Usenet Newsgroup Archive: rec.radio.amateur.antenna

2004-04 - 2004-06

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Date span: 2004-04-01 through 2004-06-30

Source text: rec.radio.amateur.antenna.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 4,666

Message records with no readable body available in the source text: 3

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Re: ZL Special

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 00:35:24 UTC
From: "T.E.O" <rfmscpa@earthlink.net>
Message-ID: <gtJac.9714$Dv2.1967@newsread2.news.pas.earthlink.net>
Source record: 97450

Try the "Field Day Special" instead. Go to http://www.eznec.com/miscpage.htm for the software for designing one. They can be easily made to rvs the pattern with the flick of a switch.

The "Field Day Special" Antenna

The Field Day Special is a two-element wire beam with a unidirectional pattern. It's similar to the "ZL" special, except that its elements are the same length. This makes it easy to reverse the pattern by using two feedlines, one at the center of each element. The original antenna was described in June 1984 QST. An antenna like this can't directly be scaled for other bands unless the size of the twinlead it's made from is scaled in proportion. However, using the program available here, you can design your own for the frequency band of interest. By changing the various dimensions, you can trade gain/beamwidth, feedpoint impedance, and bandwidth. Improvements in the program have been made since the article was published, so an optimal design for 20 meters will have dimensions slightly different than the ones shown in the article. The currents in the elements of one design were measured and found to agree very closely with those predicted by the program. Quite a number of these have been built by various people for several bands, with universal reports of operation as predicted. I use a 20 meter version nearly every year for Field Day, and occasionally 15 and 40 meter versions as well. 20 and 15 meter Field Day Specials have been my primary home QTH antennas for these bands for a number of years. Download FDSP~.EXE, then follow the directions under "Downloadable Files", above. More information about the antenna, including construction and feeding, is included in one of the expanded files. The program is a DOS program and can be run from the Windows 95/98/NT DOS prompt.

"Phil" <phil.bradway@verizon.net> wrote in message
news:OIIac.2332$Bp2.703@nwrdny02.gnilink.net...
> Any one have an idea of how broadbanded a "ZL Special" is? We're going to
> put one together for field day and wonder what 40 meter freq to cut it
for.
> If it's generally narrow band, we'll have to make a choice between the CW
> and phone portions of the band. If it's wide, maybe we can get away with
> something in between.
>
> Phil, KB2HQ
>
>

2. Lightning Protection

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 01:13:24 UTC
From: Joseph Fenn <jfenn@lava.net>
Message-ID: <Pine.BSI.4.58.0403311455400.17603@malasada.lava.net>
Source record: 97451

Well what I do is remove the HF coax line when thungder and lightning
is approaching. In the shack I have a mounting box with a normal
coax connector where I attach the ant feed to the xmtr.
I made a little device useing a new Coax plug which has a 2k resistor
connected to its center connector. This 5 watt resistor is then
connected to a 1/4 watt neon bulb which is in turn connected to the
gnd side of the connector. As a storm approaches, I glance at
it once every 5 mins or so and if If see the neon bulb flashes
due to static buildup on the feed line from the antenna, I keep my
eye on it. If it startes flashing about every 15 seconds or even
every 5 seconds, I get the hell out of the shack. This system
was used on many varieties of commercial radio systems as well as
in Military rcvr front ends where even small amounts of static
buildup could ruin the front end of a sensitive receiver.
Particularly on VHF freqs this often occurred. No amount of
grounding of your Ant is going to totally prevent damage from
a direct lightning strike on your metal mast or tower.
Lightning can strike either a tower and or feedline and then arc
accross to the structure such as your house or ham shack. That
type of strike can even split a concrete house wall right down
the middle. We had a person here a couple of months ago that
got struck by lightning but not directly. The bolt hit a power
line then arced from it down to the person it struck. That
person survived. In fact he was hospitalized just to check
him out and no permanent physical damage occurred to the
guy!
Kokomo Joe

****
* Ham KH6JF AARS/MARS ABM6JF QCWA WW2 VET WD RADIO *
****

3. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 02:02:41 UTC
From: Cecil.A.Moore@ieee.org
Message-ID: <9001ac09.0403311802.71750a2d@posting.google.com>
Source record: 97452

Richard Clark <kb7qhc@comcast.net> wrote in message
>There is no discussion as to the genesis of
> this "approximation." There is no data garnered by experiment to
> support it.

That's simply a false statement. So please tell us what objection do
you have to the graphs in the ARRL Antenna Book (a previous reference
of mine) from which everything I have said logically follows.

> I believe Tom's point was that more information was known or available
> preceding the "approximation" than following it, which portrays the
> "approximation" as a degradation of knowledge.

That's a laugh since most hams are incapable of measuring anything
like 3000+j2000 ohms. I have no idea what your (or Tom's) agenda is
but it is apparently to convince everyone that shortcuts are useless
and only gurus like yourself can bestow the sacred cow knowledge of
antennas on us, the unwashed masses.
--
73, Cecil, W5DXP

4. Re: Another Lightning Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 02:46:52 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0403311846.33ceb68@posting.google.com>
Source record: 97453

"Marvin Rosen" <puns@verizon.net> wrote in message
news:<BgAac.23494$u_2.10084@nwrddc01.gnilink.net>...
> Should one disconnect an outside buried ground
> to their indoor equipment during a storm? I was
> under the impression that static/lightning can still
> get to your equipment thru your gnd system?

I guess opinions will vary on this, but I am never connected to my outside ground. Don't use a shack ground connection anymore. But if I still did, yes, I would unhook it during storms. It's ok to have the ground, if properly set up, IE: "star config" to the ground window, but I prefer to be totally isolated from everything outside. I ground my feedlines outside, and thats it. All thats left is unplugging the gear if I think it's bad enough. And I really don't have to do that. Just makes me feel better...MK

5. NEW ARm board

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 04:22:11 UTC
From: John Triactor <nospam@noemail.com>
Message-ID: <c4g5kv$4k468@imsp212.netvigator.com>
Source record: 97455

http://arm.web7days.com

US 45+ shipping

6. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 04:44:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <va7n6092ol37pv7ef1tkoeaforeknbfn24@4ax.com>
Source record: 97454

```
On 31 Mar 2004 18:02:41 -0800, Cecil.A.Moore@ieee.org (Cecil Moore)
wrote:
>Richard Clark <kb7qhc@comcast.net> wrote in message
>>There is no discussion as to the genesis of
>> this "approximation." There is no data garnered by experiment to
>> support it.
>
>That's simply a false statement.

Recite your data.
```

7. Help retuning 2 meter Diamond f22a to aircraft band, please

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 06:53:40 UTC
From: joe <joe@nospam.com>
Message-ID: <eKWdnXpb1I6VIfbdRVn_iw@comcast.com>
Source record: 97456

I recently picked up a Diamond f22a 2 meter antenna. I would like to tune it to the aircraft band (123mhz). I have a couple of questions: How much length would I need to add to it? It looks like I can add about 8-10" inside the top fiberglass tube. Is it worth the trouble? Will it improve reception. I've done google searches and even talked to Diamond and can't come up with a figure. Any help would be greatly appreciated.

Joe

8. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 07:41:40 UTC
From: Albert Berouette <albert.berouette@pasdespam.invalid>
Message-ID: <c4gh3hkie1@news-reader3.wanadoo.fr>
Source record: 97457

"Cecil Moore" <Cecil.A.Moore@ieee.org> a crit dans le message de news:9001ac09.0403311802.71750a2d@posting.google.com...

> I have no idea what your (or Tom's) agenda is
> but it is apparently to convince everyone that shortcuts are useless
> and only gurus like yourself can bestow the sacred cow knowledge of
> antennas on us, the unwashed masses.

Cecil Moore is a troll and a crackpot.

9. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 07:42:04 UTC
From: Albert Berouette <albert.berouette@pasdespam.invalid>
Message-ID: <c4gh49$2e8$1@news-reader1.wanadoo.fr>
Source record: 97458

"Cecil Moore" <Cecil.A.Moore@ieee.org> a ?crit dans le message de
news:9001ac09.0403311515.14df578a@posting.google.com...
> Richard Clark <kb7qhc@comcast.net> wrote:
>
> > <Cecil.A.Moore@ieee.org> wrote:
> > > >What's the matter, Richard? Can't you answer the question?
> > On Tue, 30 Mar 2004 10:50:43 -0600, Cecil Moore
> > <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
> > > >EZNEC is only an approximation.
>
> Funny, I have exactly this same problem with my dog. The only
> response I ever get from her is "Arf", the exact intellectual
> equivalent of your responses.

```
Cecil Moore is a troll and a crackpot.
```

10. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 07:43:13 UTC
From: Albert Berouette <albert.berouette@pasdespam.invalid>
Message-ID: <c4gh6dkrj1@news-reader3.wanadoo.fr>
Source record: 97459

"Cecil Moore" <Cecil.A.Moore@ieee.org> a crit dans le message de
news:9001ac09.0403310827.759d4ff4@posting.google.com...
> Richard Clark <kb7qhc@comcast.net> wrote:
>
> > <Cecil.A.Moore@ieee.org> wrote:
> > >What's the matter, Richard? Can't you answer the question?
>
> > <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
> > >EZNEC is only an approximation.
>
> You have obviously missed the point. There's absolutely nothing wrong
> with an approximation. That includes EZNEC and my rule-of-thumb.
> "EZNEC is only an approximation", is NOT a negative statement any more
> than, "You are only a man", is a negative statement. Everything,
> including precise measurements with expensive instruments, has
> limitations.

```
Cecil Moore is a troll and a crackpot.
```

11. Re: RF absorbent

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 10:22:53 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <X3Sac.18857$Q45.13937@fed1read02>
Source record: 97460

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20040331115937.21296.00000347@mb-m19.aol.com...
> Ed wrote,
> >
> >Don't be an apologist for people who ask stupid or ill-phrased questions.
> >Don't pander to the lowest level. I provided a reply which I thought was
> >appropriate to the question. It was slightly sarcastic, though, by Usenet
> >standards, reasonably civilized. It provided three direct lines of search
> >for what was a very nebulous and obvious query. At no point did I attack
the
> >poster, demean his mentality, question his civilization, or impugn the
> >length of his manhood.
> >
> >Further, I hope your self-worth is well seasoned, or at least insulated,
as
> >you don't seem to understand the difference between Usenet and Ham Radio.
> >Cranking off a dumb query on Usenet is equivalent to tuning up on a
repeater
> >or net frequency. It's a bad use of electrons, and you can expect to be
> >chastised.
> >
> >Perhaps I shouldn't be so harsh with you, as you can't seem to follow the
> >thread. If you were, you would have noticed that I provided considerable
> >background on RF absorbent material in a subsequent post.
> >
> >Now, do YOU have anything informative to add to the subject, or are you
just
> >trolling for sympathy? BTW, in addition to being in the dictionary,
> >"sympathy" yields about 3,700,000 hits on Google. Now there's a project
for
> >your dotage.
> >
> >Ed
> >wb6wsn
> >
>
> Aha! Another pompous, sarcastic, smug, overbearing, insufferable post
from
> a
> gentleman whose acumen is as nebulous as his reply is asinine. You should
> get a job at a community college, Ed. College students are inured to your
> particular brand of snide, demeaning discourse, since many teachers use
> it as a technique for avoiding having to answer questions requiring
knowledge

> those teachers don't possess.
> 73,
> Tom Donaly, KA6RUH
>
>

Thomas obviously has problems with higher education, as his most potent insult is to suggest that I teach at a community college. Oh, the horror!

Whatsa matter Tommy, did I hit a button on you? Some jackass community college teacher give you a low grade, and it ruined your life? Nothing left for you but trolling Usenet?

So here's my challenge to you, Tommy Twerp. Either add something useful about RF absorbent materials, or go fellate an operating 5U4!

Ed
wb6wsn

12. Re: Any Suggestions For Relatively Simple & Basic Antenna Modeling Prog's ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 11:22:19 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0404010322.4975f47a@posting.google.com>
Source record: 97462

> Antenna modeling for "listening only" is probably overkill but try the EZNEC

For a beginner, without having to bother about segments- and
tag-numbers and counts, you could try 4nec2 freeware program.
In this there is a drag- and draw style sub-program included which you
could use to 'draw' your antenne instead of specifying separate wire,
excitation, loading and/or ground records.

However, see for yourself.

Arie.

13. FS: TA-33 - Cheap

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 11:53:03 UTC
From: JS <wd1v@removethisarrl.net>
Message-ID: <010420040653035687%wd1v@removethisarrl.net>
Source record: 97463

```
TA-33 Boxed and ready for UPS
Just $50.00 plus shipping or pu in Manchester NH
email wd1v@removenospamarrl.net
Can deliver to Dayton Hamfest
```

14. Re: FREE in the Silver Spring, MD area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 12:11:57 UTC
From: "R.A. & G.D. Whiting" <gdwhiting@erols.com>
Message-ID: <406c081d$0$3069$61fed72c@news.rcn.com>
Source record: 97464

These items are gone.

Al

> 1) KLM 2 meter crossed yagi for satellite work
>
> 2) Alliance rotor with boom for elevation rotor for satellite work.
>
> 3) Homemade 432 crossed yagis (NBS) for satellite work.
>
> These must move quickly.
>
>
> Al K3BRS
>
>

15. test

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 15:20:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <406c339e$1_7@corp.newsgroups.com>
Source record: 97465

test

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

16. Re: Difference between 5/8 and 3/4 lambda

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 15:22:48 UTC
From: "Dan Richardson"
Message-ID: <anco60ptp86uqm6et3qp13tabd6tps5em3@4ax.com>
Source record: 97468

On Mon, 29 Mar 2004 21:13:12 +0200, "Marcello"
<marcello110980@yahoo.it> wrote:

>Hello!
>wich are the differences between two monoband ground plane vertical antenna
>5/8 lambda and 3/4 lambda, with orizontal radilas?(90ï¿½).
>There is a developing system software to view this difference?
>Marcello
>

The 3/4-wave will have a substantially higher takeoff angle.

You can download a demo copy of EZNEC which you can use to see that
at: http://eznec.com

Danny, K6MHE

17. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 15:31:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406c3633_7@corp.newsgroups.com>
Source record: 97466

Richard Clark wrote:

> On 31 Mar 2004 18:02:41 -0800, Cecil.A.Moore@ieee.org (Cecil Moore)
> wrote:
>
>>Richard Clark <kb7qhc@comcast.net> wrote in message
>>
>>>There is no discussion as to the genesis of
>>>this "approximation." There is no data garnered by experiment to
>>>support it.
>>
>>That's simply a false statement.
>
> Recite your data.

Once again: The ARRL Antenna Book, 15th edition, page 2-10, the graph of resistance Vs reactance in Fig. 10 for frequencies from f/2 to 2f. The same graph appears as a series of graphs in the ARRL Antenna Book CD, ver. 2.0. Everything I said falls out directly from those graphs.

Fig. 10 is for a 1/4WL monopole so it has to be extrapolated for a 1/2WL dipole. The point of maximum reactance is approximately equal to the (anti)resonant resistance divided by 2. The resistance at the point of maximum reactance is approximately equal to the (anti) resonant resistance divided by 2.

How can you guys get so upset at someone who simply describes a graph in the ARRL Antenna Book?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

18. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 15:34:48 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406c36ff_7@corp.newsgroups.com>
Source record: 97467

Albert Berouette wrote:

> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>>I have no idea what your (or Tom's) agenda is
>>but it is apparently to convince everyone that shortcuts are useless
>>and only gurus like yourself can bestow the sacred cow knowledge of
>>antennas on us, the unwashed masses.
>
> Cecil Moore is a troll and a crackpot.

If describing a graph from the ARRL Antenna Book makes me a
troll and a crackpot, so be it.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

19. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 15:58:46 UTC
From: tdonaly@aol.com
Message-ID: <20040401105846.21977.00000388@mb-m13.aol.com>
Source record: 97369

Albert wrote,
>
>
>"Cecil Moore" <Cecil.A.Moore@ieee.org> a ï¿½crit dans le message de
> news:9001ac09.0403311802.71750a2d@posting.google.com...
>
>> I have no idea what your (or Tom's) agenda is
>> but it is apparently to convince everyone that shortcuts are useless
>> and only gurus like yourself can bestow the sacred cow knowledge of
>> antennas on us, the unwashed masses.
>
>Cecil Moore is a troll and a crackpot.
>

So? What's wrong with that? Cecil is also a fine Texas ham
who prods many of us into gaining a deeper knowledge of antennas
and transmission lines by challenging our closely held assumptions
and making us think more deeply about things we thought we knew.
Reg does the same thing, but less tenaciously. As irritating as these
gentlemen can be, they perform a valuable function on this newsgroup.
You have to goad the ox before it'll move.
73,
Tom Donaly, KA6RUH

20. Re: RF absorbent

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 16:16:50 UTC
From: tdonaly@aol.com
Message-ID: <20040401111650.21977.00000389@mb-m13.aol.com>
Source record: 97370

Ed wrote, assuming his usual air of superiority,
>
>Thomas obviously has problems with higher education, as his most potent
>insult is to suggest that I teach at a community college. Oh, the horror!
>
>Whatsa matter Tommy, did I hit a button on you? Some jackass community
>college teacher give you a low grade, and it ruined your life? Nothing left
>for you but trolling Usenet?
>
>So here's my challenge to you, Tommy Twerp. Either add something useful
>about RF absorbent materials, or go fellate an operating 5U4!
>
>Ed
>wb6wsn
>

Behind the man, the child. I must have pressed the right button.
73,
Tom Donaly, KA6RUH

21. Re: Difference between 5/8 and 3/4 lambda

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 16:57:48 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404010857.73a5799a@posting.google.com>
Source record: 97371

You should be able to find graphs of the radiation pattern versus element length in many antenna books. 5/8 wave is the longest you can make a single element and maintain a single lobe. Beyond that, the pattern splits into two (and more, when the element is even longer) lobes. To maintain a single lobe (a "flat pancake" pattern) with a longer antenna, you need a way to divide the antenna into multiple elements, and have the current in them all in-phase. You can simulate a ground-plane antenna in programs like EZNec, and if you just look at a vertical monopole over ground, or a center-fed dipole in freespace that's twice as long, you should be able to use the free evaluation version of EZNec. I'm not sure if the free version allows enough wires/segments to do a ground plane with radials, but possibly. See www.eznec.com.

Cheers,
Tom

"Marcello" <marcello110980@yahoo.it> wrote in message news:<c49sd9nun1@grillo.cs.interbusiness.it>...
> Hello!
> wich are the differences between two monoband ground plane vertical antenna
> 5/8 lambda and 3/4 lambda, with orizontal radilas?(90ďż˝).
> There is a developing system software to view this difference?
> Marcello

22. Tuning a Discone and SWR's

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 16:58:42 UTC
From: Macman <golf4pints@hotmail.com>
Message-ID: <lv-dndUpU_Oi1_HdRVn-gw@comcast.com>
Source record: 97372

My SWR's are basically flat on the lower end of the 2m scale, but there is a significant jump starting at 146.000 thru 147.999. Starting at 147.000, it's pushing the 3:1 threshold and going over the 3:1 threshold the higher in the freq band I go.

I have a discone antenna and would like some suggestions as to tuning methods. From what I know, if the SWR's are high on the 'top' end of the range, the main vertical whip needs to be trimmed.

Does that sound right or is there something else I need to check on first?

Thanks.

23. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 17:01:12 UTC
From: richardharrison@webtv.net
Message-ID: <23367-406C4AD8-251@storefull-3252.bay.webtv.net>
Source record: 97374

Al, WA4GKQ wrote:
"---as frequency is increased past quarter-wave resonance, I`ve noticed with interest that both reactance and resistance peak at different times, as they increase with frequency toward the half-wave point."

At the end of the ARRL Antenna Book edoition 19 chapter on Antenna Fundamentals is a bibliography which includes P.H. Lee`s "The Amateur Radio Vertical Antenna Handbook". In my 1974 edition, there are Figs. 18(A) Vertical Antenna Base Resistance and 18(B) Base Reactance, versus height in wavelengths.

Figs. 18(A) and (B) clearly show the variation of R and X just short of 1/2-wavelength and their dependence on the characteristic impedance of the antenna.

If the "Antenna Book" doesn`t have the information, one of the bibliography books most lilkely does.

Best regards, Richard Harrison, KB5WZI

24. Re: Difference between 5/8 and 3/4 lambda

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 17:06:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <grio60ddsc28sttnnmb04utmdl4nus445d@4ax.com>
Source record: 97373

On Mon, 29 Mar 2004 21:13:12 +0200, "Marcello"
<marcello110980@yahoo.it> wrote:
>Hello!
>wich are the differences between two monoband ground plane vertical antenna
>5/8 lambda and 3/4 lambda, with orizontal radilas?(90ï¿½).
>There is a developing system software to view this difference?
>Marcello

Hi Marcello,

Try:
http://www.eznec.com/

The FREE DEMO will reveal these differences.

73's
Richard Clark, KB7QHC

25. Latton antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 17:38:50 UTC
From: drbob92031@aol.com
Message-ID: <20040401123850.04343.00000540@mb-m29.aol.com>
Source record: 97375

Has anyone had any working experience wih the Latton antenna. Made from a singel piece of TV feed line and can work all HF bands. Sounds too easy and good to be true.
Tnx in advance de WA2EAW..Bob

26. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 17:54:16 UTC
From: drbob92031@aol.com
Message-ID: <20040401125416.04343.00000541@mb-m29.aol.com>
Source record: 97377

The simplest way to feed ladder line >through a window is to
>make a 'spacer' board to fit in the >window. Drill a couple of
>holes in the board, the correct distance >apart, feed the line
>through the holes, 'hot glue' in place (or >however you can get
>it to stay put. Have to remove the >screen...
'Doc
The above sounds very practical and do-able but make sure you put "drip loops"
on the incomming lines.
de wa2eaw...Bob

27. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 17:54:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bllo601ha4vvmsknm6qicsgp8012m26co9@4ax.com>
Source record: 97376

On Thu, 01 Apr 2004 09:31:24 -0600, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> On 31 Mar 2004 18:02:41 -0800, Cecil.A.Moore@ieee.org (Cecil Moore)
>> wrote:
>>
>>>Richard Clark <kb7qhc@comcast.net> wrote in message
>>>
>>>>There is no discussion as to the genesis of
>>>>this "approximation." There is no data garnered by experiment to
>>>>support it.
>>>
>>>That's simply a false statement.
>>
>> Recite your data.
>
>Once again:
I am satisfied. You have no data, no measurements, and no references
for your "approximation." It is simply another of the Old Wife's
Tales genre.

28. Re: Tuning a Discone and SWR's

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 18:05:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tqlo6013uak52pp3me2u8h8pfv7c55ao7k@4ax.com>
Source record: 97378

On Thu, 1 Apr 2004 11:58:42 -0500, "Macman" <golf4pints@hotmail.com>
wrote:

>My SWR's are basically flat on the lower end of the 2m scale, but there is a
>significant jump starting at 146.000 thru 147.999. Starting at 147.000,
>it's pushing the 3:1 threshold and going over the 3:1 threshold the higher
>in the freq band I go.
>
>I have a discone antenna and would like some suggestions as to tuning
>methods. From what I know, if the SWR's are high on the 'top' end of the
>range, the main vertical whip needs to be trimmed.
>
>Does that sound right or is there something else I need to check on first?
>
>Thanks.
>

Hi OM,

There is no "tuning" of Discones. They are what they are,
broadbanded. Their lower frequency of use is basically defined by the
length of the lower skirt elements (verging on quarterwave). The
higher frequency is more a function of the feedpoint gap between the
disc and the cone. If this is adjustable, you are in luck. If it is
not adjustable, something else is broke.

As you describe a vertical whip, that is NOT the usual part of a
Discone, but is a means to offer an even lower single band's coverage,
usually 6M. It's addition is not a bonus at higher frequencies (and
may actually make the antenna deaf). However, this has nothing to do
with SWR. If this is a 6M addition, and you have the option of
removing it entirely, try that.

73's
Richard Clark, KB7QHC

29. Re: Difference between 5/8 and 3/4 lambda

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 18:22:44 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <406c5e2e_2@127.0.0.1>
Source record: 97380

Tom Bruhns wrote:
> I'm not sure if the free version allows enough
> wires/segments to do a ground plane with radials, but possibly. See
> www.eznec.com.

For reasonable approximations with the free demo, just skip the
radials and use the mininec ground option.
--
73, Cecil, W5DXP

30. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 18:33:43 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <406c60d1_2@127.0.0.1>
Source record: 97381

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>
>>Richard Clark wrote:
>>>Recite your data.
>>
>>Once again:

References deliberately deleted by Richard. To what purpose?

> I am satisfied. You have no data, no measurements, and no references
> for your "approximation." It is simply another of the Old Wife's
> Tales genre.

Well, since you deleted my reference, we can assume your intent is
unethical, uncivil, and irrational.

It's essentially a no-brainer, Richard. The resonant feedpoint impedance
for a 1/2WL resonant dipole is around 60 ohms. The anti-resonant resonant
feedpoint impedance for a one-wavelength dipole is around 6000 ohms.
Between those two values of frequency, the reactance goes from zero, peaks,
and goes back to zero. How you can argue with that is beyond belief. All
this is clearly shown in my references that you deleted. Why are you afraid
to face the facts?
--
73, Cecil, W5DXP

31. collins 30L1

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 21:54:19 UTC
From: Carl Domanico <vze2686b@verizon.net>
Message-ID: <fc0bc.17270$hS3.12393@nwrdny03.gnilink.net>
Source record: 97382

Wanted Collins 30L-1 Round Emblem Amplifer...Mint to Excellent
Condition........

Reasonably Priced
Carl
N2MFW

32. Re: Tuning a Discone and SWR's

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 22:05:05 UTC
From: Macman <golf4pints@hotmail.com>
Message-ID: <IOudnfAcU4COD_HdRVn-gw@comcast.com>
Source record: 97383

Thank you Richard. This my first discone I've had a chance to play with and didn't realize that verticle 'whip' was 6m. The lower radiating elements that make up the cone; two of them have telescoping elements inside of the main element. Maybe some gentle adjustments there would improve the top end of the 2m band.
Thanks for you input.

33. Re: Tuning a Discone and SWR's

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 22:42:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sd6p60lu5kdorhl2uuahls0dq4gj67r0iu@4ax.com>
Source record: 97384

On Thu, 1 Apr 2004 17:05:05 -0500, "Macman" <golf4pints@hotmail.com>
wrote:

>Thank you Richard. This my first discone I've had a chance to play with and
>didn't realize that verticle 'whip' was 6m. The lower radiating elements
>that make up the cone; two of them have telescoping elements inside of the
>main element. Maybe some gentle adjustments there would improve the top end
>of the 2m band.
>Thanks for you input.

Hi OM,

That determination of 6M was by dint of simple guess work. The
dimensions compared to wave length (quarterwave) will bear out what
part is responsible for the lowest frequency. The inclusion of
telescoping elements further complicates the analysis. Perhaps if you
were to supply dimensions, then we could shake the characteristics
out.

73's
Richard Clark, KB7QHC

34. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 22:45:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gn6p60p9e6ivc2jg4lo21eml1dev167316@4ax.com>
Source record: 97385

On Thu, 01 Apr 2004 12:33:43 -0600, Cecil Moore
<Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>All this is clearly shown in my references that you deleted.
None of which support your "approximation"

35. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 22:49:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bp6p60l1qbs0isogak976qcg9mlvlfc0cm@4ax.com>
Source record: 97386

On Wed, 31 Mar 2004 11:40:23 +0800, Dan Jacobson <jidanni@jidanni.org>
wrote:
>Just curious, what is the result of computer modeling for the ideal
>shape of Yagi elements? I couldn't just be simple tubes.

Hi Dan,

Been a long time since I've heard anyone described as totally tubular,
much less simple tubes....

Anyway, RF current is pretty much confined to the outermost layer of
metal for any conductor (re: skin effect). On the basis of weight and
cost reduction, there is no merit in using solid rods when you move on
out of the common wire dimensions. In other words, the missing metal
hardly contributed to lower resistance for RF.

73's
Richard Clark, KB7QHC

36. 2 meter and 70cm turnstiles

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 22:52:02 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <m21bc.374397$B81.5511823@twister.tampabay.rr.com>
Source record: 97387

hello all
i have the folded dipole driven elements from a couple of old Satellite antennas that had seen better days
so what i want to do is use these driven elements as turnstiles
so does anyone have any suggestions or plans they could email me
one big question i have is spacing between the 2 folded dipoles on the same band
i have heard to put them as close as possible and others say to seperate them about 1/2 wave lenght
could someone who has built these things email me and help me out
thanks

37. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-01 23:22:28 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406ca49c_6@corp.newsgroups.com>
Source record: 97388

Richard Clark wrote:
> On Thu, 01 Apr 2004 12:33:43 -0600, Cecil Moore
> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>
>>All this is clearly shown in my references that you deleted.
>
> None of which support your "approximation"

Uhhhhh Richard, Those graphs in the ARRL Antenna Book are the
ORIGIN of my approximation. Exactly what is it about those
graphs that you disagree with? It is obvious from viewing
the graphs that the maximum reactance is about 1/2 of the
maximum resistance. It is also obvious that the resistance
at the maximum reactance point is about 1/2 of the maximum
resistance. That's exactly what my approximation said.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

38. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 00:05:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5bbp60daveo19hsi31fuvo2rqakvaktpgs@4ax.com>
Source record: 97389

On Thu, 01 Apr 2004 17:22:28 -0600, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
> That's exactly what my approximation said.
You cover so many bases, it could prove you discovered Saddam -
approximately. ;-)

Like I said, I am satisfied you have no measurements, no data, etc....

39. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 00:36:45 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <MbWdncQwG4QMKPHdRVn-jA@comcast.com>
Source record: 97390

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:bp6p60l1qbs0isogak976qcg9mlvlfc0cm@4ax.com...
> On Wed, 31 Mar 2004 11:40:23 +0800, Dan Jacobson <jidanni@jidanni.org>
> wrote:
> >Just curious, what is the result of computer modeling for the ideal
> >shape of Yagi elements? I couldn't just be simple tubes.
>
> Hi Dan,
>
> Been a long time since I've heard anyone described as totally tubular,
> much less simple tubes....
>
> Anyway, RF current is pretty much confined to the outermost layer of
> metal for any conductor (re: skin effect). On the basis of weight and
> cost reduction, there is no merit in using solid rods when you move on
> out of the common wire dimensions. In other words, the missing metal
> hardly contributed to lower resistance for RF.
>
> 73's
> Richard Clark, KB7QHC

How about a taper that puts the biggest diameter where the current is
greatest.

Tam/WB2TT

40. Re: Latton antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 00:40:45 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <406CB539.8618C905@shaw.ca>
Source record: 97391

Drbob92031 wrote:
>
> Has anyone had any working experience wih the Latton antenna. Made from a
> singel piece of TV feed line and can work all HF bands. Sounds too easy and
> good to be true.
> Tnx in advance de WA2EAW..Bob

I've got one rolled up in my shack -- used to use it but went to other
things after a while. The performance was not bad, but making one that
is strong enough to span any distance is difficult. I had to run a piece
of nylone cord through the dielectric, threaded in and out.

Another chum, now a sient key, used one for years and seemed happy with
it.

The spelling is Lattin, and you can find it on the net through Google.

Irv -- VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

41. ARRL Handbook 1988 Article

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 01:07:15 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <8oep60p52thm65p6agoor8m0h8ui4bpdgp@4ax.com>
Source record: 97392

Does anyone have a 1988 HB? I need an article from chapter 27, figure 10 - "RF Proof 30 AMP Power Supply. I have just gotten a well-built, complete example that needs a little debugging.

Thanks,

Russ (r c n i x o n a t m i n d s p r i n g d o t c o m)

42. Re: Tuning a Discone and SWR's

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 01:21:39 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <Ee3bc.37022$_U.10317@lakeread05>
Source record: 97393

"Richard Clark" wrote:
> There is no "tuning" of Discones. They are what they are,
> broadbanded. Their lower frequency of use is basically defined by the
> length of the lower skirt elements (verging on quarterwave). The
> higher frequency is more a function of the feedpoint gap between the
> disc and the cone. If this is adjustable, you are in luck. If it is
> not adjustable, something else is broke.
>
> As you describe a vertical whip, that is NOT the usual part of a
> Discone, but is a means to offer an even lower single band's coverage,
> usually 6M. It's addition is not a bonus at higher frequencies (and
> may actually make the antenna deaf). However, this has nothing to do
> with SWR. If this is a 6M addition, and you have the option of
> removing it entirely, try that.
>
> 73's
> Richard Clark, KB7QHC

Hi Richard,

Just wanted to mention, there are several discones on the market assembled with circular arrays of horizontal and 45-degree angle groundplanes plus a trimmable vertical element which is the only radiating element of those discones. The vertical radiating element comes from the factory cut to 2m but can be shortened to suit. I have owned a few and they are anything but deaf.

Best regards,

Jack Painter
Virginia Beach

43. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 01:25:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <106pg8u5rm1vjc4@corp.supernews.com>
Source record: 97394

Quite a few years ago, there were a couple of articles -- in Ham Radio magazine, I believe --, which addressed that topic. As I recall, the author used an optimization program that allowed the shape to vary. He ended up with elements bent kind of like a gull wing, and considerably longer than a half wavelength -- more like a wavelength if I recall correctly. The gain was substantially more than for a Yagi, but I don't remember how good the F/B ratio was. I believe he did construct and measure some actual antennas.

I'm sorry I don't recall the name of either the author or the articles. Hopefully, though, this posting will spur someone with a better memory (and that includes just about everyone) to recall and report enough information for you to find the articles.

The articles were very interesting, but it looked to me like the construction problems would outweigh the benefits. Apparently I'm not the only one to reach that conclusion, because in the intervening years I've never seen an actual antenna resembling that design.

Roy Lewallen, W7EL

Dan Jacobson wrote:

> Just curious, what is the result of computer modeling for the ideal
> shape of Yagi elements? I couldn't just be simple tubes.

44. Re: Tuning a Discone and SWR's

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 01:36:00 UTC
From: Macman <golf4pints@hotmail.com>
Message-ID: <H5mdnUlDH6DgXvHd4p2dnA@comcast.com>
Source record: 97395

Not too in the way of specs for it, that could be my problem.
But I did find this http://www.wep4hams.com/base.htm that shows the one I have.
Mine is the Workman T734 model.

45. Re: High Sierra antenna FS/FT

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 01:37:26 UTC
From: Nate Morton <natem1@comcast.net>
Message-ID: <v0mqepm999t6.1249qeq3t71y2$.dlg@40tude.net>
Source record: 97396

On Thu, 11 Mar 2004 01:40:37 GMT, STEVE TROOK wrote:

> Near new High sierra 6-80 meter screwdriver type antenna. complete with
> up down controller box, bracket and whip. Fully tunes to all bands
> manually. Comes with 100' of coax and power leads. Was originally bought
> for base use. Will sell outright or trade. Bought new over $600.
>
> view the antenna here. www.cq73.com an be a mobile or base.
>
> Please contact me at strook@optonline,net

Is this still available? Contact me at natem1@comcast.net. Thanks

46. Re: Tuning a Discone and SWR's

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 01:47:40 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <21hp60t9qa995eecc2um9hqfuj9o2d6ugu@4ax.com>
Source record: 97397

On Thu, 1 Apr 2004 20:36:00 -0500, "Macman" <golf4pints@hotmail.com>
wrote:

>Not too in the way of specs for it, that could be my problem.
>But I did find this http://www.wep4hams.com/base.htm that shows the one I
>have.
>Mine is the Workman T734 model.
>

Hi OM,

Well, it is a bit difficult to count the number of radial elements,
but it looks like between 6 and 8. Also, given that it operates from
25MHz (in an attempt to encompass the earth, sea, and sky) it must
ultimately disappoint you somewhere. That somewhere is that above 3
to 4 times the lowest frequency, those higher frequencies invest their
attention to sending/getting signals from overhead instead of out and
away towards the horizon. Also with fewer radial elements, there are
going to be gaps in SWR coverage (your reports confirm this).

Too often the Discone vendor is content to cite only the matching
characteristics and not mention that directionality explodes upward
like a wind swept umbrella. So, even if it did match to 2M, it would
tend to be deaf. Like I said, try to eliminate the top whip, and
retract the lower skirts lengths to roughly 1M length or less.

73's
Richard Clark, KB7QHC

47. Re: Tuning a Discone and SWR's

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 01:49:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gfhp60plnebknvol2fgbi2ap2776fnie3k@4ax.com>
Source record: 97398

On Thu, 1 Apr 2004 20:21:39 -0500, "Jack Painter" <223bthp@cox.net>
wrote:
>Hi Richard,
>
>Just wanted to mention, there are several discones on the market assembled
>with circular arrays of horizontal and 45-degree angle groundplanes plus a
>trimmable vertical element which is the only radiating element of those
>discones. The vertical radiating element comes from the factory cut to 2m
>but can be shortened to suit. I have owned a few and they are anything but
>deaf.
>
>Best regards,
>
>Jack Painter
>Virginia Beach

Hi Jack,

It would be if it were designed to a lowest resonation (through
lengths involved) at 25MHz.

73's
Richard Clark, KB7QHC

48. Re: Tuning a Discone and SWR's

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 03:04:16 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <RK4bc.37034$_U.29385@lakeread05>
Source record: 97399

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:gfhp60plnebknvol2fgbi2ap2776fnie3k@4ax.com...
> On Thu, 1 Apr 2004 20:21:39 -0500, "Jack Painter" <223bthp@cox.net>
> wrote:
> >Hi Richard,
> >
> >Just wanted to mention, there are several discones on the market
assembled
> >with circular arrays of horizontal and 45-degree angle groundplanes plus
a
> >trimmable vertical element which is the only radiating element of those
> >discones. The vertical radiating element comes from the factory cut to 2m
> >but can be shortened to suit. I have owned a few and they are anything
but
> >deaf.
> >
> >Best regards,
> >
> >Jack Painter
> >Virginia Beach
>
> Hi Jack,
>
> It would be if it were designed to a lowest resonation (through
> lengths involved) at 25MHz.
>
> 73's
> Richard Clark, KB7QHC

Richard,

That makes sense...and the reason the ones designed as "scanner" antennas are usually much shorter radials too, about 30" I think.. Though they advertise 25-1300 mhz, I only used them for the 118-139 and 225-400 mhz aircraft bands and 156 mhz marine band (where it was a poor performer in rx and tx). The newer concept of discone called the "Scantenna" although for Rx only, is a vastly superior performer than the standard discone design in the bands I mentioned.

I currently use a J-Pole for marine band and have good 2-way between CG Groups and aircraft over 100 miles distant. Accordingly, a J-pole woould seem to be a natural for 2m work since mine is so close to that at 156.8 mhz, and it outperforms fishing-pole makers that advertise upwards of 6dbi.

73's

Jack Painter
Virginia Beach, VA

49. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 03:07:10 UTC
From: dplatt@radagast.org
Message-ID: <106pm6u9k41ig29@corp.supernews.com>
Source record: 97400

In article <106pg8u5rm1vjc4@corp.supernews.com>,
Roy Lewallen <w7el@eznec.com> wrote:

>Quite a few years ago, there were a couple of articles -- in Ham Radio
>magazine, I believe --, which addressed that topic. As I recall, the
>author used an optimization program that allowed the shape to vary. He
>ended up with elements bent kind of like a gull wing, and considerably
>longer than a half wavelength -- more like a wavelength if I recall
>correctly. The gain was substantially more than for a Yagi, but I don't
>remember how good the F/B ratio was. I believe he did construct and
>measure some actual antennas.

I think you're referring to the Landstorfer-Sacher Yagi design?

http://www.cebik.com/eb.html has some information on these. It's
something akin to an EDZ (extended double zepp) beam. A 2-meter
3-element L-S Yagi shows gain in the 9.7 dB range, with F/B ratios of
16-23.

Interesting design. Not the easiest thing in the world to construct,
I suspect.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

50. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 04:09:28 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406ce7e2$1_2@corp.newsgroups.com>
Source record: 97401

Richard Clark wrote:
> Like I said, I am satisfied you have no measurements, no data, etc....

I am satisfied that your brain is suffering from proton decay a few
trillion years ahead of the predicted time.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

51. Doppler RDF Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 05:27:14 UTC
From: George <look@signature_to.reply>
Message-ID: <SQ6bc.11380$Dv2.2937@newsread2.news.pas.earthlink.net>
Source record: 97402

Is anyone familiar with three-element quarter-wave or half-wave (Adcock) Doppler antennas for RDF applications? These antennas are most commonly seen as four-element designs, but I'd like to build a three-element version that trades off directional accuracy for smaller size. I've come across articles on the Web stating that they *SHOULD* work, but I haven't found a reference to one that has actually been built.

Thanks in advance.

George K6GW

52. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 05:53:36 UTC
From: Ken Fowler <ko6no@yahoo.com>
Message-ID: <X9OdnZyXk4V_YvHdRVn-gQ@comcast.com>
Source record: 97403

On 31-Mar-2004, "Albert Berouette" <albert.berouette@pasdespam.invalid> wrote:

> Cecil Moore is a troll and a crackpot.

Three times and you're out!

P L O N K !

53. Re: ARRL Handbook 1988 Article

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 06:17:10 UTC
From: Ken Fowler <ko6no@yahoo.com>
Message-ID: <fsadnYw2Bcb1mPDd4p2dnA@comcast.com>
Source record: 97404

On 1-Apr-2004, Russ <carlzomer@hotmail.com> wrote:

> Does anyone have a 1988 HB? I need an article from chapter 27, figure
> 10 - "RF Proof 30 AMP Power Supply. I have just gotten a well-built,
> complete example that needs a little debugging.
>
> Thanks,
>
> Russ (r c n i x o n a t m i n d s p r i n g d o t c o m)

It's also in the 1989 HB. I have it. The article is 9 pages. What do you need?

Ken Fowler, KO6NO

54. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 06:29:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <du1q60hdru6qji8ppgf4jm486gv6g9j8i5@4ax.com>
Source record: 97405

On Thu, 01 Apr 2004 22:09:28 -0600, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Like I said, I am satisfied you have no measurements, no data, etc....
>
>I am satisfied that your brain is suffering from proton decay a few
>trillion years ahead of the predicted time.
Do you have any measurements, data, references. This another Old
Wife's Tale?

55. Re: RF absorbent

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 09:16:53 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <1cabc.21286$Q45.19685@fed1read02>
Source record: 97406

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20040401111650.21977.00000389@mb-m13.aol.com...
> Ed wrote, assuming his usual air of superiority,
> >
> >Thomas obviously has problems with higher education, as his most potent
> >insult is to suggest that I teach at a community college. Oh, the horror!
> >
> >Whatsa matter Tommy, did I hit a button on you? Some jackass community
> >college teacher give you a low grade, and it ruined your life? Nothing
left
> >for you but trolling Usenet?
> >
> >So here's my challenge to you, Tommy Twerp. Either add something useful
> >about RF absorbent materials, or go fellate an operating 5U4!
> >
> >Ed
> >wb6wsn
> >
>
> Behind the man, the child. I must have pressed the right button.
> 73,
> Tom Donaly, KA6RUH
>

Yes, you are pressing the correct button. Unfortunately, your meds are not
being dispensed commensurate with your previous conditioning.

This is far too easy, and since you STILL have nothing to add on the topic,
I will refrain from further comment.

Best Regards for a speedy recovery, OM!

Ed
wb6wsn

56. Re: Doppler RDF Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 13:00:59 UTC
From: Dave <noone@nowhere.com>
Message-ID: <Xtidncx7hJeH-fDdRVn-sA@crocker.com>
Source record: 97407

there is a 2 element design on my web site that is extremely simple and compact. http://www.k1ttt.net/technote/doppler.html

"George" <look@signature_to.reply> wrote in message news:SQ6bc.11380$Dv2.2937@newsread2.news.pas.earthlink.net...
> Is anyone familiar with three-element quarter-wave or half-wave (Adcock)
> Doppler antennas for RDF applications? These antennas are most commonly
> seen as four-element designs, but I'd like to build a three-element version
> that trades off directional accuracy for smaller size. I've come across
> articles on the Web stating that they *SHOULD* work, but I haven't found a
> reference to one that has actually been built.
>
> Thanks in advance.
>
> George K6GW
>
>
>
>
>
>

57. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 13:01:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <106qp1d8q3ek05c@corp.supernews.com>
Source record: 97408

That name sounds familiar, so it's probably the one. Unfortunately, the picture boxes at that web page appear blank using either IE6 or Mozilla 1.6, so I can't tell for sure. Must need some kind of plug-in to view them.

Roy Lewallen, W7EL

Dave Platt wrote:

> In article <106pg8u5rm1vjc4@corp.supernews.com>,
> Roy Lewallen <w7el@eznec.com> wrote:
>
>
>>Quite a few years ago, there were a couple of articles -- in Ham Radio
>>magazine, I believe --, which addressed that topic. As I recall, the
>>author used an optimization program that allowed the shape to vary. He
>>ended up with elements bent kind of like a gull wing, and considerably
>>longer than a half wavelength -- more like a wavelength if I recall
>>correctly. The gain was substantially more than for a Yagi, but I don't
>>remember how good the F/B ratio was. I believe he did construct and
>>measure some actual antennas.
>
>
> I think you're referring to the Landstorfer-Sacher Yagi design?
>
> http://www.cebik.com/eb.html has some information on these. It's
> something akin to an EDZ (extended double zepp) beam. A 2-meter
> 3-element L-S Yagi shows gain in the 9.7 dB range, with F/B ratios of
> 16-23.
>
> Interesting design. Not the easiest thing in the world to construct,
> I suspect.
>

58. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 13:39:38 UTC
From: Dave <noone@nowhere.com>
Message-ID: <2v6dnXN5VsS78PDdRVn-sA@crocker.com>
Source record: 97409

thats likely the one. i have their book 'optimisation of wire antennas'
that derives a design that sounds like that one.

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:106qp1d8q3ek05c@corp.supernews.com...
> That name sounds familiar, so it's probably the one. Unfortunately, the
> picture boxes at that web page appear blank using either IE6 or Mozilla
> 1.6, so I can't tell for sure. Must need some kind of plug-in to view
them.
>
> Roy Lewallen, W7EL
>
> Dave Platt wrote:
>
> > In article <106pg8u5rm1vjc4@corp.supernews.com>,
> > Roy Lewallen <w7el@eznec.com> wrote:
> > >
> > >
> > >>Quite a few years ago, there were a couple of articles -- in Ham Radio
> > >>magazine, I believe --, which addressed that topic. As I recall, the
> > >>author used an optimization program that allowed the shape to vary. He
> > >>ended up with elements bent kind of like a gull wing, and considerably
> > >>longer than a half wavelength -- more like a wavelength if I recall
> > >>correctly. The gain was substantially more than for a Yagi, but I don't
> > >>remember how good the F/B ratio was. I believe he did construct and
> > >>measure some actual antennas.
> > >
> > >
> > > I think you're referring to the Landstorfer-Sacher Yagi design?
> > >
> > > http://www.cebik.com/eb.html has some information on these. It's
> > > something akin to an EDZ (extended double zepp) beam. A 2-meter
> > > 3-element L-S Yagi shows gain in the 9.7 dB range, with F/B ratios of
> > > 16-23.
> > >
> > > Interesting design. Not the easiest thing in the world to construct,
> > > I suspect.
> > >

59. Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 15:38:00 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404020738.557cb21c@posting.google.com>
Source record: 97410

I'll have some fairly long runs of coax to HF antennas (21Mhz max) to Field Day antennas. One of the antennas will be an 80M G5RV with their usual nasty SWRs so a foam-type cable is indicated. Since it's a very temporary non-critical installation I'm not about to spend premium bucks on 9913 or any of it's relatives like I do for the home station. A non-contaminating jacket would be nice but is not much of an issue. Does anybody have any suggestions about vendors who are selling foam RG-8 for lower-than-usual prices?

Thanks, Brian w3rv

60. Re: ARRL Handbook 1988 Article

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 16:32:47 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <ra5r6092q9p8ed4ds4sb473p8i5m0cka30@4ax.com>
Source record: 97411

On Fri, 2 Apr 2004 06:17:10 GMT, "Ken Fowler" <ko6no@yahoo.com> wrote:

>
>On 1-Apr-2004, Russ <carlzomer@hotmail.com> wrote:
>
>> Does anyone have a 1988 HB? I need an article from chapter 27, figure
>> 10 - "RF Proof 30 AMP Power Supply. I have just gotten a well-built,
>> complete example that needs a little debugging.
>>
>> Thanks,
>>
>> Russ (r c n i x o n a t m i n d s p r i n g d o t c o m)
>
>It's also in the 1989 HB. I have it. The article is 9 pages. What do you need?
>
>Ken Fowler, KO6NO

I could use a scanned copy of the article. I want to fix the one I
have.

Thanks,

Russ (r c n i x o n at m i n d s p r i n g d o t c o m)

61. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 16:55:10 UTC
From: Eskay <spark_gap2000@yahoo.ca>
Message-ID: <i5qmha7je2sw.xnxlgsy6osiq.dlg@40tude.net>
Source record: 97412

On 2 Apr 2004 07:38:00 -0800, Brian Kelly wrote:

> I'll have some fairly long runs of coax to HF antennas (21Mhz max) to
> Field Day antennas. One of the antennas will be an 80M G5RV with their
> usual nasty SWRs so a foam-type cable is indicated. Since it's a very
> temporary non-critical installation I'm not about to spend premium
> bucks on 9913 or any of it's relatives like I do for the home station.
> A non-contaminating jacket would be nice but is not much of an issue.
> Does anybody have any suggestions about vendors who are selling foam
> RG-8 for lower-than-usual prices?
>
> Thanks, Brian w3rv

Could you get hold of 75 ohm cable instead? G5RV recommended it for this
antenna anyway and regardless of what you use you will need a tuner.
RG 59 may be cheaper and CATV cable may be free or someone may have enough
to help you out.
73 de VE3JUA.

62. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 17:01:12 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <406d9ca1_2@127.0.0.1>
Source record: 97413

Brian Kelly wrote:
> I'll have some fairly long runs of coax to HF antennas (21Mhz max) to
> Field Day antennas. One of the antennas will be an 80M G5RV with their
> usual nasty SWRs so a foam-type cable is indicated.

Hi Brian, what bands will the G5RV be used on? Only 80m?
The SWR is not all that nasty on 80m being about 20:1
on the ladder-line and 2:1 on the coax.

Here's one of my rules-of-thumb for which I am infamous. :-)

Given a 102 ft. Dipole at 40 ft. fed with 450 ohm ladder-line
and used on 3.8 MHz, for a ladder-line length between about
25 ft. and 100 ft., the resistance looking into the ladder-line
is about equal to the length of the ladder-line. Thus for 25 ft.
of ladder-line, the impedance looking into the ladder-line is
about 25+jXL1. For a ladder-line length of 50 ft., the impedance
looking into the ladder-line is about 50+jXL2. For a ladder-line
length of 100 ft., the impedance looking into the ladder-line
is about 100+jXL3. Does that give you any hints on how to match it?

According to EZNEC, the impedance looking into 50 ft. of ladder-line
is about 50+j466. Use two series 180pf caps to neutralize the inductive
reactance and you have a feedpoint impedance of 50 ohms. A dual ganged
300pf variable would be ideal.

A 102 ft dipole 40 feet in the air fed with 50 ft of ladder-line
tuned with a dual-gang variable cap on the antenna side of a balun/
choke and no tuner box. Doesn't that sound like a perfect 75m field
day antenna?
--
73, Cecil, W5DXP

63. Re: 2 meter and 70cm turnstiles

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 17:32:34 UTC
From: jimbo <jimbo@nospam.com>
Message-ID: <406DA3B0.9D3C8AC5@nospam.com>
Source record: 97414

Hi,

Here is the info you need, there is a wealth of info on many
types of antenna including the turnstile type.

jimbo

http://www.cebik.com/ms2.html

Dennis wrote:

> hello all
> i have the folded dipole driven elements from a couple of old Satellite
> antennas that had seen better days
> so what i want to do is use these driven elements as turnstiles
> so does anyone have any suggestions or plans they could email me
> one big question i have is spacing between the 2 folded dipoles on the
> same band
> i have heard to put them as close as possible and others say to seperate
> them about 1/2 wave lenght
> could someone who has built these things email me and help me out
> thanks

64. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 19:04:10 UTC
From: dplatt@radagast.org
Message-ID: <106re9accli29a8@corp.supernews.com>
Source record: 97415

>> http://www.cebik.com/eb.html has some information on these. It's
>> something akin to an EDZ (extended double zepp) beam. A 2-meter
>> 3-element L-S Yagi shows gain in the 9.7 dB range, with F/B ratios of
>> 16-23.

> That name sounds familiar, so it's probably the one. Unfortunately, the
> picture boxes at that web page appear blank using either IE6 or Mozilla
> 1.6, so I can't tell for sure. Must need some kind of plug-in to view them.

Weird! They show up fine on my Linux workstation using Mozilla 1.5
and on my laptop using Mozilla Firefox 0.8. I saved on of the images
to disk, and it proved to be a very ordinary GIF file, with only two
colors. They ought to be visible in any standard browser.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

65. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 19:59:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <106rhgs7rmoeq73@corp.supernews.com>
Source record: 97416

I contacted LB about the problem, and he said he'd received reports
similar to mine. He's contacted the web host but hasn't heard back yet.
So it's being addressed.

My browsers are both standard as far as I can determine. My firewall is
set to a pretty touchy level, though, so that might be the cause. But I
haven't had trouble with pictures at other sites.

Roy Lewallen, W7EL

Dave Platt wrote:

>>>http://www.cebik.com/eb.html has some information on these. It's
>>>something akin to an EDZ (extended double zepp) beam. A 2-meter
>>>3-element L-S Yagi shows gain in the 9.7 dB range, with F/B ratios of
>>>16-23.
>
>
>>That name sounds familiar, so it's probably the one. Unfortunately, the
>>picture boxes at that web page appear blank using either IE6 or Mozilla
>>1.6, so I can't tell for sure. Must need some kind of plug-in to view them.
>
>
> Weird! They show up fine on my Linux workstation using Mozilla 1.5
> and on my laptop using Mozilla Firefox 0.8. I saved on of the images
> to disk, and it proved to be a very ordinary GIF file, with only two
> colors. They ought to be visible in any standard browser.
>
>
>

66. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 20:21:45 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <406dcb8e_2@127.0.0.1>
Source record: 97417

Cecil Moore wrote:
> Given a 102 ft. Dipole at 40 ft. fed with 450 ohm ladder-line
> and used on 3.8 MHz, for a ladder-line length between about
> 25 ft. and 100 ft., the resistance looking into the ladder-line
^^^^^^^
> is about equal to the length of the ladder-line. Thus for 25 ft.
> of ladder-line, the impedance looking into the ladder-line is
> about 25+jXL1. For a ladder-line length of 50 ft., the impedance
> looking into the ladder-line is about 50+jXL2.

I misspoke above. "100 ft." should have been "50 ft."

> For a ladder-line
> length of 100 ft., the impedance looking into the ladder-line
> is about 100+jXL3.

It is true that the resistance for 100 ft. of ladder-line is about
100 ohms, but it is 100-jXC, not 100+jXL. Sorry for the faulty memory.
--
73, Cecil, W5DXP

67. Re: EZNEX Modeling Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 21:50:31 UTC
From: noexqs <PE2WDO@noexqs.demon.nl>
Message-ID: <106rnnon7emun8d@corp.supernews.com>
Source record: 97418

I've modelled a 8 element VHF loop-yagi by describing it into an excel
spreadsheet. I suppose you could do the same for helix type of antenna.
Except that you use an additional Z-axis. I'm not very familiar
with this particular antenna but modelling it shouldn't be so hard.

Therefore, this is what I did with my loop-yagi:
I divided the circumpherence of a loop into 24 parts (of 15 degrees).
Described end-points (x,y) = r*cos(a), r*sin(a) (r-radius, a-angle)
Added a Z value for each subsequent loop.
Modelled into the desired format and exported the output to a datafile
and then imported the results into the modelling software.

After optimizing in the modelling software, I exported the
calculated results and used another
spreadsheet to recover the actual length of the loops, simply by
adding the lenght of the 24 parts of each loop (using basic math).
After verification in a few modelling programs I
then built a prototype 70cm/435Mhz loop-yagi with plain electric
"house-wire"
to validate the calculations. The modelling proved quite accurate.

The endresult now is a 8 element 144Mhz loop-yagi (2WL boom) which gives
about 12.4dBd gain, about 22dB F/B and good pattern for DX
and SAT-work. Another advantage that this antenna
has a very robust construction and by making the radiating
element to rotate, you only need one-and-the-same antenna, no special
feeds for whatever polarisation. This gives amazing results!

Hope this helps.
Suc6 with the job.
Willem, PE2WDO

"George" <look@signature_to.reply> schreef in bericht
news:%1r8c.55503$aT1.28688@newsread1.news.pas.earthlink.net...
> Has anyone here modeled physically shortened (i.e. - helix wound) VHF
> antenna elements using EZNEC? I'm looking for suggestions how to do this.
>
> George
> K6GW
>
>
>

68. Half square

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 22:17:29 UTC
From: ve3bts@rac.ca
Message-ID: <1ed859b.0404021417.6ebf0c0f@posting.google.com>
Source record: 97319

Several web pages say to feed this antenna at top corner so it seems
to be unbalanced antenna.Is that correct?Any suggestions regarding
instalation of this antenna?
tnx

69. Re: Hi, bwallpapers, darling

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 23:15:54 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406df496$1_8@corp.newsgroups.com>
Source record: 97320

robert@spectra.eng.hawaii.edu wrote:
> I have a document attached, which should solve your problems.

Surprise!!!! The attached .zip file contains a virus or worm
according to Norton Antivirus 2004.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

70. Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-02 23:49:28 UTC
From: George Cronk <cartwerks@earthlink.net>
Message-ID: <Xns94BFBF60C5C23cartwerksearthlinkne@207.69.154.205>
Source record: 97321

Does anyone know where I can get plans for this antenna? Materials needed to build one?

Thanks

71. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 00:36:39 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406e0784$1_3@corp.newsgroups.com>
Source record: 97322

George Cronk wrote:
> Does anyone know where I can get plans for this antenna? Materials needed
> to build one?

ARRL Antenna Book
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

72. Re: Hugh antenna in Bergen County New Jersey

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 00:39:46 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <gb-dne64PsBYmvPdRVn-sA@comcast.com>
Source record: 97323

Like you say, neat!

Tam/WB2TT
"bunnydawg" <r.heenan@sympatico.ca> wrote in message
news:fYrac.50802$1A6.1103618@news20.bellglobal.com...
> I just found this recently and it's a rather interesting site to find out
> who owns a tower. Kinda neat have a look.
> http://www.berkana.com/tower.php3
>
> Robert
> VE3 something or other
>
> "New & Improved - N/F John" <trompiano2000@yahoo.com> wrote in message
> news:404bdb63$0$3101$61fed72c@news.rcn.com...
> > I live in Passaic County in New Jersey and I can see a hugh red and
white
> > antenna east of my location. I can't tell how far it is but it is far.
> > From Clifton I can see Garfield and the antenna is in that direction.
> >
> > Anybody have any clues?
> >
> >
>
>

73. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 01:28:55 UTC
From: David L Thompson <thompson@mindspring.com>
Message-ID: <rrobc.8945$yN6.1364@newsread2.news.atl.earthlink.net>
Source record: 97324

MFJ makes a phased 5/8 wave 2 meter antenna that also works as a 1/2 wave
vertical on 6. Sells for $49 at HRO.
73 Dave K4JRB

George Cronk <cartwerks@earthlink.net> wrote in message
news:Xns94BFBF60C5C23cartwerksearthlinkne@207.69.154.205...
> Does anyone know where I can get plans for this antenna? Materials needed
> to build one?
>
> Thanks

74. Re: Any Suggestions For Relatively Simple & Basic Antenna Modeling Prog's ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 01:35:22 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0404021735.77fe0469@posting.google.com>
Source record: 97325

I like MultiNEC at http://www.qsl.net/ac6la/

It has some good example antennas to get you started.

Al

"Robert11" <rgsxrose@comcast.net> wrote in message
news:<mMydncU_2Jn4YfvdRVn-gw@comcast.com>...

> Would like to try some simple antenna modeling.
> I truly mean relatively simple and basic.

75. NMO or UHF Mobil Mount?????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 02:37:03 UTC
From: k5fte_ech@webtv.net
Message-ID: <5881-406E234F-2@storefull-3152.bay.webtv.net>
Source record: 97326

Greetings All,

From a performance standpoint, which is better, a UHF or NMO mount for a dualband VHF/UHF mobil antenna.

Reply to my e-mail direct. k5fte_ech@webtv.net

73's

Earl

76. Re: NMO or UHF Mobile Mount?????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 04:57:32 UTC
From: Andy in NJ <"SHORECOGS at COMCAST DOT NET">
Message-ID: <24-dneD5wc5R3vPdRVn-ig@comcast.com>
Source record: 97327

Since you'll probably be working FM, assumably repeaters, it doesn't matter. Either will work just fine. It's the actual antenna that you need to be concerned about.

--
73! de Andy KC2SSB
Beachwood, NJ USA! Grid FM29vw
http://shorecogs.tripod.com
AIM: shorecogs
<k5fte_ech@webtv.net> wrote in message
news:5881-406E234F-2@storefull-3152.bay.webtv.net...
> Greetings All,
>
> From a performance standpoint, which is better, a UHF or NMO mount for a
> dualband VHF/UHF mobil antenna.
>
> Reply to my e-mail direct. k5fte_ech@webtv.net
>
> 73's
>
> Earl
>

77. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 05:23:35 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404022123.6f37028e@posting.google.com>
Source record: 97328

Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
>
> A 102 ft dipole 40 feet in the air fed with 50 ft of ladder-line
> tuned with a dual-gang variable cap on the antenna side of a balun/
> choke and no tuner box. Doesn't that sound like a perfect 75m field
> day antenna?

I hope you are successful in making people think so. :/ It'll be easier pickings for me and my superior, lower overall loss, radiating device. :) I already use the *perfect* 75m field day antenna. It's a regular old full size coax fed dipole. Why would anyone want to clutter up low loss perfection? Boggles my mind...:/ But it's ok, like I said, it's to my advantage on that bug infested night in June. I hope everyone else is using G5RV's, windoms, isotrons, EH's and other such things.. Makes it easier for us. .:) MK

78. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 05:27:03 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404022127.24ee55a3@posting.google.com>
Source record: 97329

George Cronk <cartwerks@earthlink.net> wrote in message
news:<Xns94BFBF60C5C23cartwerksearthlinkne@207.69.154.205>...
> Does anyone know where I can get plans for this antenna? Materials needed
> to build one?
>
> Thanks

You would be better off with a 1/4 wave ground plane on 2m. Seriously.
And one of those can be as simple as five 19 inch pieces of wire and a
So-239 connector. MK

79. Re: Doppler RDF Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 06:41:39 UTC
From: George <look@signature_to.reply>
Message-ID: <D0tbc.13712$lt2.10196@newsread1.news.pas.earthlink.net>
Source record: 97330

Nice and simple design, but as I understand it this design has 180 degree
ambiguity. Is that correct?

George

--
Email replies to:
"Dave" <noone@nowhere.com> wrote in message
news:Xtidncx7hJeH-fDdRVn-sA@crocker.com...
> there is a 2 element design on my web site that is extremely simple and
> compact. http://www.k1ttt.net/technote/doppler.html
>
> "George" <look@signature_to.reply> wrote in message
> news:SQ6bc.11380$Dv2.2937@newsread2.news.pas.earthlink.net...
> > Is anyone familiar with three-element quarter-wave or half-wave (Adcock)
> > Doppler antennas for RDF applications? These antennas are most commonly
> > seen as four-element designs, but I'd like to build a three-element
> version
> > that trades off directional accuracy for smaller size. I've come across
> > articles on the Web stating that they *SHOULD* work, but I haven't found
a
> > reference to one that has actually been built.
> >
> > Thanks in advance.
> >
> > George K6GW
> >
> >
> >
> >
> >
> >
>
>

80. cell phone antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 11:23:46 UTC
From: Ken <cprstn54zz@att.net>
Message-ID: <ee7t60tksgf0pckeo63buufvr57tkkvhrq@4ax.com>
Source record: 97331

When using one of those external, mag-mount antennas that plug into the antenna jack just below the stubby antenna of a flip phone, it is better to remove the stubby antenna?

On receive, I would think it makes little difference. On transmit, however, if the stubby antenna is not removed, won't energy be wasted on in-vehichle propagation that would be better directed to the mag mount on the roof?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

81. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 11:36:31 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <qpqdnQjM76FRPPPdRVn-tw@comcast.com>
Source record: 97332

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0404022127.24ee55a3@posting.google.com...
> George Cronk <cartwerks@earthlink.net> wrote in message
news:<Xns94BFBF60C5C23cartwerksearthlinkne@207.69.154.205>...
> > Does anyone know where I can get plans for this antenna? Materials
needed
> > to build one?
> >
> > Thanks
>
> You would be better off with a 1/4 wave ground plane on 2m. Seriously.
> And one of those can be as simple as five 19 inch pieces of wire and a
> So-239 connector. MK

Why would he be better off with a 1/4 wave, with it's large vertical lobe?

82. Re: compact motorized telescoping antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 12:38:00 UTC
From: BlindVoyeur <danmar9@earthlink.net>
Message-ID: <leybc.12827$Dv2.3083@newsread2.news.pas.earthlink.net>
Source record: 97333
Body handling: Inline uuencoded payload not displayed: Screwdriver Antenna.url

```
***Try looking at one using a modified electric screwdriver as shown in the
attachment.
Dan
**********************************************************************

"Jonathan Barraclough" <solar-flight@earthlink.net> wrote in message
news:Kcl9c.3101$Dv2.3073@newsread2.news.pas.earthlink.net...
> Hello everyone,
>
> This is my first post. I'm developing a product that needs a very compact
> automatic/motorized
> telescoping antenna. Something similar to a car power antenna but
> smaller and more compact. I was wondering if in anyone's antenna
> experience you've ever run across something like that? If so, could
someone
> please direct me to where I could find such a thing?
>
> Thanks,
> Jonathan B.
>
>

[Inline uuencoded payload not displayed: Screwdriver Antenna.url]
```

83. Re: Doppler RDF Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 12:38:35 UTC
From: Dave <noone@nowhere.com>
Message-ID: <6fqdncFCg8vTLfPdRVn-tA@crocker.com>
Source record: 97334

yes, the basic design is bidirectional. it has been a while since I played
with it, but I think you could design it for one frequency and get a
cardioid pattern by spacing the antennas 1/4 wave apart and using feedlines
that are 1/4 wave longer to one than the other.

"George" <look@signature_to.reply> wrote in message
news:D0tbc.13712$lt2.10196@newsread1.news.pas.earthlink.net...
> Nice and simple design, but as I understand it this design has 180 degree
> ambiguity. Is that correct?
>
> George
>
>
>
> --
> Email replies to:
> "Dave" <noone@nowhere.com> wrote in message
> news:Xtidncx7hJeH-fDdRVn-sA@crocker.com...
> > there is a 2 element design on my web site that is extremely simple and
> > compact. http://www.k1ttt.net/technote/doppler.html
> >
> > "George" <look@signature_to.reply> wrote in message
> > news:SQ6bc.11380$Dv2.2937@newsread2.news.pas.earthlink.net...
> > > Is anyone familiar with three-element quarter-wave or half-wave
(Adcock)
> > > Doppler antennas for RDF applications? These antennas are most
commonly
> > > seen as four-element designs, but I'd like to build a three-element
> > version
> > > that trades off directional accuracy for smaller size. I've come
across
> > > articles on the Web stating that they *SHOULD* work, but I haven't
found
> a
> > > reference to one that has actually been built.
> > >
> > > Thanks in advance.
> > >
> > > George K6GW
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84. Re: NMO or UHF Mobil Mount?????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 13:15:25 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <106tepbt0m8dsf0@corp.supernews.com>
Source record: 97335

<k5fte_ech@webtv.net> wrote in message
news:5881-406E234F-2@storefull-3152.bay.webtv.net...
> Greetings All,
>
> From a performance standpoint, which is better, a UHF or NMO mount for a
> dualband VHF/UHF mobil antenna.
>
> Reply to my e-mail direct. k5fte_ech@webtv.net
>
> 73's
>
> Earl
>
The NMO is easier to mount in a blind hole; you need only be able to fish
the coax.
It also presents a lower profile when the antenna's removed.
NMO is my choice when you drill a hole in sheet metal.
Electrical performance is a wash.
73
H.
NQ5H

85. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 15:53:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rumt60dropptjmohhka5afovkb1hnhio6h@4ax.com>
Source record: 97336

On Sat, 3 Apr 2004 06:36:31 -0500, "Dave VanHorn" <dvanhorn@cedar.net>
wrote:

>> You would be better off with a 1/4 wave ground plane on 2m. Seriously.
>> And one of those can be as simple as five 19 inch pieces of wire and a
>> So-239 connector. MK
>
>Why would he be better off with a 1/4 wave, with it's large vertical lobe?

Hi Dave,

For any of a couple of reasons, principal among them being simplicity.
I have 2M, 220 and 440 versions with drooping radials that match quite
easily and couldn't be any cheaper for only the cost of the SO239. As
for "it's large vertical lobe," I am not sure what you mean by that.
The 5/8ths has more gain, but not so much more in a band and
application that is dominated by line of sight communication. If the
difference between the two is important to getting into a repeater,
getting into the repeater is not the same as full quieting and can be
an obnoxious advantage suffered by those who have to listen to a poor
connection. Such problems are more simply remedied by elevating the
existing antenna than trying to "add gain."

73's
Richard Clark, KB7QHC

86. Re: cell phone antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 15:59:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cdnt60do2acukbgtkv7ub0jora3ac4b5l0@4ax.com>
Source record: 97337

On Sat, 03 Apr 2004 11:23:46 GMT, Ken <cprstn54zz@att.net> wrote:

>When using one of those external, mag-mount antennas that plug into
>the antenna jack just below the stubby antenna of a flip phone, it is
>better to remove the stubby antenna?
>
>On receive, I would think it makes little difference. On transmit,
>however, if the stubby antenna is not removed, won't energy be wasted
>on in-vehichle propagation that would be better directed to the mag
>mount on the roof?
>
>Ken KC2JDY

Hi Ken,

Do you have the option to removing it? If so, goferit.

If not, then the jack must disconnect it when you insert your external antenna (VCR/DVD products have such switching jacks that look no different than conventional RCA bulkhead connections). If this option does not exist, then the manufacturer must consider their paralleling of having no negative consequence in efficiency (which is recovered and supplemented in the better external antenna situation). However, this last is simply a guess that can be borne out only through your experience.

73's
Richard Clark, KB7QHC

87. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 16:00:06 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406edff5_1@corp.newsgroups.com>
Source record: 97338

Mark Keith wrote:
> Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
>
>>A 102 ft dipole 40 feet in the air fed with 50 ft of ladder-line
>>tuned with a dual-gang variable cap on the antenna side of a balun/
>>choke and no tuner box. Doesn't that sound like a perfect 75m field
>>day antenna?
>
> I hope you are successful in making people think so. :/ It'll be
> easier pickings for me and my superior, lower overall loss, radiating
> device. :) I already use the *perfect* 75m field day antenna. It's a
> regular old full size coax fed dipole. Why would anyone want to
> clutter up low loss perfection? Boggles my mind...:/ But it's ok, like
> I said, it's to my advantage on that bug infested night in June. I
> hope everyone else is using G5RV's, windoms, isotrons, EH's and other
> such things.. Makes it easier for us. .:) MK

I suspect the above antenna is more efficient than your coax-fed dipole.
There's negligible loss in the 50 ft. of ladder-line and negligible loss
in the series caps. No tuner required, therefore no lossy coil. So where's
the loss? Please be specific and provide data to back it up.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

88. Re: Hi, bwallpapers, darling

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 16:17:02 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <pkot60h7p1afe47i8dqmqa85esnn2sopks@4ax.com>
Source record: 97339

On Fri, 02 Apr 2004 17:15:54 -0600, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>robert@spectra.eng.hawaii.edu wrote:
>> I have a document attached, which should solve your problems.
>
>Surprise!!!! The attached .zip file contains a virus or worm
>according to Norton Antivirus 2004.

The latest evil virus spreading trick has been to put the dangerous
file extensions inside a ZIP file.

Anyone who runs an executable file from an unknown source is real
close to asking to have their system trashed.

Although, the original message is true. Running that file would stop
you from worrying about your current problems.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

89. Re: NMO or UHF Mobil Mount?????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 16:18:27 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <irot6090scqb89rdjmp5jar6040c478al0@4ax.com>
Source record: 97340

On Sat, 3 Apr 2004 07:15:25 -0600, "H. Adam Stevens, NQ5H"
<NQ5H@ARRL.net> wrote:

>The NMO is easier to mount in a blind hole; you need only be able to fish
>the coax.
>It also presents a lower profile when the antenna's removed.
>NMO is my choice when you drill a hole in sheet metal.
>Electrical performance is a wash.
>73

Also, I understand that many cell phone antennas also use the NMO.
This might turn a negative into a positive when reselling the car.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

90. Tower f/s @ HDTVForum.com (NJ)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 17:05:29 UTC
From: shamrock2020@webtv.net
Message-ID: <27404-406EEED9-54@storefull-3277.bay.webtv.net>
Source record: 97341

Antenna tower for sale in the classified section of
htt://www.hdtvforum.com

I'm in northern NJ.

91. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 17:25:34 UTC
From: richardharrison@webtv.net
Message-ID: <12341-406EF38E-20@storefull-3253.bay.webtv.net>
Source record: 97342

Dan Jacobson wrote:
"Just curious, what is the result of computer modeling for the ideal shape of Yagi elements?"

Advantage of a Yagi is gain in a small space due to close element spacing. This also results in lower radiation resistance as the size goes down with increased coupling and gain. To get a more convenient Yagi drivepoint impedance (5 ohms is not usually convenient), a folded dipole is often used as the driven element. That can multiply the impedance by 4. See "Multi-Element V-H-F Beam Antennas" section of Editors and Engineers "The Radio Handbook", William I. Orr, W6SAI, Editor 15th Edition.

The tapered elements, large at the boom and small at the tip as shown in the "ARRL Antenna Book", are mechanically sound but the taper is the reverse of that needed for wide bandwidth.

Cones which grow in size from feedpoint to open ends have an advantage of more uniform characteristic impedance.

Kraus says on page 229 of his 1950 edition:
"Whereas the characteristic impedance of a biconical antenna is uniform, the impedance of antennas of shapes other than conical is nonuniform."

Terman says on page 921 of his 1955 edition:
"A particularly effective manner of utilizing the thick antenna principle to obtain a wideband is to employ a cone antenna. Excitation at the apex starts a spherical wave, as illustrated in Fig. 23-56, which spreads out along the cone and in adjacent space without reflection until reaching the end of the cone."

I don`t know what a computer program indicates as an ideal shape for a Yagi`s driven element. The conical element shape may be a candidate for computer optimization. Kraus and Terman have suggestions about the apex angle and length of the cone.

Best regards, Richard Harrison, KB5WZI

92. Coax choke, losses and ferrite

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 18:07:51 UTC
From: Kees <substitute-with-my-name-and-that-is-kees-@stuurt.nl>
Message-ID: <anut60hdrlifh924f2tsau67jetocqu7l2@4ax.com>
Source record: 97343
Cross-posted to: alt.radio.amateur,alt.ham-radio,alt.ham-radio.hf,rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Hi to you all !

I have this question of which I am curious what you think of it.

In my situation it's about shortwave listening, not transmitting.

I have understood that it's a good idea to put a HF choke directly
under the feedpoint of an antenna (mine is a T2FD with balun) to
filter noise etc from PC's, TV, from the signal.
Also ferrite in the coax line should decrease the noises.

I was wondering it, besides the filtering of unwanted products, also
WANTED signals are being attenuated. So is the signal weakened as
well?

I myself have 7 turns through 2 ferrite cores under the feedpoint of
the T2FD.
All works ok to me, but I was just wondering......

So is the weapon worse than the thread ??

And is it for transmitting only or also applicable for listening
situation?

Thanks for your time!

73's

Kees

93. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 18:16:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <l1ut601fr93c2hshv1qg5ltlt9j8e4p0lc@4ax.com>
Source record: 97344

On Sat, 3 Apr 2004 11:25:34 -0600 (CST), richardharrison@webtv.net
(Richard Harrison) wrote:
>Kraus says on page 229 of his 1950 edition:
>"Whereas the characteristic impedance of a biconical antenna is uniform,
>the impedance of antennas of shapes other than conical is nonuniform."

Hi Richard,

This analysis is derived from Schelkunoff's work that was later (1952)
offered in his "Advanced Antenna Theory." This material is offered in
a more accessible form in "Antennas and Radiowave Propagation," Robert
E. Collin, 1985 with the following observation:
"In his book Schelkunoff shows .... the biconical antenna theory
provides a theoretical basis for assuming a sinusoidal current
distribution on thin-wire antennas."

Basically, the biconical antenna theory is the basis for the
fundamental treatment of antenna as a non-terminated transmission line
by which all thin-wire antennas may be shown to devolve from (as the
degenerate forms of infinitely small radius cone sections). Such
treatment allows those interested to observe both the SWR relationship
(E/I distribution) of thin-wire elements compared to what you
correctly identify as the uniform impedance of the large cone angle
forms and both be mathematically consistent with such diverging
characteristics (which is to say those who oppose the discussion of
Antenna as transmission line are unaware of this work).

However, as to its application in a Yagi-Uda design, it has to be
particularly unrewarding as nearby elements preclude a full-blown
conic development without the attending physical interference.

73's
Richard Clark, KB7QHC

94. Re: Latton antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 18:44:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o80u609aditvc7ok7vgfevkvqnmma6tdhn@4ax.com>
Source record: 97345

On Fri, 02 Apr 2004 00:40:45 GMT, Irv Finkleman <finkirv@shaw.ca>
wrote:

>Drbob92031 wrote:
>>
>> Has anyone had any working experience wih the Latton antenna. Made from a
>> singel piece of TV feed line and can work all HF bands. Sounds too easy and
>> good to be true.
>> Tnx in advance de WA2EAW..Bob
>
>I've got one rolled up in my shack -- used to use it but went to other
>things after a while. The performance was not bad, but making one that
>is strong enough to span any distance is difficult. I had to run a piece
>of nylone cord through the dielectric, threaded in and out.
>
>Another chum, now a sient key, used one for years and seemed happy with
>it.
>
>The spelling is Lattin, and you can find it on the net through Google.
>
>Irv -- VE6BP

Hi Bob, Irv,

Over the past couple days I've done some investigation with this
design and it has as many dead-ends as any "revolutionary" idea that
has been revealed here by breathless inventors.

For one, there are any number of hits in the search engines for the
Lattin (W4JRW) antenna. However, without exception they all reference
the same pdf file. Examination of this file does not do the inventor
justice through the omission of William J. Lattin's name (aside from
what would be due to the presumption of the antenna's name which along
the way has been corrupted). I only found his full name through Irv's
earlier (2002) posting here (W4JRW has been re-assigned as a vanity
call). Any attempt to confirm the presumed patent (1960) is
frustrated by the lack of its number (required for a patent search,
name searches are limited to post 1976).

However, when I attempted to analyze the design in EZNEC, it showed
nothing near the presumed bands without extensive trimming (albeit,
the suggest foam twin lead suggested by that single pdf reference is
not amenable to EZNEC analysis, and I simply used ladder line). Even
then, the various "traps" are neither intuitively designed nor
correctly driven. Hence with only one design extant, and the reports
of difficulty in tuning it up (not withstanding Irv's suggestions),

and confounding results from modeling; it then seems suspect on the face of it. The "theory" offered is tantalizing, but I see so many problems, that such "theory" appears to be more the result of a fantasy with numbers than the actual proof of the design/test/data cycle.

Let's face it, if the design were serviceable, it would be more current given 44 years of exposure.

73's
Richard Clark, KB7QHC

95. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 19:33:24 UTC
From: richardharrison@webtv.net
Message-ID: <25867-406F1184-110@storefull-3252.bay.webtv.net>
Source record: 97347

Richard Clark wrote:
"This analysis is derived from Schelkunoff`s work that was later (1952) offered in his "Advanced Antenna Theory"."

Kraus acknowledges this at the beginning of his 1950 "Antennas" chapter 8:
"This problem (input resistance and reactance) is most simply approached by Schelkunoff`s treatment of the biconical antenna (S.A. Schelkunoff, "Electromagnetic Waves"1943) which will be outlined in the following sections."

As Reg Edwards says, these guys all copied each other`s work. But, they nearly always gave each other the credit due.

Other than a few discones, which have 180-degrees as one of their vertex angles, I don`t see many amateur conical antennas despite the obsession with bandwidth and SWR. Skeletal designs might retain desirable characteristics without extreme cost and complexity.....Nah, the plain thin wire dipole is too simple and easy.

Best regards, Richard Harrison, KB5WZI

96. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 19:35:29 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <WrOdnYhdvrSTj_Ld4p2dnA@comcast.com>
Source record: 97346

> The 5/8ths has more gain, but not so much more in a band and
> application that is dominated by line of sight communication.

Funny, it's made a significant difference for me in the decade or so I've
been using them.

A folded monopole is almost as simple, and has more gain as well.
http://www.w4dex.com/kc4fwc/proj_2.htm

If the
> difference between the two is important to getting into a repeater,
> getting into the repeater is not the same as full quieting and can be
> an obnoxious advantage suffered by those who have to listen to a poor
> connection.

?? More gain is worse?
I don't follow you. Being able to run into the same machines at lower power
is always good for my batteries, and taking me from noisy to quiet on the
same power is always a good thing.

> Such problems are more simply remedied by elevating the
> existing antenna than trying to "add gain."

Altitude is king, as long as you don't throw it all away in the feedline.

97. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 20:09:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dv4u60do8rck1n0jgblqt8889padcf7qrn@4ax.com>
Source record: 97348

On Sat, 3 Apr 2004 14:35:29 -0500, "Dave VanHorn" <dvanhorn@cedar.net>
wrote:

>
>> The 5/8ths has more gain, but not so much more in a band and
>> application that is dominated by line of sight communication.
>
>Funny, it's made a significant difference for me in the decade or so I've
>been using them.

Less than 1 dB is significant? Are we talking about VHF FM DXing?

>> If the
>> difference between the two is important to getting into a repeater,
>> getting into the repeater is not the same as full quieting and can be
>> an obnoxious advantage suffered by those who have to listen to a poor
>> connection.
>
>?? More gain is worse?

More gain is not always enough gain. Again, if this is about getting
into a repeater, the less than 1dB difference that holds it open with
a scratchy signal is no panacea. There is nothing your contacts can
do to improve your poor S/N ratio; so, in a sense, it being better is
only from your point of view and an imposition on others to strain
their ears.

>I don't follow you. Being able to run into the same machines at lower power
>is always good for my batteries, and taking me from noisy to quiet on the
>same power is always a good thing.

The same logic applies to getting your buddies to push your car to
boost your MPG. Better MPG cannot be said to be bad, but then you
aren't the one doing the pushing.

>> Such problems are more simply remedied by elevating the
>> existing antenna than trying to "add gain."
>
>Altitude is king, as long as you don't throw it all away in the feedline.
>
Adding altitude also overcomes obstructions that could easily strip
away the added "loss" of the line.

My buddy's 2M repeater is over a nearby hill from me (I am roughly 100
feet below its crest) and 10 miles away. I can hit it with a pocket
HT (100mW with a cheesy antenna) from inside my basement, but move
into another room and it's a morgue. A "better" antenna is hardly

going to do as good a job as the same poor one above ground level. A "better" antenna will not fit in the pocket, so "better" is entirely subjective with its objective analysis not so much very better.

73's
Richard Clark, KB7QHC

98. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 20:27:49 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406f1eb4$1_3@corp.newsgroups.com>
Source record: 97349

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>I am satisfied that your brain is suffering from proton decay a few
>>trillion years ahead of the predicted time.
>
> Do you have any measurements, data, references.

Richard, in your case, the evidence is prima facie.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

99. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 20:36:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406f20c5_3@corp.newsgroups.com>
Source record: 97350

Dave VanHorn wrote:
> ?? More gain is worse?

Depends on the TOA. Around Phoenix, we had a mountaintop repeater
that we could hit better with a 1/4 wave than with a 5/8 wave when
we were close to the base of the mountain upon which it resided.
That's where we camped out a lot.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

100. not cutting excess wire beyond antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 21:19:19 UTC
From: Dan Jacobson <jidanni@jidanni.org>
Message-ID: <87isggiwtk.fsf@jidanni.org>
Source record: 97354

Assume one has borrowed a spool of wire, on the condition that one is not allowed to cut it.

OK, say we'll make a folded dipole. Can one just ignore the unused portion still on the reel beyond the contact clamp? We should roll it away from the antenna a little, yes. Assume we have only used 1/2 the wire. I suppose effects go up as frequency goes up. Probably the best answer is to pick another design that will use the whole reel.

Bet Cebik never thought of this problem.

101. Responses to my question of the Lattin antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 21:38:02 UTC
From: drbob92031@aol.com
Message-ID: <20040403163802.18619.00000635@mb-m07.aol.com>
Source record: 97351

Many thnaks to those who took the time to respond.
73 WA2EAW..Bob

102. ton of wire to apply at 90 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 21:52:03 UTC
From: Dan Jacobson <jidanni@jidanni.org>
Message-ID: <87ad1sivb0.fsf@jidanni.org>
Source record: 97353

Assume you have tons of wire, string, and hilly treed land, and want to listen to FM 90 Mhz. Impressed with the 1/2 wave dipole nulling out competing stations, you think, "I am the owner of tons of wire, I will put my wire to work to pull it in even better."

What design will utilize my ton of wire at such a short wavelength? Don't tell me to trade my ton of wire for Yagi parts, as we are on a deserted island. Assume mom will be angry if I cut the wire more than once or twice.

103. a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 22:05:36 UTC
From: Dan Jacobson <jidanni@jidanni.org>
Message-ID: <878yhciuof.fsf@jidanni.org>
Source record: 97355

Assume there is only one spot on your hilly land that you can pull in your favorite FM station, 90 Mhz, over the competition, and only with a horizontal dipole at a certain azimuth. A Yagi doesn't help, as we are depending fully on the null.

Assuming we are stuck with this position, how can we enhance our dipole? I am the owner of great sheets of metal. Can I put my great sheets of metal to use in e.g. a dipole made of two great sheets of metal?

104. Re: Difference between 5/8 and 3/4 lambda

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 22:11:11 UTC
From: Marcello <marcello110980@yahoo.it>
Message-ID: <c4ncdloji1@fata.cs.interbusiness.it>
Source record: 97352

```
Thanks to All.
I'll try to use this demo program!
best

Marcello
```

--
www.rogerk.it
"Ca c'havi chi&#65533; codda, attacca u poccu"

"Richard Clark" <kb7qhc@comcast.net> ha scritto nel messaggio
news:grio60ddsc28sttnnmb04utmdl4nus445d@4ax.com...
> On Mon, 29 Mar 2004 21:13:12 +0200, "Marcello"
> <marcello110980@yahoo.it> wrote:
> >Hello!
> >wich are the differences between two monoband ground plane vertical
antenna
> >5/8 lambda and 3/4 lambda, with orizontal radilas?(90&#65533;).
> >There is a developing system software to view this difference?
> >Marcello
>
> Hi Marcello,
>
> Try:
> http://www.eznec.com/
>
> The FREE DEMO will reveal these differences.
>
> 73's
> Richard Clark, KB7QHC

105. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 22:41:37 UTC
From: Dan Jacobson <jidanni@jidanni.org>
Message-ID: <87y8pchefy.fsf@jidanni.org>
Source record: 97356

> I contacted LB about the problem

This page details the information that is available about the URL
http://www.cebik.com/gup/gup21-5.gif that is available in the WWWOFFLE cache.

Header
The cached header contained the following items (this is before
WWWOFFLE has modified it and possibly censored some items).

HTTP/1.0 403 Forbidden
Connection: close
Date: Thu, 01 Apr 2004 23:01:29 GMT
Server: Apache/1.3.26 (Unix) FrontPage/5.0.2.2510 PHP/4.3.4
Content-Type: text/html; charset=iso-8859-1

Sure hope there are no assumptions made about how we are fetching his pages.

106. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 23:40:15 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <5_-dnduDHJXw1vLd4p2dnA@comcast.com>
Source record: 97357

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:406f20c5_3@corp.newsgroups.com...
> Dave VanHorn wrote:
> > ?? More gain is worse?
>
> Depends on the TOA. Around Phoenix, we had a mountaintop repeater
> that we could hit better with a 1/4 wave than with a 5/8 wave when
> we were close to the base of the mountain upon which it resided.
> That's where we camped out a lot.

I'm aware that there are off cases where the normal rules don't apply, but
in general, higher gain and a flatter pattern, is always better than lower
gain and heating the clouds..

I've not seen many hairpins out there, and they are just a small bit more to
build than the GP.
Why is that? Are they just not well known?

107. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 23:45:53 UTC
From: jgboyles@aol.com
Message-ID: <20040403184553.12493.00000676@mb-m16.aol.com>
Source record: 97358

>Assume there is only one spot on your hilly land that you can pull in
>your favorite FM station, 90 Mhz, over the competition, and only with
>a horizontal dipole at a certain azimuth. A Yagi doesn't help, as
>we are depending fully on the null.

Commercial FM stations are vertically polarized, cause most of the people that listen are in cars. I have found this to be true in my homebrew antennas (at least around here). You might try changing the polarization, and see if that helps.

Not sure why you think a yagi won't help. A 3 or 4 el. yagi with a good F/B and proper polarization will be a big improvement over the end nulls of a dipole.

Using great sheets of metal for a dipole will increase the bandwidth, but that is not what you are looking for. Using the great sheets of metal for a screen reflector, or corner reflector could produce some big improvements.

73 Gary N4AST

108. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-03 23:50:47 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <h5Ibc.22848$Q45.18154@fed1read02>
Source record: 97359

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20040403184553.12493.00000676@mb-m16.aol.com...
> >Assume there is only one spot on your hilly land that you can pull in
> >your favorite FM station, 90 Mhz, over the competition, and only with
> >a horizontal dipole at a certain azimuth. A Yagi doesn't help, as
> >we are depending fully on the null.
>
> Commercial FM stations are vertically polarized, cause most of the
people
> that listen are in cars.

I thought the FCC required equal EIRP of both vertical AND horizontal
polarization for an FM broadcast station? Did the horizontal requirement get
deleted?

Ed
wb6wsn

109. Re: not cutting excess wire beyond antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 00:06:49 UTC
From: jgboyles@aol.com
Message-ID: <20040403190649.12493.00000677@mb-m16.aol.com>
Source record: 97360

>Assume one has borrowed a spool of wire, on the condition that one is
>not allowed to cut it.
>

Dan, Wire is so cheap and plentiful, if I wanted to put up a folded dipole,
the very last thing I would do is borrow wire with the stipulation that I could
not cut it.:-)

I don't know, but I bet LB W4RNL has not thought about cut or not to cut.

73 Gary N4AST

110. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 00:16:34 UTC
From: jgboyles@aol.com
Message-ID: <20040403191634.12493.00000678@mb-m16.aol.com>
Source record: 97361

>I thought the FCC required equal EIRP of both vertical AND horizontal
>polarization for an FM broadcast station? Did the horizontal requirement get
>deleted?

I don't know, just reporting on the results of my tinkering, I get by far the best signal with vertical polarization. I assumed that was becuse they wanted to target automobiles. Maybe the EIPR of the stations in both the vertical and horizontal planes in my area are not in compliance?
73 Gary N4AST

111. Re: Latton antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 00:24:50 UTC
From: Phillip Jockell <philj@xxspearnet.net>
Message-ID: <Xns94C0C57CCA6F3pj12345pjpj@216.196.97.132>
Source record: 97362

Bob,

I found a bit of information from this site, though
it is in French:

http://www.connectinfo.fr/ham/radio1.html

It has about 1 Mbyte of PDF's concerning multiband
antennae made from twinlead. It is certainly a lot more
than I have found by searching for "lattin" antenna.

I ran the text from the PDF's through
the Google translation page and it came out mostly
gibberish, but some parts are understandable (I hate
being ignorant of languages.)

I am no antenna expert at all, but it looks interesting.
I have not yet attempted building one, though I am
thinking of playing with a 2 or 3 band version.

Hope this is of interest to you.

Phil - N4GWV

(remove x's from email address to reply directly)

drbob92031@aol.com (Drbob92031) wrote in
news:20040401123850.04343.00000540@mb-m29.aol.com:

> Has anyone had any working experience wih the Latton antenna.
> Made from a singel piece of TV feed line and can work all HF
> bands. Sounds too easy and good to be true.
> Tnx in advance de WA2EAW..Bob

112. Re: Latton antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 00:37:30 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <eNIbc.20458$lg.876@pd7tw2no>
Source record: 97363

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:o80u609aditvc7ok7vgfevkvqnmma6tdhn@4ax.com...
> On Fri, 02 Apr 2004 00:40:45 GMT, Irv Finkleman <finkirv@shaw.ca>
> wrote:
>
> >Drbob92031 wrote:
> >>
> >> Has anyone had any working experience wih the Latton antenna. Made from
a
> >> singel piece of TV feed line and can work all HF bands. Sounds too
easy and
> >> good to be true.
> >> Tnx in advance de WA2EAW..Bob
> >>
> >I've got one rolled up in my shack -- used to use it but went to other
> >things after a while. The performance was not bad, but making one that
> >is strong enough to span any distance is difficult. I had to run a piece
> >of nylone cord through the dielectric, threaded in and out.
> >
> >Another chum, now a sient key, used one for years and seemed happy with
> >it.
> >
> >The spelling is Lattin, and you can find it on the net through Google.
> >
> >Irv -- VE6BP
>
> Hi Bob, Irv,
>
> Over the past couple days I've done some investigation ...

> face of it. The "theory" offered is tantalizing, but I see so many
> problems, that such "theory" appears to be more the result of a
> fantasy with numbers than the actual proof of the design/test/data
> cycle.
>
> Let's face it, if the design were serviceable, it would be more
> current given 44 years of exposure.
>
> 73's
> Richard Clark, KB7QHC

The tuning was difficult but once tuned it wasn't half bad. I accomplished
the 'trimming' by addition of a hanging tail at the open end of the 'trap'
on a couple of the bands. You
have to take the velocity factor into consideration as well. Combine the

difficulty in tuning with the problem of support and you will soon put it
away! It was a fun experiment but not worth all the time and wasted
twin lead. By going to an open feeder you do away with the velocity
factor, but the trimming is still a pain. Support problems are further
compounded. If I wanted to carry a 10/15/20m antenna it might
be worth while for field day. The only reason I got involved was after
seeing Bob, VE6TE, now SK, running one and I was never one to
pass up a chance to play around with something intriguing!

Irv VE6BP

113. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 01:44:14 UTC
From: Bob Bob <bcnntp@optusnet.com.au>
Message-ID: <e9pn4c-m68.ln@p400bob.lse.com.au>
Source record: 97366

You could make a slot antenna? ie cut a rectangle out of the metal sheet (say) 2" wide and a little over 1/2 wave at the op freq. From memory you'll get pretty close to 50/75r and the polaraisation is 90deg to the slot.

Doubt it helps but worth a mention..

Cheers Bob VK2YQA

Dan Jacobson wrote:
> Assume there is only one spot on your hilly land that you can pull in
> your favorite FM station, 90 Mhz, over the competition, and only with
> a horizontal dipole at a certain azimuth. A Yagi doesn't help, as
> we are depending fully on the null.
>
> Assuming we are stuck with this position, how can we enhance our
> dipole? I am the owner of great sheets of metal. Can I put my great
> sheets of metal to use in e.g. a dipole made of two great sheets of
> metal?

114. Re: Latton antenna question & patent number

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 01:50:04 UTC
From: carkenord@juno.com
Message-ID: <4346b55e.0404031750.4b19f9a7@posting.google.com>
Source record: 97364

> For one, there are any number of hits in the search engines for the
> Lattin (W4JRW) antenna. However, without exception they all reference
> the same pdf file. Examination of this file does not do the inventor
> justice through the omission of William J. Lattin's name (aside from
> what would be due to the presumption of the antenna's name which along
> the way has been corrupted). I only found his full name through Irv's
> earlier (2002) posting here (W4JRW has been re-assigned as a vanity
> call). Any attempt to confirm the presumed patent (1960) is
> frustrated by the lack of its number (required for a patent search,
> name searches are limited to post 1976).

I have been collecting data on the Lattin antenna for a long time.
I have quite a bit of interesting stuff, including a photocopy of the
patent.

It looks like William J. Lattin applied for a patent on this antenna
on Feb 13, 1948. The serial number of his application was 8,132. He
was granted patent #2,535,298 on Dec 26, 1950. There are 5 diagrams
used in this paperwork to help describe the Lattin antenna, including
1 vertical version.

I've made a couple of semi-serious efforts to build one, but no
success. I'm not too antenna tech. capable, nor do I have any
sophisticated test equipment, beyond an swr meter and a military grid
dipper, stuff like that. I've not attempted to model it.

I would love to see someone who understands the tech part of antennas,
and who has modelling knowledge and capabilities.....to give this
Lattin a serious effort.
Lee Carkenord KA0FPJ Denver CO

115. Lattin antenna patent number

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 01:53:17 UTC
From: carkenord@juno.com
Message-ID: <4346b55e.0404031753.1753f693@posting.google.com>
Source record: 97365

Richard Clark <kb7qhc@comcast.net> wrote in message

> Over the past couple days I've done some investigation with this
> design and it has as many dead-ends as any "revolutionary" idea that
> has been revealed here by breathless inventors.
>?> Any attempt to confirm the presumed patent (1960) is
> frustrated by the lack of its number (required for a patent search,
> name searches are limited to post 1976).
>

I have been collecting data on the Lattin antenna for a long time.
I have quite a bit of interesting stuff, including a photocopy of the
patent.

It looks like William J. Lattin applied for a patent on this antenna
on Feb 13, 1948. The serial number of his application was 8,132. He
was granted patent #2,535,298 on Dec 26, 1950. There are 5 diagrams
used in this paperwork to help describe the Lattin antenna, including
1 vertical version.

I've made a couple of semi-serious efforts to build one, but no
success. I'm not too antenna tech. capable, nor do I have any
sophisticated test equipment, beyond an swr meter and a military grid
dipper, stuff like that. I've not attempted to model it.

I would love to see someone who understands the tech part of antennas,
and who has modelling knowledge and capabilities.....to give this
Lattin a serious effort.
Lee Carkenord KA0FPJ Denver CO

116. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 02:09:05 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <57Kbc.68934$JO3.39466@attbi_s04>
Source record: 97367

Ah ha!! Cecil has proof that the universe will ultimately collapse into
the Big Crunch. He can prove proton decay!!!

20 years ago my Ph.D. Physics staff spent many lunch hours discussing,
heatedly I may add, the possibility of proton half life.

Thanks Cecil!! What's your source??

DD,

Cecil Moore wrote:

> Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>> I am satisfied that your brain is suffering from proton decay a few
>>> trillion years ahead of the predicted time.
>>
>>
>> Do you have any measurements, data, references.
>
>
> Richard, in your case, the evidence is prima facie.
> --
> 73, Cecil, W5DXP
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

117. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 02:21:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <trru60hmisl104up9unrddmkcmau05s9ps@4ax.com>
Source record: 97368

On Sun, 04 Apr 2004 02:09:05 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:
>Thanks Cecil!! What's your source??

Hi Dave,

The cycle begins again, sans measurement, sans data, sans reference
indistinguishable from the myths and old wive's tales preceding it.
SOP ;-)

73's
Richard Clark, KB7QHC

118. Re: Coax choke, losses and ferrite

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 02:45:51 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404031845.66ad65c@posting.google.com>
Source record: 97219
Cross-posted to: alt.radio.amateur,alt.ham-radio,alt.ham-radio.hf,rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

The purpose of the choke is to keep "antenna" currents off the
feedline below the antenna. It won't necessarily be helpful, because
having the feedline act as part of the antenna may not be a bad thing.
But it does help keep the system behaving like a dipole (or whatever
antenna is above the choke). There _may_ be some advantage keeping
locally generated noise out of the antenna if you prevent the feedline
from being part of the antenna, so it's usually safer to include the
choke than not...the probability is that the choked one will be better
than the unchoked one. It's generally more likely that having the
feedline act like part of the antenna will be a bad thing than a good
thing.

No need to worry about losses in the choke: some turns of the
feedline simply add the attenuation of that much feedline, nothing
more, so long as you don't physically damage the feedline.

Cheers,
Tom

Kees <substitute-with-my-name-and-that-is-kees-@stuurt.nl> wrote in message
news:<anut60hdrlifh924f2tsau67jetocqu7l2@4ax.com>...
> Hi to you all !
>
>
> I have this question of which I am curious what you think of it.
>
> In my situation it's about shortwave listening, not transmitting.
>
> I have understood that it's a good idea to put a HF choke directly
> under the feedpoint of an antenna (mine is a T2FD with balun) to
> filter noise etc from PC's, TV, from the signal.
> Also ferrite in the coax line should decrease the noises.
>
> I was wondering it, besides the filtering of unwanted products, also
> WANTED signals are being attenuated. So is the signal weakened as
> well?
>
> I myself have 7 turns through 2 ferrite cores under the feedpoint of
> the T2FD.
> All works ok to me, but I was just wondering......
>
> So is the weapon worse than the thread ??
>
> And is it for transmitting only or also applicable for listening

> situation?
>
>
> Thanks for your time!
>
>
> 73's
>
> Kees

119. Re: Latton antenna question & patent number

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 02:46:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <45tu60dintbjmim9m5fdk8ango37k7kagr@4ax.com>
Source record: 97220

On 3 Apr 2004 17:50:04 -0800, carkenord@juno.com (Lee Carkenord)
wrote:

>> For one, there are any number of hits in the search engines for the
>> Lattin (W4JRW) antenna. However, without exception they all reference
>> the same pdf file. Examination of this file does not do the inventor
>> justice through the omission of William J. Lattin's name (aside from
>> what would be due to the presumption of the antenna's name which along
>> the way has been corrupted). I only found his full name through Irv's
>> earlier (2002) posting here (W4JRW has been re-assigned as a vanity
>> call). Any attempt to confirm the presumed patent (1960) is
>> frustrated by the lack of its number (required for a patent search,
>> name searches are limited to post 1976).
>
>
> I have been collecting data on the Lattin antenna for a long time.
>I have quite a bit of interesting stuff, including a photocopy of the
>patent.
>
>It looks like William J. Lattin applied for a patent on this antenna
>on Feb 13, 1948. The serial number of his application was 8,132. He
>was granted patent #2,535,298 on Dec 26, 1950. There are 5 diagrams
>used in this paperwork to help describe the Lattin antenna, including
>1 vertical version.
>
>I've made a couple of semi-serious efforts to build one, but no
>success. I'm not too antenna tech. capable, nor do I have any
>sophisticated test equipment, beyond an swr meter and a military grid
>dipper, stuff like that. I've not attempted to model it.
>
>I would love to see someone who understands the tech part of antennas,
>and who has modelling knowledge and capabilities.....to give this
>Lattin a serious effort.
> Lee Carkenord KA0FPJ Denver CO

Hi Lee,

Thanks for the patent number, it makes a world of difference between
conjecture and what "is."

For one, it quite plainly illustrates that the pdf file that dominates
most links falls seriously short at the drive point as I had figured.
It also quite plainly illustrates EXACTLY the method that Irv reports
in tuning it to make it operational:
On Sun, 04 Apr 2004 00:37:30 GMT, "Irv Finkleman"

<finkirv@shaw.ca> wrote:
> I accomplished the 'trimming' by addition of a hanging tail at the
>open end of the 'trap' on a couple of the bands.
which is also missing from the pdf treatment. This more or less
confirms my suspicion that the pdf treatment was a pipe dream.

I will look into the patent's model further.

73's
Richard Clark, KB7QHC

120. Re: Antenna Reactance Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 02:53:05 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <406f7902_5@corp.newsgroups.com>
Source record: 97221

Dave Shrader wrote:
> 20 years ago my Ph.D. Physics staff spent many lunch hours discussing,
> heatedly I may add, the possibility of proton half life.
>
> Thanks Cecil!! What's your source??

My latest source is "The Five Ages of the Universe" by Adams & Laughlin.
"Recall that a slight excess of matter over antimatter was generated
during the first microsecond of cosmic history. The universe can have
more matter than antimatter only if some physical process generates
extra baryon number. But if such a baryon number violating process
can occur, the protons are doomed. It is only a matter of time before
they must decay."
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

121. Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 03:46:15 UTC
From: JJ <radiobuff0@mailcity.moc>
Message-ID: <qoudnRKu3b6-F_LdRVn-hA@gbronline.com>
Source record: 97225

I am thinking of putting up a windom antenna (see
http://www.hfantennas.com/Products.htm)and would like comments from
anyone who is using or has used one about the performance. Primay band
of interest will be 40 meters.

Thanks

122. Re: not cutting excess wire beyond antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 03:48:55 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <406F85A7.AE282B82@cwis.net>
Source record: 97222

Dan,
Folding, or wrapping the wire around it's self in effect
makes that doubled portion 'dissapear'. So, doubling the
excess wire until the unneeded portion 'dissapears', should
work. Or, just make a loop for the frequency you want. That
always uses more wire than a dipole...
'Doc

123. Re: Coax choke, losses and ferrite

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 04:05:25 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-B46371.20051903042004@news.sf.sbcglobal.net>
Source record: 97224
Cross-posted to: alt.radio.amateur,alt.ham-radio,alt.ham-radio.hf,rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

In article <anut60hdrlifh924f2tsau67jetocqu7l2@4ax.com>,
Kees <substitute-with-my-name-and-that-is-kees-@stuurt.nl> wrote:

> Hi to you all !
>
>
> I have this question of which I am curious what you think of it.
>
> In my situation it's about shortwave listening, not transmitting.
>
> I have understood that it's a good idea to put a HF choke directly
> under the feedpoint of an antenna (mine is a T2FD with balun) to
> filter noise etc from PC's, TV, from the signal. Also ferrite in the
> coax line should decrease the noises.
>
> I was wondering it, besides the filtering of unwanted products, also
> WANTED signals are being attenuated. So is the signal weakened as
> well?
>
> I myself have 7 turns through 2 ferrite cores under the feedpoint of
> the T2FD. All works ok to me, but I was just wondering......
>
> So is the weapon worse than the thread ??
>
> And is it for transmitting only or also applicable for listening
> situation?

It won't hurt you to have the choke. Basically it's purpose is to
isolate the antenna feed point form the coax transmission line.

On transmit it helps the antenna behave according to its design by
isolating the coax outer shield from it by presenting high impedance to
the RF current.

On transmit the radio generates a differential signal on the coax that
the choke will not prevent passing on to the antenna.

On receive it prevents noise from the AC power the radio is plugged into
from traveling up the shield to the antenna again by presenting high
impedance to the RF current on the shield. This prevents the AC system
noise from mixing with the signals the antenna is picking up and
conveying it to the radio.

The choke stops the common mode current on the coax shield and it will
not affect the signals the antenna picks up from the distance because

the antenna generates a differential signal not blocked by the choke.

--
Telamon
Ventura, California

124. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 04:05:45 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c4o1ik$2jioin$1@ID-225206.news.uni-berlin.de>
Source record: 97223

Most of the FM stations broadcast circular polarization, but it seems
that more of the hoz part gets attenuated by trees more than vertical.
So if there is a shallow angle to the transmitter, through some vegetation
Vert seems more dominant.

But I think this changes with over-the-horizon, and it gets more Hoz,
but I have not measured this.

On the original question, you can add antenna patterns if they are phased
right.
You can put a piece of metal in the direct path to block signal, may go down
10 dB or so.
Metal could be screen wire mesh between dipole and unwanted transmitter 10
by 10,
centered to get phase null in the back.

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20040403191634.12493.00000678@mb-m16.aol.com...
> >I thought the FCC required equal EIRP of both vertical AND horizontal
> >polarization for an FM broadcast station? Did the horizontal requirement
get
> >deleted?
>
> I don't know, just reporting on the results of my tinkering, I get by far
the
> best signal with vertical polarization. I assumed that was becuse they
wanted
> to target automobiles. Maybe the EIPR of the stations in both the
vertical
> and horizontal planes in my area are not in compliance?
> 73 Gary N4AST

125. Re: cell phone antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 04:35:33 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c4o3k4$2kof4i$1@ID-225206.news.uni-berlin.de>
Source record: 97226

we did testing on antennas inside and on top of car, about 6 dB difference
(better outside)
for Both TX/RX. with same antenna as on cell

problem is stubby not removable, something seems mismatched,

but on many cell phones the ground is really just some of the metal parts
inside, no good "ground" at all
so the antenna is only part of the radiating area, the cell phone and your
arm the rest of the antenna.

Which means it may be hard (with a cellphone) to get RF into/outof a coax to
an outside antenna, unless it has a real connector (most do not, cost too
much, no need for it)

<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<<

"Ken" <cprstn54zz@att.net> wrote in message
news:ee7t60tksgf0pckeo63buufvr57tkkvhrq@4ax.com...
> When using one of those external, mag-mount antennas that plug into
> the antenna jack just below the stubby antenna of a flip phone, it is
> better to remove the stubby antenna?
>
> On receive, I would think it makes little difference. On transmit,
> however, if the stubby antenna is not removed, won't energy be wasted
> on in-vehichle propagation that would be better directed to the mag
> mount on the roof?
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

126. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 05:22:47 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c4o637$fm5$1@mail.specsol.com>
Source record: 97228

Dan Jacobson <jidanni@jidanni.org> wrote:
> Assume there is only one spot on your hilly land that you can pull in
> your favorite FM station, 90 Mhz, over the competition, and only with
> a horizontal dipole at a certain azimuth. A Yagi doesn't help, as
> we are depending fully on the null.

> Assuming we are stuck with this position, how can we enhance our
> dipole? I am the owner of great sheets of metal. Can I put my great
> sheets of metal to use in e.g. a dipole made of two great sheets of
> metal?

Nonsense; a properly constructed yagi will perform far better at rejecting
the undesired signal and maximizing the desired one than any dipole.

--
Jim Pennino

Remove -spam-sux to reply.

127. Re: US Tower/Yaesu 800 rotor problems

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 05:46:54 UTC
From: Billy <billy@cmaaccess.com>
Message-ID: <406fa8b8$0$32592$2c56edd9@news.cablerocket.com>
Source record: 97227

Thanks for all of the suggestions, I finally got it worked out. If anyone has this problem, this is how you do it. You have to take the rotor plate out of the tower, install the rotor where the plug points at one of the tower legs. Put the plug on the rotor and reinstall rotor, plate, and cable in one piece. If you put the rotor on the plate in the tower, the cable will not go on. After it is installed, you can't remove the rotor cable. It will just barely work, and you have to be commited to get it to fit. Thanks again for all the advice and help.

Best 73.....WR5X

Billy

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message news:m_udnfRrUoMG0PbdRVn-uw@comcast.com...
> Can you drill new mounting holes, so the plug is facing one of the corners?
> If this won't work, you can always modify the plug.
>
> Tam/WB2TT
> "Billy" <billy@cmaaccess.com> wrote in message
> news:406a50e4$0$32586$2c56edd9@news.cablerocket.com...
> > I am having a problem. I am in the process of installing my US Tower tmm
> > 541ss. I have the yaesu 800sdx rotor. When I hook the rotor cable to the
> > side of the rotor, it sticks out just enough that the tower will not go
> all
> > the way down. If I let the tower down, it will break the end of the plug
> > off. I tried turning the rotor, but this only moved the problem. Does
> > anyone know of a solution to this problem. I am sure I am not the only
> one
> > who has ran into this. I sent US Tower an email asking their advice, but
> of
> > course I haven't heard anything from them. Does anyone know if Yaesu
> > sells/makes a plug at a 90-degree angle or anything? According to the
> > paperwork with the tower, they suggest the Yaesu 800 rotor. If you have
> any
> > suggestions please email me direct. billyatcmaaccess.com. Of course
> > replace at with @ to hold down the spam. Thanks in advance for any help.
> >
> > Best 73.....WR5X

> >
> >
> >
> >
>
>

128. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 06:26:30 UTC
From: bunnydawg <r.heenan@sympatico.ca>
Message-ID: <7UNbc.90582$1A6.2615807@news20.bellglobal.com>
Source record: 97230

I have a friend down in Missouri that just put one up. He's having
excellent results with it from what i gather.
Winston are you around somewhere ?
Robert
VE3 something or other.
"JJ" <radiobuff0@mailcity.moc> wrote in message
news:qoudnRKu3b6-F_LdRVn-hA@gbronline.com...
> I am thinking of putting up a windom antenna (see
> http://www.hfantennas.com/Products.htm)and would like comments from
> anyone who is using or has used one about the performance. Primay band
> of interest will be 40 meters.
>
> Thanks
>

129. Re: Hugh antenna in Bergen County New Jersey

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 06:29:15 UTC
From: bunnydawg <r.heenan@sympatico.ca>
Message-ID: <IWNbc.90614$1A6.2616617@news20.bellglobal.com>
Source record: 97231

Glad i could share it with the group. Thanks for the comment Tam. At least
i know someone did try it out.
Robert
VE3 something or other.

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:gb-dne64PsBYmvPdRVn-sA@comcast.com...
> Like you say, neat!
>
> Tam/WB2TT
> "bunnydawg" <r.heenan@sympatico.ca> wrote in message
> news:fYrac.50802$1A6.1103618@news20.bellglobal.com...
> > I just found this recently and it's a rather interesting site to find
out
> > who owns a tower. Kinda neat have a look.
> > http://www.berkana.com/tower.php3
> >
> > Robert
> > VE3 something or other
> >
> > "New & Improved - N/F John" <trompiano2000@yahoo.com> wrote in message
> > news:404bdb63$0$3101$61fed72c@news.rcn.com...
> > > I live in Passaic County in New Jersey and I can see a hugh red and
> white
> > > antenna east of my location. I can't tell how far it is but it is
far.
> > > From Clifton I can see Garfield and the antenna is in that direction.
> > >
> > > Anybody have any clues?
> > >
> > >
> >
> >
>
>

130. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 06:31:16 UTC
From: David Ryeburn <ryeburn@sfu.caz>
Message-ID: <ryeburn-A40472.22311603042004@morgoth.sfu.ca>
Source record: 97229

In article <c4o637$fm5$1@mail.specsol.com>, jimp@specsol-spam-sux.com
wrote:

> Dan Jacobson <jidanni@jidanni.org> wrote:
> > Assume there is only one spot on your hilly land that you can pull in
> > your favorite FM station, 90 Mhz, over the competition, and only with
> > a horizontal dipole at a certain azimuth. A Yagi doesn't help, as
> > we are depending fully on the null.
>
> > Assuming we are stuck with this position, how can we enhance our
> > dipole? I am the owner of great sheets of metal. Can I put my great
> > sheets of metal to use in e.g. a dipole made of two great sheets of
> > metal?
>
> Nonsense; a properly constructed yagi will perform far better at rejecting
> the undesired signal and maximizing the desired one than any dipole.

I get the impression that this whole discussion about reception
difficulties for 90 MHz FM signals is hypothetical, rather than an
attempt to solve an existing real problem.

Are you sure about the Yagi being better than a dipole under the
circumstances described? He said to assume that he is on hilly land. The
predicted performance of a Yagi is far-field performance. If the
surrounding terrain is bumpy enough close enough, perhaps the
performance might be rather different. If the field near the director is
substantially different from that near the driven element, and the field
near the reflector is different from both of those, perhaps a Yagi might
do a poorer job of discriminating against unwanted signals than a
smaller, simple, dipole would do, since the field in the neighborhood of
the smaller dipole would be more uniform. I'm not asserting that this
would be have to be the case, but it seems reasonable to me that it
might be the case.

Consider, for example, how FM broadcast signal strength and cleanliness
can vary markedly as one slowly moves one's car just a few inches, e.g.
in heavy traffic. This can happen both in downtown skyscraper jungles
and in the more natural mountainous terrain near where I live (Greater
Vancouver, BC, area), though in the mountains the heavy traffic is
blessedly absent. Clearly far-field assumptions are unwarranted under
such circumstances.

David, ex-W8EZE

--
David Ryeburn

ryeburn@sfu.caz
To send e-mail, use "ca" instead of "caz".

131. Re: Coax choke, losses and ferrite

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 12:50:15 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <4070087d_2@news1.prserv.net>
Source record: 97232

cross posting eliminated
Kees:

I am always amused at all the responses one gets on these NGs, and yet no one answers the question asked. Having said that:

Coaxial cable is supposed to carry signals in electromagnetic wave form between the shield and inner conductor. It usually does that well. However, in addition to that, the coax itself looks simply like a big fat antenna wire on the outside. Now, your job, should you decide to accept it, is to keep the signals the outside of the coax collects from getting inside. And where might they get inside? At the top end, where the real antenna is connected. So, a choke on the outside at the top, which has no effect at all on the signals inside the coax, tends to isolate the outside of the coax from the antenna, so these unwanted signals and noises aren't coupled to the antenna and then on down the inside of the coax. BTW, some radios with poor shielding will benefit from an additional choke at the receiver end also, but that depends on the radio. A test to determine whether it is needed: Disconnect the center conductor of the coax and leave the shield connected. Hear any signals and/or noise? If so, add a choke.

--
Crazy George
Remove N O and S P A M imbedded in return address

132. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 14:28:09 UTC
From: Annette & LJ Dumas <nettski@worldnet.att.net>
Message-ID: <ZXUbc.19943$vo5.609369@bgtnsc05-news.ops.worldnet.att.net>
Source record: 97233

The Portsmouth, VA ARC (W4POX) uses them during Field Day on 40 & 80 M,
we've had outstanding results.

Joe
N2LJD
"JJ" <radiobuff0@mailcity.moc> wrote in message
news:qoudnRKu3b6-F_LdRVn-hA@gbronline.com...
> I am thinking of putting up a windom antenna (see
> http://www.hfantennas.com/Products.htm)and would like comments from
> anyone who is using or has used one about the performance. Primay band
> of interest will be 40 meters.
>
> Thanks
>

133. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 14:58:28 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40702294.7E14A3B8@cwis.net>
Source record: 97234

'JJ',
'Windom' antennas work well if they are used/erected
properly. They aren't really any 'better' than any other
antenna used properly. The 'all band with no tuning' is
more 'sales hype' than fact. But, they do work.
I think the particular antenna you are looking at is
more accurately called an 'Off Center fed' than a 'Windom',
but that's sort of 'picky'...
'Doc

PS - I also think the price is sort of 'steep', for a basically
simple antenna.

134. Ansoft Ensemble SV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 15:50:23 UTC
From: arunsv@hathway.com
Message-ID: <20d1aae2.0404040750.5d0b0805@posting.google.com>
Source record: 97235

Hi all,
I need to simulate a couple of microstrip antenna designs.I
am told that Ansoft Ensemble SV (Student version) is a good tool to
work with.I was not able to find a link to download it on Ansoft's
website.Can anyone mail me as to where can I get the version 7/8 of
Ansoft ensemble SV.Thank you.

-Arun

135. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 15:52:39 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <bbWbc.67622$gA5.825928@attbi_s03>
Source record: 97236

I believe that today's "Windoms" are not true Windoms!!

Ah Ha! Blasphemy surfaces.

As soon as "Ice Out" and the end of "Mud" season occurs I will be
installing a 1930s version of the "Windom".

Used one from Massachusetts with results equal to a dipole but simpler
construction.

DD, W1MCE

JJ wrote:
> I am thinking of putting up a windom antenna (see
> http://www.hfantennas.com/Products.htm)and would like comments from
> anyone who is using or has used one about the performance. Primay band
> of interest will be 40 meters.
>
> Thanks
>

136. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 16:29:01 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407037e7_1@corp.newsgroups.com>
Source record: 97237

Dave Shrader wrote:
> I believe that today's "Windoms" are not true Windoms!!

My 1956 ARRL Handbook says that a Windom is fed with a
single vertical wire. If an antenna with Windom dimensions
is fed with a transmission line rather than a single vertical
wire, in the 1956 ARRL Handbook, it is called an "Off Center
Fed" dipole.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

137. Re: Ansoft Ensemble SV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 16:47:35 UTC
From: Eskay <spark_gap2000@yahoo.ca>
Message-ID: <hbneukoex8ay.1wbc6kvx980yq$.dlg@40tude.net>
Source record: 97238

On 4 Apr 2004 08:50:23 -0700, Arun SV wrote:

> Hi all,
> I need to simulate a couple of microstrip antenna designs.I
> am told that Ansoft Ensemble SV (Student version) is a good tool to
> work with.I was not able to find a link to download it on Ansoft's
> website.Can anyone mail me as to where can I get the version 7/8 of
> Ansoft ensemble SV.Thank you.
>
> -Arun

Google: "ensemble sv" first hit.
73 de Eskay

138. Lattin antenna.....more info sources

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 17:07:04 UTC
From: carkenord@juno.com
Message-ID: <4346b55e.0404040907.73bc4ac5@posting.google.com>
Source record: 97239

The following is some of the info I gathered in my attempts to understand and build a Lattin. As I said in my previous post, I was never able to get it to work as Mr. Lattin described. I wish that when I tried to build it, I would of had access to todays "Antenna Analyzer" test instruments.

It has been patented, filed Feb 13, 1948. Patent # 2,535,298 My local library had the patent on microfiche, and I was able to get it copied. I have a copy of his patent, with illustrations/drawings, on file here.

Lattin described this antenna in QST in December of 1960.

July 1960 issue of "CQ" mag has a related antenna project, by Richmond, W1CEJ, called "A Portable Dipole"

Vincent Lear, G3TKN has also worked with the Lattin design, and was published in RSGB.

July 1992 issue of "73" mag has another article "Six-band linear trap antenna" by Brumbaugh KB4ZGC.....using approx the same idea.

September 1986 issue of "73" mag has Lattin type antenna project described...."The Texas Tango Antenna" by Garrett K5BTV.

Maybe the above info will stimulate some more experimentation and/or modelling of the
Lattin. I sure hope so.

Lee Carkenord KA0FPJ

139. MFJ-921 tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 17:41:18 UTC
From: Ken <cprstn54zz@att.net>
Message-ID: <voh0709frvo13bp1gva8cfcc1766ue01cp@4ax.com>
Source record: 97240

With a [DC-500MHz] dummy load on my new MFJ-921 2M tuner, both
adjustable capacitors have to be set at around 3 to get SWR=1.0, with
the minimum being quite sharp.

I took off the cover and verified that cap settings of zero are indeed
minimum capacitance.

See: http://www.hy-gain.com/man/mfjpdf/MFJ-921.pdf

Shouldn't both caps be at the minimum setting for SWR=1.0 with a dummy
load connected? What does it mean if I need to add capacitance at
both points to tune a dummy load?

Should I reset the knobs so that they show zero when a dummy load is
connected?

Ken KC2JDY
Ken
(to reply via email
remove "zz" from address)

140. Re: not cutting excess wire beyond antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 17:54:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <noi0709eun3qa21th8ibk4pa327etop3i7@4ax.com>
Source record: 97241

On Sun, 04 Apr 2004 09:07:28 -0700, Bill Turner <noway@nohow.com>
wrote:

>On Sat, 03 Apr 2004 21:48:55 -0600, 'Doc <w5lz@cwis.net> wrote:
>
>> Folding, or wrapping the wire around it's self in effect
>>makes that doubled portion 'dissapear'.
>
>_____
>
>But having a spool of wire there will add some capacitance to the
>antenna, thus lowering it's resonant frequency a bit.

And having a spool of insulated wire there will add a gob of
inductance and with close-spaced turns: loss.

73's
Richard Clark, KB7QHC

141. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 18:14:03 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c4pj9b$1jn$1@mail.specsol.com>
Source record: 97242

David Ryeburn <ryeburn-A40472.22311603042004@morgoth.sfu.ca> wrote:

>I get the impression that this whole discussion about reception
>difficulties for 90 MHz FM signals is hypothetical, rather than an
>attempt to solve an existing real problem.
>
>Are you sure about the Yagi being better than a dipole under the
>circumstances described? He said to assume that he is on hilly land. The
>predicted performance of a Yagi is far-field performance. If the
>surrounding terrain is bumpy enough close enough, perhaps the
>performance might be rather different. If the field near the director is
>substantially different from that near the driven element, and the field
>near the reflector is different from both of those, perhaps a Yagi might
>do a poorer job of discriminating against unwanted signals than a
>smaller, simple, dipole would do, since the field in the neighborhood of
>the smaller dipole would be more uniform. I'm not asserting that this
>would be have to be the case, but it seems reasonable to me that it
>might be the case.

Entirely unreasonable for the following reasons:

The spacing between elements of a 90 MHz yagi is about 2 to 3 feet. It is
hard to imagine a 3 foot wide hill.

In other words, it would take some rather bizarre terrain to have a
different effect on the driven element than the director.

Further, the far field at 90 MHz is about 10 feet or so; one would
hope the antenna is at least 10 feet off the ground and the next
hill is more than 10 feet away.

With a dipole, you are depending on the null to minimize the undesired
signal and have little gain in the direction of the desired signal.

With a yagi, you still have the null (assuming a proper yagi) plus
additional gain in the desired direction. The net result is the ratio of
the signal strengths of the desired to undesired signals becomes greater.

>Consider, for example, how FM broadcast signal strength and cleanliness
>can vary markedly as one slowly moves one's car just a few inches, e.g.
>in heavy traffic. This can happen both in downtown skyscraper jungles
>and in the more natural mountainous terrain near where I live (Greater
>Vancouver, BC, area), though in the mountains the heavy traffic is
>blessedly absent. Clearly far-field assumptions are unwarranted under
>such circumstances.

Clearly, far field assumptions ARE warrented under such circumstances.

What you are seeing is multiple reflections (in the far field) off the various structures.

Yet another reason to get the antenna high; i.e. above the influence of such structures.

>David, ex-W8EZE

--
Jim Pennino

Remove -spam-sux to reply.

142. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 18:19:14 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c4pjj2$1jn$2@mail.specsol.com>
Source record: 97243

Dan Jacobson <jidanni@jidanni.org> wrote:
> Assume there is only one spot on your hilly land that you can pull in
> your favorite FM station, 90 Mhz, over the competition, and only with
> a horizontal dipole at a certain azimuth. A Yagi doesn't help, as
> we are depending fully on the null.

> Assuming we are stuck with this position, how can we enhance our
> dipole? I am the owner of great sheets of metal. Can I put my great
> sheets of metal to use in e.g. a dipole made of two great sheets of
> metal?

I should have probably also mentioned that making a dipole from
sheet elements mostly effects the bandwidth and has very little
effect on either the gain or the pattern.

Search the web for bat wing antenna for more info.

--
Jim Pennino

Remove -spam-sux to reply.

143. 2 meter/440 dualband mag mount?????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 18:31:41 UTC
From: k5fte_ech@webtv.net
Message-ID: <29458-4070548D-43@storefull-3153.bay.webtv.net>
Source record: 97244

I used to drill holes in my new rides. Isn't a good NMO mag mount just as good performance wise? I want to use a 43 inch dualband (144/440 mhz) antenna.
I get nervous in my old age punching holes in the roof of a mega$$$ truck.

BTW: Repeaters in far West Texas and Southern New Mexico are on top of high mountains. 1500 to 9,000 feet above average terrain.

144. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 19:11:53 UTC
From: dplatt@radagast.org
Message-ID: <1070nfp7fa89k3c@corp.supernews.com>
Source record: 97245

In article <c4pj9b$1jn$1@mail.specsol.com>, <jimp@specsol-spam-sux.com> wrote:

>With a dipole, you are depending on the null to minimize the undesired
>signal and have little gain in the direction of the desired signal.
>
>With a yagi, you still have the null (assuming a proper yagi) plus
>additional gain in the desired direction. The net result is the ratio of
>the signal strengths of the desired to undesired signals becomes greater.

Agreed. With a Yagi one might get the best desired-to-undesired signal strength ratio by pointing the antenna somewhat to one side or the other of the transmitter. This could reduce the "desired" signal somewhat, but could put the "undesired" signal path right in one of the antenna's deep nulls. Most Yagis having a modest number of elements have a wide-enough beam angle to give you a fair amount of wiggle-room in the aiming.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

145. Re: 2 meter/440 dualband mag mount?????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 19:22:36 UTC
From: Incognito <BLB@sero.net>
Message-ID: <0gZbc.70768$1I5.8473@fed1read01>
Source record: 97246

Just my experience. Today's cars seem to have a lighter sheet metal
thickness than days of yore.
I used a Greenlee punch on my 91 T-Bird.
Curses - put a dimple in the roof.
Forget the hole saw -- dimples as well with too much pressure.

I Asked around and the gurus say to use a Motorola tool for this -- outfits
that do police, fire installations etc will have these.

Be sure to seal the opening after installing the roof mount -- the same
outfit can advise. I found the o-ring to be not good enough

I like the roof mounts -- makes a good connection with the car metal.

And you can swap whips easily -- for 2M I use a 1/4 wave around town and a
5/8 for trips.

Really haven't found much 440 activity while traveling, so I use a 2M 5/8
wave and watch the clearance in parking garages - hi hi.

Haven't seen a comparison of mag to roof hole mount performance - but mag
mounts worked OK on a rental car I got for a trip back east

Good Luck

--
Incognito By Necessity (:-(

If you can't convince them, confuse them.
- - -Harry S Truman

<k5fte_ech@webtv.net> wrote in message
news:29458-4070548D-43@storefull-3153.bay.webtv.net...
>
> I used to drill holes in my new rides. Isn't a good NMO mag mount just
> as good performance wise? I want to use a 43 inch dualband (144/440 mhz)
> antenna.
> I get nervous in my old age punching holes in the roof of a mega$$$
> truck.
>
> BTW: Repeaters in far West Texas and Southern New Mexico are on top of
> high mountains. 1500 to 9,000 feet above average terrain.
>

146. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 19:31:17 UTC
From: JJ <radiobuff0@mailcity.moc>
Message-ID: <ttSdnRZ7MPC87O3dRVn-vg@gbronline.com>
Source record: 97248

'Doc wrote:
> 'JJ',
> 'Windom' antennas work well if they are used/erected
> properly. They aren't really any 'better' than any other
> antenna used properly. The 'all band with no tuning' is
> more 'sales hype' than fact. But, they do work.
> I think the particular antenna you are looking at is
> more accurately called an 'Off Center fed' than a 'Windom',
> but that's sort of 'picky'...
> 'Doc
>
> PS - I also think the price is sort of 'steep', for a basically
> simple antenna.

I wonder about this one working all bands without a tuner. I need
something simple for the moment that I can quickly put up and work
several bands. I think this one is what is/was referred to as the
"Carolina Windom"? Thanks to everyone for the replys, I think I will try it.

147. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 20:18:57 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <R4_bc.12762$w84.1118289@twister.southeast.rr.com>
Source record: 97247

"Dave Platt" <dplatt@radagast.org> wrote in message
news:106pm6u9k41ig29@corp.supernews.com...
> In article <106pg8u5rm1vjc4@corp.supernews.com>,
> Roy Lewallen <w7el@eznec.com> wrote:
>
> >Quite a few years ago, there were a couple of articles -- in Ham Radio
> >magazine, I believe --, which addressed that topic. As I recall, the
> >author used an optimization program that allowed the shape to vary. He
> >ended up with elements bent kind of like a gull wing, and considerably
> >longer than a half wavelength -- more like a wavelength if I recall
> >correctly. The gain was substantially more than for a Yagi, but I don't
> >remember how good the F/B ratio was. I believe he did construct and
> >measure some actual antennas.
>
> I think you're referring to the Landstorfer-Sacher Yagi design?
>
> http://www.cebik.com/eb.html has some information on these. It's
> something akin to an EDZ (extended double zepp) beam. A 2-meter
> 3-element L-S Yagi shows gain in the 9.7 dB range, with F/B ratios of
> 16-23.
>
> Interesting design. Not the easiest thing in the world to construct,
> I suspect.
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

I believe this antenna pretty much lost out to stacked arrays. It proved to
be too much for a nickel and not enough for a dime.

148. Re: MFJ-921 tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 20:51:00 UTC
From: jgboyles@aol.com
Message-ID: <20040404165100.12493.00000712@mb-m16.aol.com>
Source record: 97249

>ith a [DC-500MHz] dummy load on my new MFJ-921 2M tuner, both
>adjustable capacitors have to be set at around 3 to get SWR=1.0
>Shouldn't both caps be at the minimum setting for SWR=1.0 with a dummy
>load connected?

The best way to get a 1:1 SWR with a tuner connected to a dummy load would be to put the tuner in bypass (if it has one). Adding a tuner between your dummy load and swr bridge will make the bridge see something besides 50+-j0 ohms even with the caps set at minimum.
What you are having to do is adjust the tuner until the bridge once again sees 50+-j0 ohms. Apparently with the 921 this is with the caps around 3.
>Should I reset the knobs so that they show zero when a dummy load is
>connected?

Not unless you just want to. The numbers are for reference so you can quickly reset the tuner for a given antenna or impedance.
73 Gary N4AST

149. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 21:19:20 UTC
From: JJ <radiobuff0@mailcity.moc>
Message-ID: <VdWdnRIWCd38F-3dRVn-ig@gbronline.com>
Source record: 97255

garigue wrote:
>>I am thinking of putting up a windom antenna (see
>>http://www.hfantennas.com/Products.htm)and would like comments from
>>anyone who is using or has used one about the performance. Primay band
>>of interest will be 40 meters.
>
>
> Hello JJ ..... I am using a Carolina Windom which is really on OCF dipole
> from what I gather. How does it work ??? Well I much prefer my old inverted
> vees but it does get me on the air on multiple bands with one feed. I am
> sure that the marginal height of my system is a negative (about 25-30 feet
> or so). Again it does get me on the air and the K-2 tuner handles things
> well enough although the thing is supposed to function well without a tuner.
>
> God Bless JJ ...catch you on the air one of these days ..... 73 Tom
> Popovic KI3R Belle Vernon Pa.
>
>
Thanks for the comments Tom. I just need something for now to get back
on the air.

73 - JJ

150. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 21:26:53 UTC
From: F8BOE <f8boe-8@bluemail.ch>
Message-ID: <40707d8e$0$14536$626a14ce@news.free.fr>
Source record: 97250

Hello,

I use a home made (low $$$) OCFD type antenna for 80-10m + WARC of the Fritzel FD4 2kW version's length; fed with 300 Ohms twin lead and a 1/6 current balun out of the shack. It needs only minimal AT tuning for 20m and the WARC bands, 15m is no problem due to a second shorter OCFD cut for 21 MHz at a common feed point.

For 160-10m operation a 2X20m Levy antenna with Levy tuner and 15-20m 300ohms twin lead would be a better choice.

73 de F8BOE Olivier ...-.-

"JJ" <radiobuff0@mailcity.moc> a crit dans le message de news:qoudnRKu3b6-F_LdRVn-hA@gbronline.com...
> I am thinking of putting up a windom antenna (see
> http://www.hfantennas.com/Products.htm)and would like comments from
> anyone who is using or has used one about the performance. Primay band
> of interest will be 40 meters.
>
> Thanks
>

151. S: Rubber Whip Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 21:28:52 UTC
From: Tim Abs <timoria@hushmail.com>
Message-ID: <40707df6$0$15480$91cee783@newsreader01.highway.telekom.at>
Source record: 97251

Hi,
I am searching for a rubber whip antenna, which
can be mounted to a car, about 15 cms (about 6 inches)
long. The antenna should bounce when the car moves.
The technical specifications are of no interest, because
it would be only for the optic.
Once there was such an antenna made by BOSCH Part No
8 698 121 751 (STAB 461 F). Unfortunately that antenna
isn't available anymore.
Tim

152. Re: MFJ-921 tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 21:58:28 UTC
From: JJ <radiobuff0@mailcity.moc>
Message-ID: <96CdndV-A6B4Du3dRVn-jg@gbronline.com>
Source record: 97258

Dee D. Flint wrote:

> "Ken" <cprstn54zz@att.net> wrote in message
> news:voh0709frvo13bp1gva8cfcc1766ue01cp@4ax.com...
>
>>With a [DC-500MHz] dummy load on my new MFJ-921 2M tuner, both
>>adjustable capacitors have to be set at around 3 to get SWR=1.0, with
>>the minimum being quite sharp.
>>
>>I took off the cover and verified that cap settings of zero are indeed
>>minimum capacitance.
>>
>>See: http://www.hy-gain.com/man/mfjpdf/MFJ-921.pdf
>>
>>Shouldn't both caps be at the minimum setting for SWR=1.0 with a dummy
>>load connected? What does it mean if I need to add capacitance at
>>both points to tune a dummy load?
>>
>>Should I reset the knobs so that they show zero when a dummy load is
>>connected?
>>
>>Ken KC2JDY
>>Ken
>>(to reply via email
>>remove "zz" from address)
>
>
> Unless you have a tube type radio where the radio itself may need tuned to a
> 50 ohm output, the dummy load should be connected to a bypass port on your
> tuner. Then the settings of the capacitors is unimportant. You then use
> the dummy load to make adjustments to your ALC level, mic gain, processor
> gain, etc without transmitting over the air.
>
> Dee D. Flint, N8UZE
>

This tuner dosen't have a position to bypass the unit. I would guess the
reason for having to add some capacitance is because there are three
fixed inductors in series and you have to tune out their reactance to
get 50 ohms.

153. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 22:00:13 UTC
From: garigue <garigue@comcast.net>
Message-ID: <Nz%bc.75735$JO3.40076@attbi_s04>
Source record: 97252

> I am thinking of putting up a windom antenna (see
> http://www.hfantennas.com/Products.htm)and would like comments from
> anyone who is using or has used one about the performance. Primay band
> of interest will be 40 meters.

Hello JJ ..... I am using a Carolina Windom which is really on OCF dipole from what I gather. How does it work ??? Well I much prefer my old inverted vees but it does get me on the air on multiple bands with one feed. I am sure that the marginal height of my system is a negative (about 25-30 feet or so). Again it does get me on the air and the K-2 tuner handles things well enough although the thing is supposed to function well without a tuner.

God Bless JJ ...catch you on the air one of these days ..... 73 Tom Popovic KI3R Belle Vernon Pa.

154. Re: S: Rubber Whip Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 22:12:44 UTC
From: jgboyles@aol.com
Message-ID: <20040404181244.12493.00000713@mb-m16.aol.com>
Source record: 97253

>I am searching for a rubber whip antenna, which
>can be mounted to a car, about 15 cms (about 6 inches) long.

That's a really small car, is it one of those R/C jobs? Last Christmas they were selling some that were only 3 inches long. Maybe you could see what kind of antenna they used on the 3 inch long cars. :-)

73 Gary N4AST

155. Re: 2 meter/440 dualband mag mount?????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 22:16:10 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <69WdnT777tKzFO3dRVn-ig@comcast.com>
Source record: 97254

"Incognito" <BLB@sero.net> wrote in message
news:0gZbc.70768$1I5.8473@fed1read01...
> Just my experience. Today's cars seem to have a lighter sheet metal
> thickness than days of yore.
> I used a Greenlee punch on my 91 T-Bird.
> Curses - put a dimple in the roof.
> Forget the hole saw -- dimples as well with too much pressure.

Here's what I did, for a very tall and heavy antenna.
http://www.inchase.org/outflow/events/installnic2002/f5Mount.html

156. Re: S: Rubber Whip Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 22:32:45 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40708d29_3@corp.newsgroups.com>
Source record: 97256

Tim Abs wrote:
> I am searching for a rubber whip antenna, which
> can be mounted to a car, about 15 cms (about 6 inches)
> long.

Did you misplace a modifier or is the car really about
6 inches long? - perhaps a model car?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

157. Re: MFJ-921 tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 22:49:42 UTC
From: "Dee D. Flint" <deeflint01@comcast.net>
Message-ID: <wKOdnbegvq5RDe3dRVn-hg@comcast.com>
Source record: 97257

"Ken" <cprstn54zz@att.net> wrote in message
news:voh0709frvo13bp1gva8cfcc1766ue01cp@4ax.com...
> With a [DC-500MHz] dummy load on my new MFJ-921 2M tuner, both
> adjustable capacitors have to be set at around 3 to get SWR=1.0, with
> the minimum being quite sharp.
>
> I took off the cover and verified that cap settings of zero are indeed
> minimum capacitance.
>
> See: http://www.hy-gain.com/man/mfjpdf/MFJ-921.pdf
>
> Shouldn't both caps be at the minimum setting for SWR=1.0 with a dummy
> load connected? What does it mean if I need to add capacitance at
> both points to tune a dummy load?
>
> Should I reset the knobs so that they show zero when a dummy load is
> connected?
>
> Ken KC2JDY
> Ken
> (to reply via email
> remove "zz" from address)

Unless you have a tube type radio where the radio itself may need tuned to a 50 ohm output, the dummy load should be connected to a bypass port on your tuner. Then the settings of the capacitors is unimportant. You then use the dummy load to make adjustments to your ALC level, mic gain, processor gain, etc without transmitting over the air.

Dee D. Flint, N8UZE

158. aerial coupling and nec2 - I do not understand my results

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 23:34:43 UTC
From: stuart macgregor <stuart.191@ntlworld.com>
Message-ID: <pan.2004.04.04.23.34.43.492290@ntlworld.com>
Source record: 97259

I wrote a little ruby (nice interpretive language) wrapper round the C port of the nec2 program, and began happily generating simulations. So far so good. (When I am finished I could offer it to anyone interested)

I am new to EM stuff - so here comes what is probably a silly misunderstanding:

Consider an array of similar aerials (antennae).

Since the situation is linear, I would expect the currents received from a plane wave signal to be linearly related to the currents which would be obtained at each element position if there were no aerials at the other element positions (assuming the effect of an aerial on its surroundings is due solely to its current, and you can linearly add a cancelling current and thus remove it)?

The relationship can be expressed by a symmetric (reciprocity) coupling matrix which should be independant of the incident plane wave direction?

For a regular array on a circle the matrix should be toeplitz, by symmetry, and constitutes a cyclic FIR filter which will yield the coupled signal observations from the (free) field values at the element positions (to a complex scale factor). It can thus be found by division of the FFTs (of the loaded simulation currents vs open circuit simulation currents or vs free field plane wave calculation) and inverse FFT.

When I try this - for example with a regular 3 element circular array of resonant dipoles - I find that the FIR coefficients derived do indeed convert from free field pattern at the element positions to array currents, but only for the angle from which they are derived. The relationship seems to be signal dependant :-(. For example the plane waves in the opposite sense (180 deg) have a quite different coupling matrix (mostly in phase).

Can anyone point out my mistake, this is really bugging me. I have tried increasing the number of segments to silly levels, to no avail. For 2 dipoles it works, more and it does not.

Help

159. Re: not cutting excess wire beyond antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-04 23:47:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1i71701hajkbkdkn19luiu3snbue9pfg4d@4ax.com>
Source record: 97260

On Sun, 04 Apr 2004 12:21:47 -0700, Bill Turner <noway@nohow.com>
wrote:

>On Sun, 04 Apr 2004 17:54:20 GMT, Richard Clark <kb7qhc@comcast.net>
>wrote:
>
>>And having a spool of insulated wire there will add a gob of
>>inductance and with close-spaced turns: loss.
>
>____
>
>True, but a "gob" of inductance will have little current flow through
>it, and especially so when there is no wire on the other side of the
>inductance. Not to worry.

Hi Bill,

The interwinding capacitance has got to be another gob to a gob and a
half. Naw, I don't worry about it either.

73's
Richard Clark, KB7QHC

160. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 00:01:42 UTC
From: Al - VA3KAI <niittyma@sympatico.ca>
Message-ID: <il1cc.1034$BF2.177839@news20.bellglobal.com>
Source record: 97261

I'm not a technical expert like many on this group, but I have used a Antennas & More TNT-Windom (OCF dipole) for a few years now both in an inverted-vee dipole and "windom half-square" configuration up 35' (33V'-66H'-33V') set up N-S. This TNT model has a choke balun near the feedpoint that helps with RF on the coax.

The best set-up was the half-square which had low angle broadside gain E-W on 40M and on some higher bands. Good 80M coverage given the height too and excellent DX above 40M. Good matches everywhere (17M & 12M too, more difficult on 30M, 15M and 10M) but my built-in tuner on the TS450SAT did it all regardless. I even used an external tuner for 160M tuning - poor performance, but okay for 400 miles around - for extra multis in contests.

I think this model is better than the Carolina Windom because the Carolina vertical element needs to be 15' from any metal - according to a phone call to the manufacturer. I hang from a TV tower now so the tower proximity would interact much more the Carolina model.

This was my 2nd commercial purchase to replace a hurting G5RV and I feel it works MUCH better than the G5RV it replaced. I still use it for 80M-40M portable contest work.

..... va3kai

"JJ" <radiobuff0@mailcity.moc> wrote in message
news:qoudnRKu3b6-F_LdRVn-hA@gbronline.com...
> I am thinking of putting up a windom antenna (see
> http://www.hfantennas.com/Products.htm)and would like comments from
> anyone who is using or has used one about the performance. Primay band
> of interest will be 40 meters.
>
> Thanks
>

161. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 00:46:55 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <302cc.74849$w54.424219@attbi_s01>
Source record: 97262

Cecil Moore wrote:
> Dave Shrader wrote:
>
>> I believe that today's "Windoms" are not true Windoms!!
>
>
> My 1956 ARRL Handbook says that a Windom is fed with a
> single vertical wire. If an antenna with Windom dimensions
> is fed with a transmission line rather than a single vertical
> wire, in the 1956 ARRL Handbook, it is called an "Off Center
> Fed" dipole.
> --
> 73, Cecil, W5DXP
>

My Handbook shows the same thing. This only confirms that both of us have been in ham radio too long!!!

My first Novice 80 CW antenna was a true Windom. W1GID, Ralph Tedford, one of my early Elmers, installed it for me. I ran an ARC 5 transmitter into it. Funny thing though, I kept getting tingling sensations off the key until I lengthened the feed line about 25 feet :-)

I earned my first award with that radio and antenna: "WATV"

Deacon Dave, W1MCE for 50 years

162. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 00:54:06 UTC
From: Mike <km6ab@pacbell.net>
Message-ID: <O62cc.18513$w43.12338@newssvr27.news.prodigy.com>
Source record: 97263

Looking over the replies to this post makes me wonder where the helpful ham hand is lurking these days. This poor guy just wants to know about plans and materials for an antenna to build and all but one reply tells him he doesn't want one or you should buy this one or he's stupid for considering one or I can get into this repeater with that antenna, bla, bla bla. It can be made with the same components as an SO-239 1/4 wave ground plane but with a little more wire with a cork screw turn at the bottom. Doesn't anyone have the simple plans for this guy?

George Cronk wrote:

> Does anyone know where I can get plans for this antenna? Materials needed
> to build one?
>
> Thanks

163. Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 01:08:40 UTC
From: Matthew&Wendy <mapwam@frontiernet.net>
Message-ID: <sk2cc.656$gN.467@news01.roc.ny>
Source record: 97264

Instead of buying an antenna tuner, is it possible to build one myself. Nothing fancy, but a rotary switch and some ?capacitors?. Thanks for the advice.

Matthew

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.644 / Virus Database: 412 - Release Date: 3/26/2004

164. Re: MFJ-921 tuner question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 01:20:15 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <4070B44F.71A1F821@cwis.net>
Source record: 97265

Ken,
What you are seeing is fairly 'normal', nothing to be
worried about. I also wouldn't bother resetting the
controls on the tuner, just be aware that '0' doesn't
always represent '0', the numbers are just for reference.
'Doc

165. Re: S: Rubber Whip Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 01:31:15 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <DF2cc.188812$po.1003715@attbi_s52>
Source record: 97266

I think "about 15 cm..." is a parenthetical remark, note the leading and trailing commas. Of course it is MUCH more fun to imagine a toy car!

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:40708d29_3@corp.newsgroups.com...
> Tim Abs wrote:
> > I am searching for a rubber whip antenna, which
> > can be mounted to a car, about 15 cms (about 6 inches)
> > long.
>
> Did you misplace a modifier or is the car really about
> 6 inches long? - perhaps a model car?
> --
> 73, Cecil, W5DXP
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

166. COLUMBUS OHIO, where to stay and be near OSU and still have a little DX?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 02:15:21 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <ni3cc.4591$wq4.396012@news20.bellglobal.com>
Source record: 97269

I'll be attending a function at OSU in early July, and I'm looking for some advice from local ham residents and/or hams who are very familiar with the area near Ohio State University.

I'll be bringing my FT-817 along and it would be nice to find a multi-storey hotel that has balconies for each room and not be next to some horrible HF unfriendly influence. (not that cities in general are particularly good for HF, but a hotel right next to a power substation or AM radio station transmitter would not be my first choice, and a 3 storey place sandwiched between much higher office buildings would not likely be my second ;)

So, the closer to OSU the better, because it would be nice to be able to walk there each morning for to attend the lecture series, within a mile walking distance would be okay.

A balcony would be nice (weather cooperating that is) for early morning / late evening QRP and would allow me to put some sort of antenna outside of the walls of the structure.

I realise this might be asking for a lot, but I've never been there and as such I'm completely uninformed about the area, so I thought this might be a good place to ask "hams who know" what they would like if they were there.

Thanks for reading!
Bob

167. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 02:25:34 UTC
From: richardharrison@webtv.net
Message-ID: <12340-4070C39E-325@storefull-3253.bay.webtv.net>
Source record: 97271

Dan Jacobson wrote:
"A Yagi doesn`t help, as we are depending fully on the null."

Dan also wrote:
"I am the owner of great sheets of metal."

If "your favorite FM station, 90 Mhz," differs in direction from its interfering "competition, and only with a horizontal dipole at a certain azimuth", a Yagi made by adding a director and a reflector should increase signal to noise ratio.

Great sheets of metal can be used as a corner reflector for a favored dipole. A 90-degree reflector can give about 10 dBd gain. A 60-degree reflector can give about 2 dB more gain than the 90-degree reflector.

J.D. Kraus documented the corner reflector, Proc. I.R.E., 28, 513-619, November 1940. Consult Kraus, "Antennas" for complete information, 1950 edition, page 328.

Best regards, Richard Harrison, KB5WZI

168. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 02:26:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4070c3ed_5@corp.newsgroups.com>
Source record: 97267

Dave Shrader wrote:
> My first Novice 80 CW antenna was a true Windom. W1GID, Ralph Tedford,
> one of my early Elmers, installed it for me. I ran an ARC 5 transmitter
> into it. Funny thing though, I kept getting tingling sensations off the
> key until I lengthened the feed line about 25 feet :-)

I also ran an ARC 5 into an OCF when I was in college. Used 300 ohm
twinlead and a Heathkit air-core balun. Worked well enough for WAS-2.

> Deacon Dave, W1MCE for 50 years
--
73, Cecil, W5DXP for longer than that. :-)

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169. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 02:29:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4070c4a0_5@corp.newsgroups.com>
Source record: 97268

Matthew&Wendy wrote:
> Instead of buying an antenna tuner, is it possible to build one myself.
> Nothing fancy, but a rotary switch and some ?capacitors?. Thanks for the
> advice.

I prefer pi-net tuners - two variable caps to ground and a variable
coil in series in the middle. Easy to build and is a low-pass filter
to boot.
--
73, Cecil, W5DXP

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170. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 02:34:02 UTC
From: Matthew&Wendy <mapwam@frontiernet.net>
Message-ID: <uA3cc.403$Bb7.55@news02.roc.ny>
Source record: 97270

OK. I am brand new to circuit design. Is there a diagram or picture I could find to build it. I can solder and get parts, I just don't know the lingo yet.

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:4070c4a0_5@corp.newsgroups.com...
> Matthew&Wendy wrote:
> > Instead of buying an antenna tuner, is it possible to build one myself.
> > Nothing fancy, but a rotary switch and some ?capacitors?. Thanks for the
> > advice.
>
> I prefer pi-net tuners - two variable caps to ground and a variable
> coil in series in the middle. Easy to build and is a low-pass filter
> to boot.
> --
> 73, Cecil, W5DXP
>
>
>
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Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.644 / Virus Database: 412 - Release Date: 3/26/2004

171. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 02:40:42 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <ucWdnSA9m5c8Wu3d4p2dnA@ctc.net>
Source record: 97272

"Matthew&Wendy" <mapwam@frontiernet.net> wrote in message
news:sk2cc.656$gN.467@news01.roc.ny...
> Instead of buying an antenna tuner, is it possible to build one myself.
> Nothing fancy, but a rotary switch and some ?capacitors?. Thanks for the
> advice.
>
>

Yes you can build one if you can get the parts. There is nothing very
special in most designs. The ARRL Handbook has a few in it. I am sure a
Google search would lead to many.

172. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 02:50:55 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4070c9ab$1_5@corp.newsgroups.com>
Source record: 97273

Matthew&Wendy wrote:
> OK. I am brand new to circuit design. Is there a diagram or picture I could
> find to build it. I can solder and get parts, I just don't know the lingo
> yet.

There are some antenna tuners described in the ARRL Antenna Book.
--
73, Cecil, W5DXP

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173. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 03:12:24 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <1071jpdsuajq1d6@corp.supernews.com>
Source record: 97274

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:4070c4a0_5@corp.newsgroups.com...
> Matthew&Wendy wrote:
> > Instead of buying an antenna tuner, is it possible to build one myself.
> > Nothing fancy, but a rotary switch and some ?capacitors?. Thanks for the
> > advice.
>
> I prefer pi-net tuners - two variable caps to ground and a variable
> coil in series in the middle. Easy to build and is a low-pass filter
> to boot.
> --
> 73, Cecil, W5DXP

Hi Cecil
Hi "Matthew&Wendy"
I prefer resonant antennas and transmission lines that match them.
You just can't beat a resonant antenna for radiation.
Tuners squander AT BEST 1 or 2 db.
At WORST (as Cecil has posted here regarding "shootouts") >10 db.
So build your antenna resonant, match it, and don't bother with a tuner.
If impedance transformation is necessary, use a transformer;
That's why they're called transformers.
That's what they're for.
Just my 2 cents.
73
H.
NQ5H

PS
Wire antennas are CHEAP.

174. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 03:34:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4070d3e4_3@corp.newsgroups.com>
Source record: 97275

H. Adam Stevens, NQ5H wrote:
> I prefer resonant antennas and transmission lines that match them.

I prefer non-resonant antennas and transmission lines that resonant them. :-)

> You just can't beat a resonant antenna for radiation.

Maybe not, but you can equal them. A tuned transmission line resonates
the antenna system.

> Tuners squander AT BEST 1 or 2 db.

That's why I don't use a conventional tuner.

> So build your antenna resonant, match it, and don't bother with a tuner.

Or build your antenna non-resonant and match it with a series section
transformer.

> If impedance transformation is necessary, use a transformer;

IF impedance transformation is necessary, use a transmission line
as the transformer. :-)
--
73, Cecil, http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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175. Re: Beverage antenna for the american continent

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 03:37:49 UTC
From: Butch <lynyrd@cableone.net>
Message-ID: <1071l54jls9f0af@corp.supernews.com>
Source record: 97276

Patents don't last forever, and the beverage antenna has been around
forevern'forever. You can build a duplicate of anything you want to,
you just can't "manufacture for sale". Wish I had the property here on
the Gulf Coast for a beverage. I'm just able to get my multi-band
dipole on my lot by having an L shaped flat top. It works pretty good
so I shouldn't complain.

Butch KF5DE

Kelly wrote:
> Ok Rich. Thanks for the answer. I must have ment the Beverage antenna
> patent, which I read somewhere.
> It sure is an awesome antenna. Yesterday Latin America was wide open but it
> was only me that made a logging.
> I have equipped my remotely controlled MW Tuner with a user log button so
> that people can log what they hear for others to see.
>
> In addition I have also messed with an array of EWE antennas on my farm,
> also remotely controlled by users.
> And even though I am not a skilled DXer, peope who use it say the EWE is
> extreme and less noisy.
> I have some picture of this array here
> http://www.dxtuners.com/index.jsp?ib_page=29
>
> 73
> Kelly, SM7NHC
>
>
> "Rick " <ricknj10@hotmail.com> skrev i meddelandet
> news:4062d81e.103874031@news.optonline.net...
>
>>>But I heard recently that the Beverage concept is copyrighted??? Is this
>>>true? If so, what does that mean?
>>
>>Kelly, Don't confuse copyrighting with a patent.
>>I am only a layman, so lawyers will tell me I am all wrong, but
>>basically I think all you are talking about is that something someone
>>wrote (such as a magazine article), if they indicate it is
>>copyrighted, means you cannot copy their material. It has nothing to
>>do with your rights to do anything you want with a Beverage antenna.
>>In fact, you can copyright your netnews postings if you want !! (see
>>below)
>>
>>BTW - I also have a Beverage. Mine is 500 ft long in NJ, pointed
>>towards Europe and it does great. Many 80 and 160 m signals down in

>>the noise on a dipole are Q5 with the Bev. Also brings in AM
>>broadcast signals to the NE fantastic.
>>
>>73,
>>Rick K2XT
>>(above article copyright 2004, all rights reserved !!!!)
>>
>
>
>

176. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 03:53:06 UTC
From: "Dan Richardson"
Message-ID: <vrl1709ijtr6ug5rodi2okpotcb4n33u9r@4ax.com>
Source record: 97277

On Sun, 4 Apr 2004 22:12:24 -0500, "H. Adam Stevens, NQ5H"
<NQ5H@ARRL.net> wrote:

>You just can't beat a resonant antenna for radiation.

Eh? You mean a 1ï¿½-wave (non-resonate) dipole radiates less than a
ï¿½-wave resonate dipole?

Strange in that a 1ï¿½-wave dipole has 3 dBd gain.

Danny, K6MHE

177. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 04:21:11 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <4en170h5mched61sentl9jh0otur23n0mj@4ax.com>
Source record: 97278

On Mon, 05 Apr 2004 00:54:06 GMT, Mike <km6ab@pacbell.net> wrote:

>Looking over the replies to this post makes me wonder where the helpful
>ham hand is lurking these days. This poor guy just wants to know about
>plans and materials for an antenna to build and all but one reply tells
>him he doesn't want one or you should buy this one or he's stupid for
>considering one or I can get into this repeater with that antenna, bla,
>bla bla. It can be made with the same components as an SO-239 1/4 wave
>ground plane but with a little more wire with a cork screw turn at the
>bottom. Doesn't anyone have the simple plans for this guy?
>
>George Cronk wrote:
>
>> Does anyone know where I can get plans for this antenna? Materials needed
>> to build one?
>>
>> Thanks
Actually I do have plans for a colinear 5/8 over 5/8 2 meter antenna;
all you'd have to do is omit the phasing coil and top radiator. This
one is built from wire on an SO-239.

To the original poster - I can scan the sketch & email it to you, let
me know if you'd like that & it's a done deal.

Howard
KE6something or other

178. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 06:02:56 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <kE6cc.12928$s34.12063@nwrddc01.gnilink.net>
Source record: 97279

"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
news:vrl1709ijtr6ug5rodi2okpotcb4n33u9r@4ax.com...
> On Sun, 4 Apr 2004 22:12:24 -0500, "H. Adam Stevens, NQ5H"
> <NQ5H@ARRL.net> wrote:
>
> >You just can't beat a resonant antenna for radiation.
>
> Eh? You mean a 1�-wave (non-resonate) dipole radiates less than a
> �-wave resonate dipole?
>
> Strange in that a 1�-wave dipole has 3 dBd gain.
>
> Danny, K6MHE

Danny

Do antennas have gain or do they have directivity?

Jerry

179. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 06:08:13 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <hJ6cc.12958$s34.8547@nwrddc01.gnilink.net>
Source record: 97280

"Bill Turner" <noway@nohow.com> wrote in message
news:fjl170tffcch0p29bied7l5o691d38c0rk@4ax.com...
> On Sun, 4 Apr 2004 22:12:24 -0500, "H. Adam Stevens, NQ5H"
> <NQ5H@ARRL.net> wrote:
>
> >Tuners squander AT BEST 1 or 2 db.
>
> ----------
>
> Nonsense. At 1500 watts, a tuner which "squandered" 1 db would be
> dissipating about 300 watts and would soon be a smoking mess.
>
> 2 db I don't even want to think about.
>
>
> --
> Bill, W6WRT
> QSLs via LoTW

Bill

This is just something to think about. I would have thought that
"squandered" power wouldnt necessarily be "dissipated".

Jerry

180. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 07:20:57 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404042320.57782110@posting.google.com>
Source record: 97281

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
>
> I suspect the above antenna is more efficient than your coax-fed dipole.
> There's negligible loss in the 50 ft. of ladder-line and negligible loss
> in the series caps. No tuner required, therefore no lossy coil. So where's
> the loss? Please be specific and provide data to back it up.

I suspect you would be in for a surprise at field day..
What about your balun/choke connection? I assume you will be running coax to that choke, and then to 50 ft of ladder line? And the variable cap on the antenna side of the choke...How convenient... All I can say is why? There is no way on earth that setup is *more* efficient than a coax fed dipole. It may be *fairly* efficient, maybe even quite so if you are real lucky, but it's not going to be as good as the full size dipole fed with good coax. No way. The only real loss I have is the loss of the feedline "213", and on 80m, it's about as good as ladder line.
Dunno...I think complicated gimmicky setups that are inferior to the ultra simple coax fed dipole are kind of silly. :/ But to each his own. If it were better, I could see it. But it's not. It's inferior. If it were not, I would be using one here at the house. Why would anyone want to do more work, for something a step in the wrong direction? Boggles me mind...I've never seen why people want to use smaller or compromise antennas when you have the whole wide outdoors to string up anything you want. The "average" storebought G5RV is pitiful on 80m compared to the coax fed dipole. Not even a real contest.
But everyone ignore what I say. I'm really fibbing, and just messing with ole Cecils head....I suggest all field day op's on 80m use G5RV's, windoms, isotrons and EH antennas. If you all follow my advice, I might be able to mop up quick, and be able to go home early and get some sleep in my cool, bug free, air conditioned bed.. :/ MK

181. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 07:56:56 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404042356.564c7cfc@posting.google.com>
Source record: 97282

"Dave VanHorn" <dvanhorn@cedar.net> wrote in message
news:<qpqdnQjM76FRPPPdRVn-tw@comcast.com>...
> "Mark Keith" <nm5k@wt.net> wrote in message
> news:25eb70d7.0404022127.24ee55a3@posting.google.com...
> > George Cronk <cartwerks@earthlink.net> wrote in message
> news:<Xns94BFBF60C5C23cartwerksearthlinkne@207.69.154.205>...
> > > Does anyone know where I can get plans for this antenna? Materials
> needed
> > > to build one?
> > >
> > > Thanks
> >
> > You would be better off with a 1/4 wave ground plane on 2m. Seriously.
> > And one of those can be as simple as five 19 inch pieces of wire and a
> > So-239 connector. MK
>
> Why would he be better off with a 1/4 wave, with it's large vertical lobe?

Cuz it's easier decoupled with it's 1/4 wave radials, and is less
likely to have feedline radiation than the funky 5/8 antenna with 1/4
wave radials. In direct comparisons here, the 1/4 GP was a good bit
better than the 5/8 with 1/4 radials. The maximum gain of an elevated
1/4 wave GP on 2m, mounted at 35 ft at the base, is appx 6.2 dbi at 3
degrees. The maximum gain of a 5/8 GP with horizontal 1/4 wave
radials, at the same height, is about 4.7 dbi at the same angle. And
this does not yet take into account any decoupling problems! If the
feedline radiates, any gain on the horizon is likely lost as the
pattern is skewed up off the horizon. The average 5/8 antenna is
ruined by using 1/4 wave radials. A 5/8 should be paired with a mirror
image 5/8 to function properly. IE: dual 5/8 collinear such as the
isopole, etc...
And decoupling must still be used even on those. I agree with one
thing Richard said about height and a 1/4 wave..If you get the tip of
the 1/4 GP at the same height as the tip of a tall dual 5/8 collinear,
there is little real difference between the two. And the dual 5/8's
collinear is better than a 5/8 GP. 2m is real critical as far as the
low angles used, and also to the effects of feedline radiation
lowering the gain at those low angles. Now on 10m, many times I do
prefer a 5/8 GP over a 1/4 GP, but there the angles used are less
critical.
If your 5/8's works, I wouldn't worry much, but in comparing them in
A/B tests, "at appx 35 ft" I've never seen a 5/8 GP with 1/4 radials
beat a 1/4 wave GP with 1/4 radials. I once built a fancy 5/8 GP with
a nice larson coil, lots of 1/4 wave radials, etc...Was a super

dud...I tore it up the 1st day and went back to a 1/4 wave. The 1/4 wave was an average 3-4 S units better on local rptrs, and simplex. About the same difference as comparing a undecoupled ringo ranger, to a decoupled ringo ranger 2... MK

182. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 08:07:41 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404050007.211a47ea@posting.google.com>
Source record: 97283

Mike <km6ab@pacbell.net> wrote in message
news:<O62cc.18513$w43.12338@newssvr27.news.prodigy.com>...
> Looking over the replies to this post makes me wonder where the helpful
> ham hand is lurking these days. This poor guy just wants to know about
> plans and materials for an antenna to build and all but one reply tells
> him he doesn't want one or you should buy this one or he's stupid for
> considering one or I can get into this repeater with that antenna, bla,
> bla bla. It can be made with the same components as an SO-239 1/4 wave
> ground plane but with a little more wire with a cork screw turn at the
> bottom. Doesn't anyone have the simple plans for this guy?

Sure, if he really wants to use an inferior antenna, I can tell him
how to build it. It's simple. A 5/8 wave radiator, and about 4-5 turns
of coil on a one inch form for matching will get him fairly close.
But I don't recommend one. You wouldn't get me running a 5/8 GP on 2m
for anything. It's like G5RV's on 80m...They usually suck...So do most
5/8's GP's on 2m...:/ But don't take my word for it. Compare them with
an antenna switch and see. The only time I ever see a 5/8's beat a 1/4
on 2m, is if they are nearly on the ground. And I think thats just a
line of sight deal... MK

183. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 08:23:08 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404050023.643e3571@posting.google.com>
Source record: 97284

"garigue" <garigue@comcast.net> wrote in message news:<Nz%bc.75735$JO3.40076@attbi_s04>...
> > I am thinking of putting up a windom antenna (see
> > http://www.hfantennas.com/Products.htm)and would like comments from
> > anyone who is using or has used one about the performance. Primay band
> > of interest will be 40 meters.
>
> Hello JJ ..... I am using a Carolina Windom which is really on OCF dipole
> from what I gather. How does it work ??? Well I much prefer my old inverted
> vees

Don't tell them this...This will ruin my plan for less work and more
sleep on field day night...:/ MK

184. Re: ton of wire to apply at 90 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 09:53:24 UTC
From: Toni <ea3fya@hotmail.com>
Message-ID: <fpa270lcv0r8hoahae7op255b6a9es4dt5@4ax.com>
Source record: 97285

En Dan Jacobson va escriure en Sun, 04 Apr 2004 05:52:03 +0800:

>Assume you have tons of wire, string, and hilly treed land, and want
>to listen to FM 90 Mhz. Impressed with the 1/2 wave dipole nulling out
>competing stations, you think, "I am the owner of tons of wire, I will
>put my wire to work to pull it in even better."
>
>What design will utilize my ton of wire at such a short wavelength?
>Don't tell me to trade my ton of wire for Yagi parts, as we are on a
>deserted island. Assume mom will be angry if I cut the wire more than
>once or twice.

A nice rhombic with ladder feedline? You will also need a
resistor though. Do you have a pencil in that island?

Toni

185. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 11:25:54 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <1072gmruqusc8e@corp.supernews.com>
Source record: 97286

sigh
"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:4070d3e4_3@corp.newsgroups.com...
> H. Adam Stevens, NQ5H wrote:
> > I prefer resonant antennas and transmission lines that match them.
>
> I prefer non-resonant antennas and transmission lines that resonant them.
:-)

It's "resonate", Cecil, and the antenna still won't be resonant.

>
> > You just can't beat a resonant antenna for radiation.
>
> Maybe not, but you can equal them. A tuned transmission line resonates
> the antenna system.

When you get a lossless line. And the antenna still isn't resonant.

>
> > Tuners squander AT BEST 1 or 2 db.
>
> That's why I don't use a conventional tuner.
>
> > So build your antenna resonant, match it, and don't bother with a tuner.
>
> Or build your antenna non-resonant and match it with a series section
> transformer.
>
> > If impedance transformation is necessary, use a transformer;
>
> IF impedance transformation is necessary, use a transmission line
> as the transformer. :-)

Not the least lossy approach.
Matched impedance = max power transfer.

> --
> 73, Cecil, http://www.qsl.net/w5dxp
>
73
H.

186. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 11:30:15 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <1072guvd3hap912@corp.supernews.com>
Source record: 97287

"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
news:vrl1709ijtr6ug5rodi2okpotcb4n33u9r@4ax.com...
> On Sun, 4 Apr 2004 22:12:24 -0500, "H. Adam Stevens, NQ5H"
> <NQ5H@ARRL.net> wrote:
>
> >You just can't beat a resonant antenna for radiation.
>
> Eh? You mean a 1�-wave (non-resonate) dipole radiates less than a
> �-wave resonate dipole?
>
> Strange in that a 1�-wave dipole has 3 dBd gain.
>
> Danny, K6MHE
>
>
Antenna resonance implies a purely resistive impedance at the feed point.
Both 1/2 wave and 3/2 wave dipoles are resonant.
I don't know what a "1/4-wave resonate dipole" is.
A dipole is 1/2 wavelength long at it's fundamental resonant frequency.
"Gain" is merely a re-distribution of the radiation pattern.
73
H.
NQ5H

187. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 11:49:21 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <1072i2qc60cokbd@corp.supernews.com>
Source record: 97288

"Bill Turner" <noway@nohow.com> wrote in message
news:fjl170tffcch0p29bied7l5o691d38c0rk@4ax.com...
> On Sun, 4 Apr 2004 22:12:24 -0500, "H. Adam Stevens, NQ5H"
> <NQ5H@ARRL.net> wrote:
>
> >Tuners squander AT BEST 1 or 2 db.
>
> ----------
>
> Nonsense. At 1500 watts, a tuner which "squandered" 1 db would be
> dissipating about 300 watts and would soon be a smoking mess.
>
> 2 db I don't even want to think about.
>
>
> --
> Bill, W6WRT
> QSLs via LoTW
>
Nonsense huh?
OK
Load up your rig at 1500 watts key down with a tuner.
Measure the tuner's temperature.

Icom specifies the insertion loss for the tuners in my 756PROII and PW1.
Icom claims less than one decibel. (After tuning)
The loss is easy to measure and at 1KW it is indeed well over 100 watts
warming the PW1's innards when it could be radiating away from my SteppIR.
So I leave the tuners out of line and adjust the antenna for SWR = 1:1.
73
H.
NQ5H

188. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 12:26:43 UTC
From: "Dan Richardson"
Message-ID: <n2k270hhkgkvb5rp64pvk7snu368dkdc3v@4ax.com>
Source record: 97289

On Mon, 5 Apr 2004 06:30:15 -0500, "H. Adam Stevens, NQ5H"
<NQ5H@ARRL.net> wrote:

>
>"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
>news:vrl1709ijtr6ug5rodi2okpotcb4n33u9r@4ax.com...
>> On Sun, 4 Apr 2004 22:12:24 -0500, "H. Adam Stevens, NQ5H"
>> <NQ5H@ARRL.net> wrote:
>>
>> >You just can't beat a resonant antenna for radiation.
>>
>> Eh? You mean a 1ï¿½-wave (non-resonate) dipole radiates less than a
>> ï¿½-wave resonate dipole?
>>
>> Strange in that a 1ï¿½-wave dipole has 3 dBd gain.
>>
>> Danny, K6MHE
>>
>>
>Antenna resonance implies a purely resistive impedance at the feed point.
>Both 1/2 wave and 3/2 wave dipoles are resonant.
>I don't know what a "1/4-wave resonate dipole" is.
>A dipole is 1/2 wavelength long at it's fundamental resonant frequency.
>"Gain" is merely a re-distribution of the radiation pattern.
>73
>H.
>NQ5H
>

Sorry.. a typo should be 1ï¿½-wave non-resonte dipole.

Danny

189. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 12:30:35 UTC
From: "Dan Richardson"
Message-ID: <55k270pi7ob9e2fl7ks1svhkv4v4kfs5mv@4ax.com>
Source record: 97290

```
On Mon, 05 Apr 2004 06:02:56 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:

>
>"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
>news:vrl1709ijtr6ug5rodi2okpotcb4n33u9r@4ax.com...
>> On Sun, 4 Apr 2004 22:12:24 -0500, "H. Adam Stevens, NQ5H"
>> <NQ5H@ARRL.net> wrote:
>>
>> >You just can't beat a resonant antenna for radiation.
>>
>> Eh? You mean a 1ï¿½-wave (non-resonate) dipole radiates less than a
>> ï¿½-wave resonate dipole?
>>
>> Strange in that a 1ï¿½-wave dipole has 3 dBd gain.
>>
>> Danny, K6MHE
>
> Danny
>
> Do antennas have gain or do they have directivity?
>
> Jerry
>

Both

Danny
```

190. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 12:33:25 UTC
From: "Dan Richardson"
Message-ID: <1ck270pa9un7h3ocke0jjk8706n5fp6ppp@4ax.com>
Source record: 97291

On Mon, 5 Apr 2004 06:30:15 -0500, "H. Adam Stevens, NQ5H"
<NQ5H@ARRL.net> wrote:

>
>"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
>news:vrl1709ijtr6ug5rodi2okpotcb4n33u9r@4ax.com...
>> On Sun, 4 Apr 2004 22:12:24 -0500, "H. Adam Stevens, NQ5H"
>> <NQ5H@ARRL.net> wrote:
>>
>> >You just can't beat a resonant antenna for radiation.
>>
>> Eh? You mean a 1ï¿½-wave (non-resonate) dipole radiates less than a
>> ï¿½-wave resonate dipole?
>>
>> Strange in that a 1ï¿½-wave dipole has 3 dBd gain.
>>
>> Danny, K6MHE
>>
>>
>Antenna resonance implies a purely resistive impedance at the feed point.
>Both 1/2 wave and 3/2 wave dipoles are resonant.
>I don't know what a "1/4-wave resonate dipole" is.
>A dipole is 1/2 wavelength long at it's fundamental resonant frequency.
>"Gain" is merely a re-distribution of the radiation pattern.
>73
>H.
>NQ5H
>

Well, I'll try it again..... still a typo I meant to say "a ï¿½-wave
resonate dipole".. Sorry

In other words I press Alt+172 instead of Alt+171

Danny

191. Re: small mobile antenna suggestion?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 13:55:11 UTC
From: anpap@my-deja.com
Message-ID: <c106891e.0404050555.54e28c90@posting.google.com>
Source record: 97292

Thanks for the comments everyone!

I'm aware of the performance issues for short antennas, but at least I won't have to remove it to park my car in the garage :-)

How about the COMET B-10? Anyone using it?
Is there anything similar, around the same size with a little better performance?

thx,
Andreas

derswede@aol.comspam.com (AA) wrote in message news:<20040319085303.07878.00000017@mb-m11.aol.com>...
> << I would like it to be quite short (less than 30cm/12in) or
> > be able to fold it somehow, so that I can park my car (SUV) in the
> > basement. >>
>
> Tho not always true, "short" and "good performance" rarely go hand in hand. If
> you're willing to fold over, look at the Comet SB15 or the Diamond equiv....my
> SB15 has around 100K miles on it, works great, excellent performance (both FM
> and SSB) for a vertical and folds over for those nasty parking decks. Ford was
> SO nice to put in an antenna holder on their SUVs (company vehicle)....it is
> called the rear window wiper....
>
> Now, to get the wife to allow me to put one on the new Mini....with a
> screwdriver on the other side. Hmmm, think the ATAS120 might
> work...mini-screwdriver for a Mini.....
>
> A

192. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 14:59:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40717458_7@corp.newsgroups.com>
Source record: 97293

Jerry Martes wrote:

> Do antennas have gain or do they have directivity?

From Balanis: "Although the gain of an antenna is closely
related to the directivity, gain is a measure that takes into
account the efficiency of the antenna as well as the
directional properties of the antenna, and it is therefore
controlled only by the pattern."
--
73, Cecil, W5DXP

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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193. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 15:00:28 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <2cudnTZndL4J6ezd4p2dnA@comcast.com>
Source record: 97294

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0404042356.564c7cfc@posting.google.com...
> "Dave VanHorn" <dvanhorn@cedar.net> wrote in message
news:<qpqdnQjM76FRPPPdRVn-tw@comcast.com>...
> > "Mark Keith" <nm5k@wt.net> wrote in message
> > news:25eb70d7.0404022127.24ee55a3@posting.google.com...
> > > George Cronk <cartwerks@earthlink.net> wrote in message
> > news:<Xns94BFBF60C5C23cartwerksearthlinkne@207.69.154.205>...
> > > > Does anyone know where I can get plans for this antenna? Materials
> > needed
> > > > to build one?
> > > >
> > > > Thanks
> > >
> > > You would be better off with a 1/4 wave ground plane on 2m. Seriously.
> > > And one of those can be as simple as five 19 inch pieces of wire and a
> > > So-239 connector. MK
> >
> > Why would he be better off with a 1/4 wave, with it's large vertical
lobe?
>
> Cuz it's easier decoupled with it's 1/4 wave radials, and is less
> likely to have feedline radiation than the funky 5/8 antenna with 1/4
> wave radials. In direct comparisons here, the 1/4 GP was a good bit
> better than the 5/8 with 1/4 radials.

Interesting. You obviously have developed a far superior measurement
technique than most antenna engineering firms, and maybe even NIST. Your
results disagree with pretty much everyone who measures antenna gain
professionally, and the ARRL handbooks, but hey they must all be wrong then.

Though it's entirely done in the HF spectrum, a pretty detailed analysis is
presented here:
http://www.cebik.com/58-3.html
A good ground, and cleaner near-field space, is easier to come by at VHF and
UHF, so I would expect results to be somewhat better than what was seen here
even at the high end of the HF spectrum.

If you google a bit, you'll probably find some articles on converting a CB
antenna to a 5/8 2 meter antenna.

194. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 15:09:35 UTC
From: jder8745@aol.com
Message-ID: <20040405110935.22017.00000596@mb-m22.aol.com>
Source record: 97295

Someone sed,

"You just can't beat a resonant antenna for radiation."
==========

PHOOEY! Some of the best antennas are NOT resonant, and shouldn't be.

I use my 130-ft doublet on 40 m where it is one wavelength long. Has
theoreitical gain of about 1.8 dB. This is NOT a resonant antenna.

73 de Jack, K9CUN

195. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 15:12:04 UTC
From: jder8745@aol.com
Message-ID: <20040405111204.22017.00000597@mb-m22.aol.com>
Source record: 97296

"Do antennas have gain or do they have directivity?"
==========
What a wierd question! These are not mutally exclusive properties.

73 de Jack, K9CUN

196. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 15:32:18 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40717c1f$1_7@corp.newsgroups.com>
Source record: 97297

Mark Keith wrote:
> What about your balun/choke connection?

W2DU choke, virtually lossless. The tuning cap is also virtually
lossless, much more so than a tuner with a coil.

> The only real loss I have is the
> loss of the feedline "213", and on 80m, it's about as good as ladder
> line.

It's about as good as open-wire line with a 10:1 SWR. The matched line
losses in 100 ft. of RG-213 are higher than the unmatched line losses
in 100 ft. of open-wire line with a 10:1 SWR on 80m.

According to Wirebook II, the matched line loss for RG-213 is ten
times higher on 80m than the matched line loss for open-wire line.

> If it were better, I could see it. But it's not. It's inferior.
> If it were not, I would be using one here at the house.

You are so biased, you wouldn't use one if your life depended
on it. :-)

> Why would
> anyone want to do more work, for something a step in the wrong
> direction?

It's a step in the right direction, Mark, toward an all-HF-band
antenna. I modified my G5RV yesterday to work well on all eight
HF bands plus 6m. Field strength measurements indicated it is
virtually identical to my 130 foot dipole on 80m.

> The "average" storebought G5RV is
> pitiful on 80m compared to the coax fed dipole.

Mine is virtually equal to a resonant dipole. Your "average" storebought
G5RV must be poorly designed - maybe lacking a balun - maybe using RG-58
coax - maybe using the wrong length of the series section transformer.

> But everyone ignore what I say. I'm really fibbing, and just messing
> with ole Cecils head...

I asked for some scientific proof of what you say. All you responded
with is prejudice and hand-waving. Please take time to calculate
the matched line losses in RG-213 Vs the unmatched line losses for
open-wire line and you will change your mind (if you are rational).
--
73, Cecil, W5DXP

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197. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 15:46:43 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40717f80$1_7@corp.newsgroups.com>
Source record: 97298

H. Adam Stevens, NQ5H wrote:

> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>>Maybe not, but you can equal them. A tuned transmission line resonates
>>the antenna system.
>
> When you get a lossless line. And the antenna still isn't resonant.

So what? If you move off the resonant frequency, your antenna still isn't resonant. I'd rather have a resonant antenna system on many frequencies and many bands than an antenna system resonant on only one frequency.

>>IF impedance transformation is necessary, use a transmission line
>>as the transformer. :-)
>
> Not the least lossy approach.
> Matched impedance = max power transfer.

Depends upon how much money you want to sink into your coax. Open-wire line with an SWR of 10:1 will beat RG-213 in the loss department on 80m. It takes 9913 to equal the performance of open-wire line with an SWR of 10:1 on 80m and 9913 costs about three times as much as open-wire line.

And with open-wire line, one can enjoy all eight HF bands immediately, and not have to spend two days cutting and trying a fan dipole.
--
73, Cecil, W5DXP

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198. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 15:51:11 UTC
From: w9dmk@crosslink.net
Message-ID: <40717ebe.4262539@news.crosslink.net>
Source record: 97299

On Sun, 04 Apr 2004 21:12:51 -0700, Bill Turner <noway@nohow.com>
wrote:

>On Sun, 4 Apr 2004 22:12:24 -0500, "H. Adam Stevens, NQ5H"
><NQ5H@ARRL.net> wrote:
>
>>Tuners squander AT BEST 1 or 2 db.
>
>_____
>
>Nonsense. At 1500 watts, a tuner which "squandered" 1 db would be
>dissipating about 300 watts and would soon be a smoking mess.
>
>2 db I don't even want to think about.
>
>
>--
>Bill, W6WRT
>QSLs via LoTW
>

Dear Bill,
Your figures and your terminology are 100% correct. Anyone who has an amplifier capable of delivering 1500 watts of carrier power, continuously, for any appreciable amount of time would, indeed, encounter a smoking mess. Fortunately, hams don't usually run that kind of power, but it does explain why so many tuners found at hamfests have very obvious damage to the variable inductor coil.

Bob, W9DMK, Dahlgren, VA
http://www.qsl.net/w9dmk

199. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 15:52:11 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407180c9_7@corp.newsgroups.com>
Source record: 97300

H. Adam Stevens, NQ5H wrote:

> "Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote:
>>Strange in that a 1ï¿½-wave dipole has 3 dBd gain.
>
> I don't know what a "1/4-wave resonate dipole" is.

Look again, Danny said a 1.25 WL dipole, a non-resonant length
dipole known as an extended-double-Zepp and known to have about
3 dB gain over your 1/2WL resonant dipole. With about a 0.2WL
series section transformer made out of open-wire line, the
non-resonant EDZ resonates as a system and will beat your
resonant 1/2WL dipole in its favored direction.
--
73, Cecil, W5DXP

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200. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 15:59:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40718295$1_7@corp.newsgroups.com>
Source record: 97301

JDer8745 wrote:
> "Do antennas have gain or do they have directivity?"
> ============================
> What a wierd question! These are not mutally exclusive properties.

Guess the answer is 'yes'. :-) Seriously, directivity doesn't
include efficiency. Gain includes efficiency. If an antenna
could be 100% efficient, the directivity and gain would be the
same.
--
73, Cecil, W5DXP

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201. Re: ton of wire to apply at 90 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 16:16:21 UTC
From: richardharrison@webtv.net
Message-ID: <26764-40718655-121@storefull-3251.bay.webtv.net>
Source record: 97303

Dan Jacobson wrote:
"What design will utilize my ton of wire at such a short wavelength
(3.33 meters)?"

Dan also indicated he would like to minimize cuts in the wire.

An obvious contender would be an axial-mode helix antenna which just stretches out a coil of wire with no cuts at all.

The inventor, J.D. Kraus, includes chapter 8 of his 3rd edition of "Antennas", The Helical Antenna: Axial and Other Modes, Part 2.

Kraus has an example in Fig. 8-54(a) on page 281 of an 80-turn axial-mode (end-fire) helix with a gain of "24 dB". (This is surely dBi as Kraus doesn`t specify dBd.)

There would also surely be a few pounds of wire left over unless the wire is very large indeed. It might be bonded for a reflector or other purposes.

Best regards, Richard Harrison, KB5WZI

202. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 16:21:14 UTC
From: tdonaly@aol.com
Message-ID: <20040405122114.11965.00000742@mb-m06.aol.com>
Source record: 97302

Dave VanHorn wrote,
>lobe?
>>
>> Cuz it's easier decoupled with it's 1/4 wave radials, and is less
>> likely to have feedline radiation than the funky 5/8 antenna with 1/4
>> wave radials. In direct comparisons here, the 1/4 GP was a good bit
>> better than the 5/8 with 1/4 radials.
>
>Interesting. You obviously have developed a far superior measurement
>technique than most antenna engineering firms, and maybe even NIST. Your
>results disagree with pretty much everyone who measures antenna gain
>professionally, and the ARRL handbooks, but hey they must all be wrong then.
>
>Though it's entirely done in the HF spectrum, a pretty detailed analysis is
>presented here:
>http://www.cebik.com/58-3.html
>A good ground, and cleaner near-field space, is easier to come by at VHF and
>UHF, so I would expect results to be somewhat better than what was seen here
>even at the high end of the HF spectrum.
>
>If you google a bit, you'll probably find some articles on converting a CB
>antenna to a 5/8 2 meter antenna.
>

In volume 1 of the Antenna Compendium series is an article entitled "The
5/8-Wavelength Antenna Mystique" by Donald K. Reynolds, K7DBA.
I don't think Reynolds would disagree with Mark too much.
73,
Tom Donaly, KA6RUH

203. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 18:10:12 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <8ihcc.78389$w54.443453@attbi_s01>
Source record: 97304

Cecil Moore wrote:

SNIP
>
> I also ran an ARC 5 into an OCF when I was in college. Used 300 ohm
> twinlead and a Heathkit air-core balun. Worked well enough for WAS-2.

SNIP

> --
> 73, Cecil, W5DXP for longer than that. :-)
>

I threw away a B&W 250 watt air-core balun, 4:1 or 1:1 selectable, when we changed QTH from Massachusetts to NH.

Wish I had kept it!!

Cecil, I know we are close in age and close in our university careers. When were you licensed? My W1MCE is first re-issue in the mid 1950s and predates the 'K' series of calls by a year or more.

Deacon Dave

204. Outside Rec. Only Antenna Compared To Present Attic Setup Quest's.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 18:11:59 UTC
From: Robert11 <rgsxrose@comcast.net>
Message-ID: <Mt2dnSUAcfrtPOzd4p2dnA@comcast.com>
Source record: 97305

Hello:

Do listening only.

Presntly using a random length wire strung around the 4 sides of my attic
(probably about 40 ft x 25 ft x 40 ft x 25 ft; resultant loop left open at
end)

Works fairly well, but would like to try and do better.
Might bite the bullet this spring, and try putting something outside.

Whatever I try, I want it to be omni-directional, and be fairly broadband in
freq. coverage; say from 500 KHz to 30 MHz.
No Tower.

a. For something relatively straightforward, what type or brand would you
suggest ? Worth doing over what I now use indoors ?

b. Any probable advantage to taking the most simple approach, and ust
stringing a 150 foot straight wire outside
compared to what I now have in the attic, assuming same height.

c. regarding nearby lightning strikes and resultant voltage surges picked
up by the indoor antenna wire:
does the house roof off any meaningful protection (when dry) compared to
a wire strung outside?

BTW: For a straight 150 foot wire, at a height of about 25 feet, is it most
sensitive perpendicular to the wire axis, or along it ?
How does the answer depend on received freq. ?

Much thanks,
Bob

205. Re: Outside Rec. Only Antenna Compared To Present Attic Setup Quest's.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 18:33:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <439370l7a4l96m5htf8o5rtvrcg8h9ptjb@4ax.com>
Source record: 97306

On Mon, 5 Apr 2004 14:11:59 -0400, "Robert11" <rgsxrose@comcast.net>
wrote:

>Hello:
>
>Do listening only.
>
>Presntly using a random length wire strung around the 4 sides of my attic
>(probably about 40 ft x 25 ft x 40 ft x 25 ft; resultant loop left open at
>end)
>
>Works fairly well, but would like to try and do better.
>Might bite the bullet this spring, and try putting something outside.
>
>Whatever I try, I want it to be omni-directional, and be fairly broadband in
>freq. coverage; say from 500 KHz to 30 MHz.

Hi Bob,

You fail to mention the quality of your receiver, I will proceed as if
it were middle of the road ($200-$400).

Your open loop should be coax fed with a choke at the feed point to
reduce noise from the house coupling in (unless there are noisy
components in the attic).

At the other end of the coax, back at the receiver, you should be
using a tuner to perform matching to DX and rejection of strong AM
stations that can seriously de-sensitize you (this is the hidden DX
killer).

Connect to a suitable ground. This sometimes does wonders for
sensitivity. It also sometimes introduces ground loop problems
(solving those problems is worth while to keep the ground).

You already have "enough" wire. Your future goals should be to move
it away from the house if you suffer noise. You would also stand to
gain if you can elevate it higher. Either way, more wire is unlikely
to bring any fantastic return. This has exceptions, of course, if you
want to try Rhombics, or Beverage Antennas (these require serious real
estate for HF however).

73's
Richard Clark, KB7QHC

206. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 18:36:24 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404051036.1bee59b6@posting.google.com>
Source record: 97307

"Dave VanHorn" <dvanhorn@cedar.net> wrote in message
> >
> > Cuz it's easier decoupled with it's 1/4 wave radials, and is less
> > likely to have feedline radiation than the funky 5/8 antenna with 1/4
> > wave radials. In direct comparisons here, the 1/4 GP was a good bit
> > better than the 5/8 with 1/4 radials.
>
> Interesting. You obviously have developed a far superior measurement
> technique than most antenna engineering firms, and maybe even NIST.

Maybe so if using a simple antenna switch to A/B test is superior...

Your
> results disagree with pretty much everyone who measures antenna gain
> professionally, and the ARRL handbooks, but hey they must all be wrong then.

No, they do NOT disagree with most who have a clue. BTW, those
"results" I gave you with gain numbers were from modeling.
>
> Though it's entirely done in the HF spectrum, a pretty detailed analysis is
> presented here:

HF? Thats the problem....You can't apply the performance shown on HF,
and expect it to pan out on 2m. The decoupling problem will rear it's
head on VHF.

> http://www.cebik.com/58-3.html
> A good ground, and cleaner near-field space, is easier to come by at VHF and
> UHF, so I would expect results to be somewhat better than what was seen here
> even at the high end of the HF spectrum.

A good ground is not the whole answer. Decoupling is more important at
those higher frequencies.
>
> If you google a bit, you'll probably find some articles on converting a CB
> antenna to a 5/8 2 meter antenna.

Why would I need to do that? I already done that before. I've built
enough 5/8 antennas to choke a horse. Maybe two or three. Thats why
I'm fairly comfortable with what I say.
I'd like to ask one question. Have you ever actually compared the two
types at the same time using a switch? MK

207. Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 18:44:33 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <6Ohcc.6259$Em4.1492@fe03.usenetserver.com>
Source record: 97308

I have a 2000 model year Ford Taurus wagon, and am thinking about mounting a through-glass antenna on one of the back side windows. Yes, I know---a roof mount would work better, but I would have to get a hole punch and a divorce lawyer to do it ;-)

Does anyone have any practical experience with this set up? Does the window tinting cause any problems on 146 MHz or 440 MHz? There is a completely dark (opaque) band around the edge of the window. Should this be avoided?

I have seen Taurus wagons with cell phone antennas on the back side windows, and was wondering how it worked on the ham bands.

Jim
N8EE

208. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 18:44:41 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404051044.1c18cc17@posting.google.com>
Source record: 97309

"Dave VanHorn" <dvanhorn@cedar.net> wrote in message
>
> If you google a bit, you'll probably find some articles on converting a CB
> antenna to a 5/8 2 meter antenna.

One note...There is only one case on VHF where I often prefer a 5/8
over a 1/4 , and that is on a car when roof mounted. The 5/8 will
usually "picket fence" less, if you are in an area that is all flat
terrain. But as far as elevated ground planes at the house, I prefer
the 1/4 wave anyday. If I use 5/8 elements at home, it will always be
a dual 5/8 collinear of some type. Not a GP with 1/4 wave radials. MK

209. Cell phone through-glass antenna on ham bands?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 18:49:42 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <XShcc.6293$Em4.5264@fe03.usenetserver.com>
Source record: 97310

I have a new in box cell phone glass mount antenna. It is one of the "full size" 800 MHz type with a self supporting air wound coil.

How well would this work on 146 MHz, if at all? 440 Mhz? Dual band (146/440)? Is anything more than trimming the length required?

Jim
N8EE

210. Re: COLUMBUS OHIO, where to stay and be near OSU and still have a little DX?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 19:00:43 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <o1icc.6325$Em4.3380@fe03.usenetserver.com>
Source record: 97311

Holiday Inn
328 W. Lane Avenue
800-465-4329
614-294-4848

Right across the street from the north end of campus. Don't know if they have balconies, but it is a high-rise.

Where on campus is your function? There are others in the area, but this is the closest one I can recall if you are going to the north end of campus (mostly engineering and sciences). Depends on what you mean by 'walking distance', though. Practically the entire campus is 'walking distance', since it is mostly closed to vehicles (except around the periphery).

Jim
N8EE
OSU class of '75, '89

"Bob" <nowhere@nospam.org> wrote in message
news:ni3cc.4591$wq4.396012@news20.bellglobal.com...
> I'll be attending a function at OSU in early July, and I'm looking for
> some advice from local ham residents and/or hams who are very familiar
> with the area near Ohio State University.
>
> I'll be bringing my FT-817 along and it would be nice to find a
> multi-storey hotel that has balconies for each room and not be next to
> some horrible HF unfriendly influence. (not that cities in general are
> particularly good for HF, but a hotel right next to a power substation
> or AM radio station transmitter would not be my first choice, and a 3
> storey place sandwiched between much higher office buildings would not
> likely be my second ;)
>
> So, the closer to OSU the better, because it would be nice to be able to
> walk there each morning for to attend the lecture series, within a mile
> walking distance would be okay.
>
> A balcony would be nice (weather cooperating that is) for early morning
> / late evening QRP and would allow me to put some sort of antenna
> outside of the walls of the structure.
>
> I realise this might be asking for a lot, but I've never been there and
> as such I'm completely uninformed about the area, so I thought this
> might be a good place to ask "hams who know" what they would like if
> they were there.

>
> Thanks for reading!
> Bob
>

211. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 19:39:36 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <iYmdnRECVo6dK-zdRVn-hQ@comcast.com>
Source record: 97312

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0404051044.1c18cc17@posting.google.com...
> "Dave VanHorn" <dvanhorn@cedar.net> wrote in message
> >
> > If you google a bit, you'll probably find some articles on converting a
CB
> > antenna to a 5/8 2 meter antenna.
>
> One note...There is only one case on VHF where I often prefer a 5/8
> over a 1/4 , and that is on a car when roof mounted. The 5/8 will
> usually "picket fence" less, if you are in an area that is all flat
> terrain.

And that's exactly where I use them.
Not much problem with ground planes or decoupling.

212. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 19:41:34 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4071b68d$1_5@corp.newsgroups.com>
Source record: 97313

Dave Shrader wrote:
> Cecil, I know we are close in age and close in our university careers.
> When were you licensed? My W1MCE is first re-issue in the mid 1950s and
> predates the 'K' series of calls by a year or more.

My WN5DXP was a first re-issue in 1951. I was 13 at the time with
a Hallicrafters S53A and a Globe Scout 65B. So I'm working on my
second half century as a ham. (The 'K' calls always seemed kind
of sissy to me. :-)
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

213. Re: Half square

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 19:42:26 UTC
From: David L Thompson <thompson@mindspring.com>
Message-ID: <CEicc.12704$yN6.11098@newsread2.news.atl.earthlink.net>
Source record: 97314

Yes, you feed it at the corner where the flat top ends and the vertical leg goes down. Keep the vertical leg at least 10 feet from any tower. I use two tall trees for my 80 half square. The coax should come down away from the vertical leg. The best way is to have it come down splitting the angle between the vertical leg and the center. Its not critical however.
73 Dave K4JRB

ve3bts <ve3bts@rac.ca> wrote in message
news:1ed859b.0404021417.6ebf0c0f@posting.google.com...
> Several web pages say to feed this antenna at top corner so it seems
> to be unbalanced antenna.Is that correct?Any suggestions regarding
> instalation of this antenna?
> tnx

214. Re: Cell phone through-glass antenna on ham bands?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 19:44:11 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <icqdnWrAWdiPKuzdRVn-hA@comcast.com>
Source record: 97315

"JLB" <IHateSpam@nospam.net> wrote in message
news:XShcc.6293$Em4.5264@fe03.usenetserver.com...
> I have a new in box cell phone glass mount antenna. It is one of the
"full
> size" 800 MHz type with a self supporting air wound coil.
>
> How well would this work on 146 MHz, if at all? 440 Mhz? Dual band
> (146/440)? Is anything more than trimming the length required?

Not very well.

The larsen glassmounts made for 2/440 are roughly comparable to a 1/4 wave,
but I would say somewhat less gain. I've never measured mine.

I'd expect the cell version to be way short, and the coil is probably wrong
for this app too.

Then again, if it's bad enough, the coil might not make much difference. :)

I have a pair of the larsen glassmounts for SSTV and APRS, and I'm
seriously thinking of converting to a pair of normally mounted antennas. 50W
up that pipe dosen't get much done.
If height weren't a problem, I'd go for a pair of SG-7900s, but they are
challenging to mount, and not very forgiving of low hanging trees or other
obstructions.

215. WTB 2 meter AEA Isopole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 19:44:40 UTC
From: David L Thompson <thompson@mindspring.com>
Message-ID: <IGicc.12705$yN6.11810@newsread2.news.atl.earthlink.net>
Source record: 97316

Please condition and price in private e-mail to me. Ignore the spam blocker message as I get the replies.

73 Dave K4JRB

216. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 19:47:42 UTC
From: Vito <vito@crosslink.net>
Message-ID: <4071b7e2$0$27392@dingus.crosslink.net>
Source record: 97317

Hustler makes a 5/8 wave 2M antenna they call the SF-2. HRO sells them for
$14.95.
At that price the only reason to make one is "for fun" but that's
worthwhile.
73, K3DWW

"George Cronk" <cartwerks@earthlink.net> wrote in message
news:Xns94BFBF60C5C23cartwerksearthlinkne@207.69.154.205...
> Does anyone know where I can get plans for this antenna? Materials needed
> to build one?
>
> Thanks

217. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 20:04:06 UTC
From: "Dick, AA5VU" <aa5vuNOSPAM@arrl.net>
Message-ID: <aa5vuNOSPAM-519192.15040605042004@newssvr24-ext.news.prodigy.com>
Source record: 97318

Jim,

Think about the front windshield behind the rear view mirror. That is
where I ran one on a Z-28 and Corvette and it worked great.

Dick - AA5VU

In article <6Ohcc.6259$Em4.1492@fe03.usenetserver.com>,
"JLB" <IHateSpam@nospam.net> wrote:

> I have a 2000 model year Ford Taurus wagon, and am thinking about mounting a
> through-glass antenna on one of the back side windows. Yes, I know---a roof
> mount would work better, but I would have to get a hole punch and a divorce
> lawyer to do it ;-)
>
> Does anyone have any practical experience with this set up? Does the window
> tinting cause any problems on 146 MHz or 440 MHz? There is a completely
> dark (opaque) band around the edge of the window. Should this be avoided?
>
> I have seen Taurus wagons with cell phone antennas on the back side windows,
> and was wondering how it worked on the ham bands.
>
> Jim
> N8EE

218. Re: ideal shape of Yagi elements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 20:22:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1073g0r7b75bn1f@corp.supernews.com>
Source record: 97119

LB has gotten his web page fixed, so I can see the graphics now. Figure 10 on the URL referenced below is indeed the antenna I was referring to.

Roy Lewallen, W7EL

Dave Platt wrote:

> In article <106pg8u5rm1vjc4@corp.supernews.com>,
> Roy Lewallen <w7el@eznec.com> wrote:
>
>
>>Quite a few years ago, there were a couple of articles -- in Ham Radio
>>magazine, I believe --, which addressed that topic. As I recall, the
>>author used an optimization program that allowed the shape to vary. He
>>ended up with elements bent kind of like a gull wing, and considerably
>>longer than a half wavelength -- more like a wavelength if I recall
>>correctly. The gain was substantially more than for a Yagi, but I don't
>>remember how good the F/B ratio was. I believe he did construct and
>>measure some actual antennas.
>
>
> I think you're referring to the Landstorfer-Sacher Yagi design?
>
> http://www.cebik.com/eb.html has some information on these. It's
> something akin to an EDZ (extended double zepp) beam. A 2-meter
> 3-element L-S Yagi shows gain in the 9.7 dB range, with F/B ratios of
> 16-23.
>
> Interesting design. Not the easiest thing in the world to construct,
> I suspect.
>

219. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 21:15:24 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c4sicb$2m93dv$1@ID-225206.news.uni-berlin.de>
Source record: 97120

Just get a mag mount, that is a magnetic mount.
You can change out the rod for longer wavelengths
put on roof, or trunk, take off when done
(doesn't look good on the hood,)
your ham store should have them too.

"JLB" <IHateSpam@nospam.net> wrote in message
news:6Ohcc.6259$Em4.1492@fe03.usenetserver.com...
> I have a 2000 model year Ford Taurus wagon, and am thinking about mounting
a
> through-glass antenna on one of the back side windows. Yes, I know---a
roof
> mount would work better, but I would have to get a hole punch and a
divorce
> lawyer to do it ;-)
>
> Does anyone have any practical experience with this set up? Does the
window
> tinting cause any problems on 146 MHz or 440 MHz? There is a completely
> dark (opaque) band around the edge of the window. Should this be avoided?
>
> I have seen Taurus wagons with cell phone antennas on the back side
windows,
> and was wondering how it worked on the ham bands.
>
> Jim
> N8EE
>
>
>

220. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 21:54:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4071d5af$1_4@corp.newsgroups.com>
Source record: 97121

John Smith wrote:
> Just get a mag mount, that is a magnetic mount.

One nice thing about a mag mount is that if you hit something
pretty hard, it just falls over but keeps attaching itself
to the vehicle body. I stopped worrying about parking garages,
trees, etc. I could hear it fall over and when everything was
clear, I simply stopped the vehicle and straightened it back
up. Sometimes the simple way is the best way. Life doesn't have
to be complicated.
--
73, Cecil, W5DXP

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

221. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 22:03:06 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404051403.3a76d34f@posting.google.com>
Source record: 97122

"Dave VanHorn" <dvanhorn@cedar.net> wrote in message
>
> Though it's entirely done in the HF spectrum, a pretty detailed analysis is
> presented here:
> http://www.cebik.com/58-3.html
> A good ground, and cleaner near-field space, is easier to come by at VHF and
> UHF, so I would expect results to be somewhat better than what was seen here
> even at the high end of the HF spectrum.

It's more decoupling than anything. Although the usual 5/8 GP with 1/4
wave radials is a flawed animal from the git-go. I think the best
article to describe the effect is from a Dr. Reynolds , "I think thats
the name anyway", that wrote an article for AEA about this problem.
They put out a small brochure with the article and some pictures. They
described the problems with most of the common verticals used. IE: 1/2
waves, 5/8's, and collinears. The result of all that led to the
development of the AEA isopole. Probably the best decoupled dual 5/8
collinear ever designed. And thus , the highest performing compared to
less well decoupled competitors. Thats why cushcraft modified their
ringo ranger, and added a decoupling section, and renamed it the ringo
ranger 2. The effects of a lack of decoupling was glaring when
compared to an antenna of the same appx size, using good decoupling.
The RR was also an appx dual 5/8, although slightly perverted in
dimensions...The RR2 is a good antenna. But the isopole will still
usually beat it. The 5/8 GP or other poorly decoupled antenna does
have the rare chance of the feedline currents adding in phase and
creating some gain, but this is like a one in twenty chance...Like
going to Vegas...Doesn't usually work out that way for most people.
Never did for me...I've never had an elevated 5/8 GP on 2m that was
worth a hoot. Not a one...
Only on a car were they ok. But you look at a car...It's large enough
to usually provide a lower 5/8's of sorts, and also there is no
feedline radiation to skew the pattern upwards. The feedline radiation
if any, is shielded by the car body.
HF is a whole different story. On 10m, a 5/8 GP is best over both a
1/4 wave and a 1/2 wave. I've tested this many times in the real
world...
HF is less critical as far as using a real low wave angle, and also
the average angle used , even locally, is probably slightly higher.
But it doesn't apply to VHF or UHF. It's a whole different world
there, and feedline decoupling is by far the most critical part of a
good antenna. Not brute gain numbers. It won't do any good if the gain
is not where you need it. And thats under 5 degrees for local VHF. MK

222. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 23:54:51 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <elmcc.75941$gA5.905305@attbi_s03>
Source record: 97123

JLB wrote:

> I have a 2000 model year Ford Taurus wagon, and am thinking about mounting a
> through-glass antenna on one of the back side windows. Yes, I know---a roof
> mount would work better, but I would have to get a hole punch and a divorce
> lawyer to do it ;-)
>
> Does anyone have any practical experience with this set up? Does the window
> tinting cause any problems on 146 MHz or 440 MHz?

Possibly

There is a completely dark (opaque) band around the edge of the window.
Should this be avoided?

YES

>
> I have seen Taurus wagons with cell phone antennas on the back side windows,
> and was wondering how it worked on the ham bands.

Cell phone antennas perform poorly on 2 & 440 <grin>. I presume you
mean the mounting not the antenna. Through the glass should be fine.

I use a Larsen Through the Glass and there is no noticeable loss of
signal. Theoretically, the loss is about 0.5 to 1.0 dB for clear glass.

Deacon Dave, W1MCE

>
> Jim
> N8EE
>
>
>

223. Vertical Antenna suggestions?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-05 23:54:55 UTC
From: Paul Logan <paul.logan4@btinternet.com>
Message-ID: <c4srkedae1@sparta.btinternet.com>
Source record: 97124

Hi all,

just wondering can anyone suggest some good verticals (available in the UK)
for HF- say 40- 10m and also a tribander or dual bander covering 6 and 2m.

regards and thanks for any help-

--
Paul Logan,
Lisnaskea, N. Ireland.

224. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 00:11:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <adt370tlth9hrte94vgdgdjo2aacnitkfp@4ax.com>
Source record: 97125

On Mon, 05 Apr 2004 23:54:51 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:
>Theoretically, the loss is about 0.5 to 1.0 dB for clear glass.

Hi Dave,

What's the theory?

73's
Richard Clark, KB7QHC

225. Re: not cutting excess wire beyond antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 00:54:47 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <etednf1uafRLYuzd4p2dnA@adelphia.com>
Source record: 97126

Bill Turner wrote:
> On Sun, 04 Apr 2004 23:47:33 GMT, Richard Clark <kb7qhc@comcast.net>
> wrote:
>
>
>>Hi Bill,
>>
>>The interwinding capacitance has got to be another gob to a gob and a
>>half. Naw, I don't worry about it either.
>
>
> ____
>
> Well, if you have a gob of inductance and a gob of capacitance, you have
> a resonant circuit. Now we can worry. :-)

Time for Willy Wonka's Everlasting Gobstoppers!

- Mike KB3EIA -

226. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 00:56:52 UTC
From: k9mov@aol.com
Message-ID: <20040405205652.16223.00000531@mb-m23.aol.com>
Source record: 97127

Watch-it now!! :)
Lane-- K9MOV

227. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 01:53:25 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c4t2i4$2m4k4b$1@ID-225206.news.uni-berlin.de>
Source record: 97128

If it is smoked or mirrored glass,
you can use the "smoke and mirrors theory"
(yes, this is an attempt at humor)

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:adt370tlth9hrte94vgdgdjo2aacnitkfp@4ax.com...
> On Mon, 05 Apr 2004 23:54:51 GMT, Dave Shrader
> <david.shrader@comcast.net> wrote:
> >Theoretically, the loss is about 0.5 to 1.0 dB for clear glass.
>
> Hi Dave,
>
> What's the theory?
>
> 73's
> Richard Clark, KB7QHC

228. Re: aerial coupling and nec2 - I do not understand my results

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 02:02:58 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c4t3cl$2lqk03$1@ID-225206.news.uni-berlin.de>
Source record: 97129

There is a mutual coupling term between the elements of an array antenna.
This can be minimized by proper spacing, and by eliminating some of the
elements.
Looking back at the array - (from each angle) -- The pattern is a linear
summation of the each of the currents induced by the emitters (using complex
numbers, i.e. magnitude and angle, distance etc)

"stuart macgregor" <stuart.191@ntlworld.com> wrote in message
news:pan.2004.04.04.23.34.43.492290@ntlworld.com...
> I wrote a little ruby (nice interpretive language) wrapper round the C
> port of the nec2 program, and began happily generating simulations. So
> far so good. (When I am finished I could offer it to anyone interested)
>
> I am new to EM stuff - so here comes what is probably a silly
> misunderstanding:
>
> Consider an array of similar aerials (antennae).
>
> Since the situation is linear, I would expect the currents received from a
> plane wave signal to be linearly related to the currents which would be
> obtained at each element position if there were no aerials at the other
> element positions (assuming the effect of an aerial on its surroundings is
> due solely to its current, and you can linearly add a cancelling current
> and thus remove it)?
>
> The relationship can be expressed by a symmetric (reciprocity) coupling
> matrix which should be independant of the incident plane wave direction?
>
> For a regular array on a circle the matrix should be toeplitz, by
> symmetry, and constitutes a cyclic FIR filter which will yield the coupled
> signal observations from the (free) field values at the element positions
> (to a complex scale factor). It can thus be found by division of the FFTs
> (of the loaded simulation currents vs open circuit simulation currents
> or vs free field plane wave calculation) and inverse FFT.
>
> When I try this - for example with a regular 3 element circular array of
> resonant dipoles - I find that the FIR coefficients derived do indeed
> convert from free field pattern at the element positions to array
> currents, but only for the angle from which they are derived. The
> relationship seems to be signal dependant :-(. For example the plane waves
> in the opposite sense (180 deg) have a quite different coupling matrix
> (mostly in phase).
>

> Can anyone point out my mistake, this is really bugging me. I have tried
> increasing the number of segments to silly levels, to no avail. For 2
> dipoles it works, more and it does not.
>
> Help

229. Re: COLUMBUS OHIO, where to stay and be near OSU and still have a little DX?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 02:44:52 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <1Qocc.2580$BF2.466415@news20.bellglobal.com>
Source record: 97130

The course is music teachers symposium. It's about a week long, depending on which seminars your choose to attend. I have a synopsis of the schedule. It's in various buildings; Weigel Auditorium, Hughes Auditorium, Mershon something or other...

I'm not sure if those buildings are near the Holiday Inn or not. If you're familiar with their location with respect to the hotel, I'd really appreciate your input.

Thanks!
Bob

230. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 03:38:29 UTC
From: KU2S <ku2s@arrl.net>
Message-ID: <0e94705k7qgq4o96ko1lhps45p5d7ok2u6@4ax.com>
Source record: 97131

On Sun, 04 Apr 2004 14:28:09 GMT, "Annette & LJ Dumas"
<nettski@worldnet.att.net> wrote:

>The Portsmouth, VA ARC (W4POX) uses them during Field Day on 40 & 80 M,
>we've had outstanding results.
>
>Joe
>N2LJD
>"JJ" <radiobuff0@mailcity.moc> wrote in message
>news:qoudnRKu3b6-F_LdRVn-hA@gbronline.com...
>> I am thinking of putting up a windom antenna (see
>> http://www.hfantennas.com/Products.htm)and would like comments from
>> anyone who is using or has used one about the performance. Primay band
>> of interest will be 40 meters.
>>
>> Thanks
>>
>

I use a homebrewed Windom antenna as my sole HF antenna. Works VERY
well on 80, 40, 30, 20, 15 and 10 meters. Tunes easily with an
MFJ-941D tuner, and performs very well in all directions. It's a
little twitchy on 12 and 17 meters, but by reducing output power on
the transmitter, it's useable...

Raymond Sirois KU2S
SysOp: The Lost Chord BBS
607-733-5745
telnet://thelostchord.dns2go.com:6000

231. Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 04:34:00 UTC
From: Dave Pitzer <dpitzer@sonic.net>
Message-ID: <Yqqcc.4078$Fo4.44247@typhoon.sonic.net>
Source record: 97132

I have a CC Radio Plus (Sangean) AM/FM/TV/WX radio (from C. Crane Co.) I enjoy broadcasr band DX'ing and this radion does a super job with just it's built-in ferrite antenna. I have logged AM BC stations from practically every state east of the Mississippi.

Best reception is, of course, at night. But.... for some reason WABC (New York City) comes in poorly at night even though it's xmitter is only 80 miles away. The signal fades to next to nothing and then increases to very loud but extremely distorted then will be loud and clear for a while. (During the day this station's signal is fine.) On the same evening, stations in Georgia (WSB, Atlanta), Illonois (WGN, Chicago), Michigan (WJR, Detroit), etc., etc. come in fine 90% of the time.

Do I need an external antenna for the closer WABC?????

Thanks,

Dave Pitzer
Pocono Lake, PA
==========

232. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 05:24:11 UTC
From: Rick Frazier <rick@rickfrazier.com>
Message-ID: <40723F07.8F1DA18F@rickfrazier.com>
Source record: 97133

Dave:

I don't know the specifics of WABC, but many radio stations have different power and antenna patterns for night time operation than they do for daytime. I would suppose that WABC is a clear channel station that can transmit 24 hours a day at 50KW (50,000 watts). Even as such, the antenna pattern may be nearly omnidirectional during the day, and highly directional north and south at night, and you may be sitting in one of the "nulls", hence you get poor reception at night.

As you are close by, you may be able to call them directly and ask what their power and antenna patterns are, if you are interested in finding out if this is the issue...

Of course, atmospheric conditions change dramatically after the sun goes down, and they could be accounting for the signal fluctuations you are experiencing...

Thanks
--Rick AH7H

Dave Pitzer wrote:

> I have a CC Radio Plus (Sangean) AM/FM/TV/WX radio (from C. Crane Co.) I
> enjoy broadcasr band DX'ing and this radion does a super job with just it's
> built-in ferrite antenna. I have logged AM BC stations from practically
> every state east of the Mississippi.
>
> Best reception is, of course, at night. But.... for some reason WABC (New
> York City) comes in poorly at night even though it's xmitter is only 80
> miles away. The signal fades to next to nothing and then increases to very
> loud but extremely distorted then will be loud and clear for a while.
> (During the day this station's signal is fine.) On the same evening,
> stations in Georgia (WSB, Atlanta), Illonois (WGN, Chicago), Michigan (WJR,
> Detroit), etc., etc. come in fine 90% of the time.
>
> Do I need an external antenna for the closer WABC?????
>
> Thanks,
>
> Dave Pitzer
> Pocono Lake, PA
> ========================

233. Re: Vertical Antenna suggestions?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 07:46:25 UTC
From: F8BOE <f8boe-8@bluemail.ch>
Message-ID: <4072603e$0$19489$626a14ce@news.free.fr>
Source record: 97134

Hello,

Maybe Cushkraft antennas... I have a second hand AP8A since 1998 and it works quite good on HF.

For V-UHF, you can homebrew your own antenna or step up for the cheaper Diamond clones by TSB (or others).

73 de F8BOE Olivier ...-.-

"Paul Logan" <paul.logan4@btinternet.com> a crit dans le message de news:c4srkedae1@sparta.btinternet.com...
>
> Hi all,
>
> just wondering can anyone suggest some good verticals (available in the UK)
> for HF- say 40- 10m and also a tribander or dual bander covering 6 and 2m.
>
> regards and thanks for any help-
>
>
> --
> Paul Logan,
> Lisnaskea, N. Ireland.
>
>
>

234. Re: Plans for a 5/8 wave 2M ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 09:14:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1074t8m4ts8d5a7@corp.supernews.com>
Source record: 97135

Mark makes a good point. Those with EZNEC or other modeling program might try this -- build a model of a ground plane antenna, and do an elevation plot. I'll describe the process with EZNEC, but you can do the same with other programs. With EZNEC, start with the example description VHFGP.EZ, and change the Plot Type to Elevation. Click FF Pat to run a pattern. In the 2D window, select Save Trace As, enter a name, and click Save. Then, from the junction of the ground plane and vertical wire, extend a wire downward for 3/4 wavelength, by adding a wire (in the Wires Window) with end coordinates 0,0,5 and 0,0,4.25 wavelengths. Give the new wire 15 or so segments. Change the Units to Inches or Millimeters, and make the diameter about equal to the outside diameter of your feedline coax. Do a pattern calculation on the new antenna. In the 2D window, select Add Trace, and enter the name of the trace you just saved to show the original pattern for comparison. The distortion of the pattern is due to current induced on the outside of the feedline by the antenna -- the radiating feedline is as much a part of the antenna as the intended radiator. (Those of you enamored with with CFA, EH, or other small antenna take note!) In fact, feedline radiation can actually contribute more to the overall field than radiation from the supposed "antenna". You can see this current in the View Antenna display after doing a calculation. You'll find that very small changes in the length of the feedline wire make profound differences in the pattern. (The phenomenon is similar to what happens when you change the length of a Yagi element.)

This open ended feedline of course doesn't do a good job of representing most real feedlines, and the length was chosen to be nearly resonant. The real feedline is likely to be longer, and take a circuitous path, perhaps through the mains wiring, eventually ending at ground, and might or might not resonate. The pattern you'll actually get depends on this path and length, which are often hard to predict or quantify. But the program shows that pretty severe pattern distortion is possible for some feedline lengths, so you might or might not experience it. It also illustrates that the ground radials do an ineffective job of isolating the outside of the feedline from the antenna. I believe it's very possibly a reason people have such varying opinions about ground planes of various lengths and of J-poles -- and why people seem pretty uniformly satisfied with the AEA Isopole. It's not spectacular, but it's consistent, and independent of the feedline.

To further your education, try different ground radial angles and lengths in the model antenna, and different radiator lengths. Another fun experiment is to put a "balun" -- a resistive or reactive load of about 1000 ohms -- at the "coax" feedpoint connection (wire 6, 0% of the way from end 1), and see what that does to the current and pattern. Try

moving it, and adding a second one at various spacings. Interesting, isn't it?

The conclusion you should reach is that a description of the vertical and ground plane wires alone isn't an adequate description of the actual radiating structure -- the feedline is an integral part of the system and has to be included if you're to have any idea of how the antenna will really work.

Hopefully, this exercise will help you understand why, when you ask a question about how well a "simple" antenna will work, some of us hem and haw and answer "It depends".

Roy Lewallen, W7EL

235. Re: COLUMBUS OHIO, where to stay and be near OSU and still have a little DX?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 11:08:05 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <dcwcc.9715$Em4.5286@fe03.usenetserver.com>
Source record: 97136

www.osu.edu

They have a virtual map you can look at. There is also list of nearby hotels, but the holiday inn I mentioned is not on it for some reason. The buildings you mentioned would be about a 10 minute walk.

Jim
N8EE
"Bob" <nowhere@nospam.org> wrote in message
news:1Qocc.2580$BF2.466415@news20.bellglobal.com...
> The course is music teachers symposium. It's about a week long,
> depending on which seminars your choose to attend. I have a synopsis of
> the schedule. It's in various buildings; Weigel Auditorium, Hughes
> Auditorium, Mershon something or other...
>
> I'm not sure if those buildings are near the Holiday Inn or not.
> If you're familiar with their location with respect to the hotel, I'd
> really appreciate your input.
>
> Thanks!
> Bob
>

236. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 11:13:57 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Hhwcc.9737$Em4.968@fe03.usenetserver.com>
Source record: 97137

But it is not clear glass, it is tinted.

And, yes, I meant the window mounting not the cellular antenna (I asked that in a seperate post).

Do you have a Taurus wagon? I was hoping to find someone here who actually tried a glass mount on a Taurus. [I find it amusing how many people respond to a post without reading it. Someone actually suggested putting a mag mount on the trunk!]

Jim
N8EE
"Dave Shrader" <david.shrader@comcast.net> wrote in message news:elmcc.75941$gA5.905305@attbi_s03...
> JLB wrote:
>
> > I have a 2000 model year Ford Taurus wagon, and am thinking about mounting a
> > through-glass antenna on one of the back side windows. Yes, I know---a roof
> > mount would work better, but I would have to get a hole punch and a divorce
> > lawyer to do it ;-)
> >
> > Does anyone have any practical experience with this set up? Does the window
> > tinting cause any problems on 146 MHz or 440 MHz?
>
> Possibly
>
> There is a completely dark (opaque) band around the edge of the window.
> Should this be avoided?
>
> YES
>
> >
> > I have seen Taurus wagons with cell phone antennas on the back side windows,
> > and was wondering how it worked on the ham bands.
>
> Cell phone antennas perform poorly on 2 & 440 <grin>. I presume you
> mean the mounting not the antenna. Through the glass should be fine.
>
> I use a Larsen Through the Glass and there is no noticeable loss of
> signal. Theoretically, the loss is about 0.5 to 1.0 dB for clear glass.

>
> Deacon Dave, W1MCE
>
> >
> > Jim
> > N8EE
> >
> >
> >
>

237. ICOM rack mount handles ???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 11:26:43 UTC
From: Josh <xppq@ispwest.com>
Message-ID: <c4u45a030ab@enews2.newsguy.com>
Source record: 97140

Looking to BUY ICOM MB19 rack mount
handles - used on IC 775, 781 and 765 among others

Does any one have some (2) of these handles?

Josh N7XM xppq@ispwest.com

238. Tower Climbers / Riggers in northern NEVADA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 11:31:30 UTC
From: Josh <xppq@ispwest.com>
Message-ID: <c4u4e9030ke@enews2.newsguy.com>
Source record: 97141

Any hams who are experienced Climbers / Riggers
in RENO area of Northern Nevada????

Need experienced help (will pay) on 100 feet of Rohn 45

Josh N7XM xppq@ispwest.com

239. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 11:39:33 UTC
From: WB2JKX <mycall-N0SPAM@arrl.net>
Message-ID: <VFwcc.26690$vo5.840362@bgtnsc05-news.ops.worldnet.att.net>
Source record: 97138

Dave Pitzer <dpitzer@sonic.net> wrote in message
news:Yqqcc.4078$Fo4.44247@typhoon.sonic.net...
> I have a CC Radio Plus (Sangean) AM/FM/TV/WX radio (from C. Crane Co.) I
> enjoy broadcasr band DX'ing and this radion does a super job with just
it's
> built-in ferrite antenna. I have logged AM BC stations from practically
> every state east of the Mississippi.
>
> Best reception is, of course, at night. But.... for some reason WABC (New
> York City) comes in poorly at night even though it's xmitter is only 80
> miles away. The signal fades to next to nothing and then increases to very
> loud but extremely distorted then will be loud and clear for a while.
> (During the day this station's signal is fine.) On the same evening,
> stations in Georgia (WSB, Atlanta), Illonois (WGN, Chicago), Michigan
(WJR,
> Detroit), etc., etc. come in fine 90% of the time.
>
> Do I need an external antenna for the closer WABC?????
>
> Thanks,
>
> Dave Pitzer
> Pocono Lake, PA
> ========================
>
You're still close enough to receive the groundwave signal, but at night
skywave signal will cause constructive and destructive interference as the
phase relationship between the twoslowly changes. I experience the same
thing in NW NJ.

240. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 11:48:53 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <FOwcc.84377$JO3.43213@attbi_s04>
Source record: 97139

Richard Clark wrote:

> On Mon, 05 Apr 2004 23:54:51 GMT, Dave Shrader
> <david.shrader@comcast.net> wrote:
>
>>Theoretically, the loss is about 0.5 to 1.0 dB for clear glass.
>
>
> Hi Dave,
>
> What's the theory?
>
> 73's
> Richard Clark, KB7QHC

My EM guys, Physics types, [from my working days] indicated that the three dielectric interfaces, adhesive to glass to adhesive, all with different dielectric coefficients create reflections at the boundaries.

241. Re: COLUMBUS OHIO, where to stay and be near OSU and still have a little DX?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 12:06:25 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <v2xcc.2739$BF2.516505@news20.bellglobal.com>
Source record: 97142

I called the Holiday Inn, and checked them out on the web, and mapblast. The music dept is pretty much centered around the corner of College Road and North High street. Holiday Inn looks good, and they have rooms, but no balconies. (I called them.) The front desk fellow was very helpful, but I was not about to ask "...and how difficult would it be to get an antenna outside the room window?" :-)

It's still the front runner though, I'll ferret about Microsoft's "Streets and Trips" and a few other sources. Might even resort to calling the University itself, I'm sure they have a list (perhaps even online) of suggestions.

Thank you for all your input and advice!
Bob

242. Re: COLUMBUS OHIO, where to stay and be near OSU and still have a little DX?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 12:33:11 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Yrxcc.10118$Em4.9062@fe03.usenetserver.com>
Source record: 97143

"Bob" <nowhere@nospam.org> wrote in message
news:v2xcc.2739$BF2.516505@news20.bellglobal.com...

> calling the University itself, I'm sure they have a list (perhaps even
> online) of suggestions.
>

Yes, they do. It is at http://www.osu.edu/visitors/accommodations.html but as I said, the Holiday Inn is not on it. Note that some on this list are a few miles away and will require a car. Summer quarter ain't too bad, but otherwise parking is absolutely attrocious!!

Jim
N8EE

243. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 12:47:14 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <nFxcc.54948$_U.42069@lakeread05>
Source record: 97144

"WB2JKX" <mycall-N0SPAM@arrl.net> wrote in message
news:VFwcc.26690$vo5.840362@bgtnsc05-news.ops.worldnet.att.net...
>
> Dave Pitzer <dpitzer@sonic.net> wrote in message
> news:Yqqcc.4078$Fo4.44247@typhoon.sonic.net...
> > I have a CC Radio Plus (Sangean) AM/FM/TV/WX radio (from C. Crane Co.) I
> > enjoy broadcasr band DX'ing and this radion does a super job with just
> it's
> > built-in ferrite antenna. I have logged AM BC stations from practically
> > every state east of the Mississippi.
> >
> > Best reception is, of course, at night. But.... for some reason WABC
(New
> > York City) comes in poorly at night even though it's xmitter is only 80
> > miles away. The signal fades to next to nothing and then increases to
very
> > loud but extremely distorted then will be loud and clear for a while.
> > (During the day this station's signal is fine.) On the same evening,
> > stations in Georgia (WSB, Atlanta), Illonois (WGN, Chicago), Michigan
> (WJR,
> > Detroit), etc., etc. come in fine 90% of the time.
> >
> > Do I need an external antenna for the closer WABC?????
> >
> > Thanks,
> >
> > Dave Pitzer
> > Pocono Lake, PA
> > ========================
> >
> You're still close enough to receive the groundwave signal, but at night
> skywave signal will cause constructive and destructive interference as the
> phase relationship between the twoslowly changes. I experience the same
> thing in NW NJ.

One NJ station that I can't remember at the moment told me that I was the
Southern-most reception report they had (Princeton to Virginia Beach, Va).
They change from 100,000w daytime to 1,000w nighttime. Normally a powerful
Florida station overpowers their transmission.

Jack

244. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 13:24:54 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <8qSdna6YooaILe_dRVn-hg@comcast.com>
Source record: 97145

> My EM guys, Physics types, [from my working days] indicated that the
> three dielectric interfaces, adhesive to glass to adhesive, all with
> different dielectric coefficients create reflections at the boundaries.

There are four. You couldn't really have an odd number..

Metal-adhesive, adhesive-glass, glass-adhesive, adhesive-metal.

Then there's the tuner box and all that on the feedline to consider.
Not surprising that there's some significant loss in the process.

245. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 13:24:54 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <n4adnedgM4SwLe_dRVn-vw@comcast.com>
Source record: 97146

> My EM guys, Physics types, [from my working days] indicated that the
> three dielectric interfaces, adhesive to glass to adhesive, all with
> different dielectric coefficients create reflections at the boundaries.

There are four. You couldn't really have an odd number..

Metal-adhesive, adhesive-glass, glass-adhesive, adhesive-metal.

Then there's the tuner box and all that on the feedline to consider.
Not surprising that there's some significant loss in the process.

246. Re: aerial coupling and nec2 - I do not understand my results

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 13:43:43 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <3uycc.10370$Em4.704@fe03.usenetserver.com>
Source record: 97147

I did something similar to this as part of my Master's research, except I used a 'brute force' algorithm written in Fortran.

As the other poster suggested, you have to consider the mutual coupling. This can really mess up the pattern if ignored, except in one special case. That special case is when the array is completely symmetrical. That is each dipole 'sees' the same surroundings as all other dipoles. Since you have them in a circular arrangement, the dipoles will have to be placed radially on the circle. That is, one end of each should point towards the center of the circle.

What is happening is that the elements are coupling to each other. This introduces an additional complex impedance in addition to the self impedance of the dipoles themselves. You then have to 'dither' the phase of the driving current (for an all driven array) to get the desired pattern. In the case of an array with parasitic elements (that is, the driving current is 0.0), what is typically done is to dither the self impedance of the parasitic elements by either placing a lumped constant (inductance or capacitance) in the parasitic element, or changing the length of the parasitic element slightly. The more elements you have, the more complicated the problem becomes.

Note that the pattern for receiving will be the same as for transmitting because of reciprocity. It is usually easier to calculate the pattern for the transmit case.

Two dipoles, as you found, are always symmetrical to each other. Get yourself a copy of J. D. Kraus' "Antennas" and study the section on mutual coupling and reciprocity. The newer editions also have a section on the "Method of Moments", which is what NEC and similar programs use.

For my thesis project, I used a brute force method. Kraus gives canned formulas for the self and mutual impedances of simple antenna elements---dipoles, monopoles, etc. (actually, he only gives part of the formulas and refers you to other papers). I then wrote some complex matrix math routines in Fortran, and let it crank away. For N elements, you need an NxN matrix of complex numbers to describe the relationship between all of the elements. The self impedances will be on the diagonal, and the mutual impedances for each pairing of elements will be elsewhere in the matrix. What you do then is solve the matrix equation I=V/Z, with V being a unit matrix (for a uniformly driven array). This will give you the currents in the elements from which the pattern can be calculated. To 'dither' the currents, change the complex values in the V diagonal. For a parasitic array (I never got far enough to actually try this) all but the feed element in V is 0.0.

Fortunately, NEC does all of this for you.

By the way, a herd of bugs have 'antennae', a herd of radios have 'antennas'. (As in Kraus' Antennas).

Jim
N8EE

247. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 14:13:22 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <c4udu2$om0$1@f04n12.cac.psu.edu>
Source record: 97148

Dick,

I think the reason that is a safe place is that the auto manufacturers
know that drivers like to mount radar detectors there, and that requires
an RF-transparent section of glass.

73,
Bob AD3K

Dick, AA5VU wrote:
> Jim,
>
> Think about the front windshield behind the rear view mirror. That is
> where I ran one on a Z-28 and Corvette and it worked great.
>
> Dick - AA5VU
>
> In article <6Ohcc.6259$Em4.1492@fe03.usenetserver.com>,
> "JLB" <IHateSpam@nospam.net> wrote:
>
>
>>I have a 2000 model year Ford Taurus wagon, and am thinking about mounting a
>>through-glass antenna on one of the back side windows. Yes, I know---a roof
>>mount would work better, but I would have to get a hole punch and a divorce
>>lawyer to do it ;-)
>>
>>Does anyone have any practical experience with this set up? Does the window
>>tinting cause any problems on 146 MHz or 440 MHz? There is a completely
>>dark (opaque) band around the edge of the window. Should this be avoided?
>>
>>I have seen Taurus wagons with cell phone antennas on the back side windows,
>>and was wondering how it worked on the ham bands.
>>
>>Jim
>>N8EE

--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

248. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 14:17:37 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <c4ue61$om2$1@f04n12.cac.psu.edu>
Source record: 97149

Wasn't it James Thurber who said, "When someone says 'theoretically,' he means 'not actually.'"?

73
Bob AD3K

Richard Clark wrote:

> On Mon, 05 Apr 2004 23:54:51 GMT, Dave Shrader
> <david.shrader@comcast.net> wrote:
>
>>Theoretically, the loss is about 0.5 to 1.0 dB for clear glass.
>
>
> Hi Dave,
>
> What's the theory?
>
> 73's
> Richard Clark, KB7QHC

--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

249. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 14:41:20 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <40716a74_1@newsfeed.slurp.net>
Source record: 97150

Sure. check virtually any ARRL Handbook for plans, and start making the
rounds of local ham swap meets...

73,
Mike KI6PR
El Rancho R.F., CA

"Matthew&Wendy" wrote
> Instead of buying an antenna tuner, is it possible to build one myself.
> Nothing fancy, but a rotary switch and some ?capacitors?. Thanks for the
> advice.
>
> Matthew
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.644 / Virus Database: 412 - Release Date: 3/26/2004
>
>

250. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 15:02:45 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <pEzcc.83612$K91.182697@attbi_s02>
Source record: 97151

Robert Spooner wrote:
> Wasn't it James Thurber who said, "When someone says 'theoretically,' he
> means 'not actually.'"?
>
> 73
> Bob AD3K

When I use 'theory' or 'theoretically', I'm using it in the engineering context of Physics and Mathematics. Meaning the mathematical solution of the LAWs of Physics are applicable.

There are other understandings of theory: such as the district attorney's theory behind a crime; or, in science terms the next step beyond 'hypothesis'; or, the step below 'law of nature'.

The theory is understanding 'WHY' things are actually, to quote your word above. Knowledge, in engineering and science, is incomplete without the THEORY of operation or Physics.

So, I reject your hypothesis regarding Thurber's statement. It is inconsistent with science/engineering/physics.

251. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 15:04:33 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4072c723$1_7@corp.newsgroups.com>
Source record: 97153

Dave Pitzer wrote:
> Best reception is, of course, at night. But.... for some reason WABC (New
> York City) comes in poorly at night even though it's xmitter is only 80
> miles away. The signal fades to next to nothing and then increases to very
> loud but extremely distorted then will be loud and clear for a while.

More than likely, you are getting interference between the ground wave
and the sky wave as the strength and path of the sky wave varies with
atmospheric conditions. I don't know of a cure. I sometimes have the
same problem with the same radio tuned to WTAW, 40 miles away.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

252. MFJ Screwdriver Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 15:04:37 UTC
From: Jim Volstad <jvolstad-nospam@yahoo.com>
Message-ID: <9Gzcc.57447$3E1.26337@fe2.texas.rr.com>
Source record: 97152

Curious how effective these antennas are in a portable/base environment?
Any users out there?

253. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 15:33:56 UTC
From: Dave Pitzer <dpitzer@sonic.net>
Message-ID: <E5Acc.4121$Fo4.44819@typhoon.sonic.net>
Source record: 97154

Gents,

I think the suggestion that the ground and sky wave are "fighting" each other after sunset is the answer. This would account for the "wierd" phase-shifting audio sounds that accompany the shifts in signal strength.

The links below show that I'm between the local and distant coverage pattern contours. (I'm a little east of Allentown, PA.)

http://www.radio-locator.com/cgi-bin/pat?call=WABC&service=AM&status=L&hours=D

http://www.radio-locator.com/cgi-bin/pat?call=WABC&service=AM&status=L&hours=N

Incidentally, www.radio-locator.com is a good resource for BCB Dxing.

Dave Pitzer
==========
"Dave Pitzer" <dpitzer@sonic.net> wrote in message
news:Yqqcc.4078$Fo4.44247@typhoon.sonic.net...
> I have a CC Radio Plus (Sangean) AM/FM/TV/WX radio (from C. Crane Co.) I
> enjoy broadcasr band DX'ing and this radion does a super job with just
it's
> built-in ferrite antenna. I have logged AM BC stations from practically
> every state east of the Mississippi.
>
> Best reception is, of course, at night. But.... for some reason WABC (New
> York City) comes in poorly at night even though it's xmitter is only 80
> miles away. The signal fades to next to nothing and then increases to very
> loud but extremely distorted then will be loud and clear for a while.
> (During the day this station's signal is fine.) On the same evening,
> stations in Georgia (WSB, Atlanta), Illonois (WGN, Chicago), Michigan
(WJR,
> Detroit), etc., etc. come in fine 90% of the time.
>
> Do I need an external antenna for the closer WABC?????
>
> Thanks,
>
> Dave Pitzer
> Pocono Lake, PA
> ========================
>
>
>

254. Re: MFJ Screwdriver Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 15:51:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4072d22a$1_7@corp.newsgroups.com>
Source record: 97155

Jim Volstad wrote:
> Curious how effective these antennas are in a portable/base environment?
> Any users out there?

Not a user - just a general comment.

With a proper ground plane, these antennas are effective on 10m-20m.
For portable/base operation, you can always do better on 30m-160m
with larger/longer antennas.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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255. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 15:52:59 UTC
From: "Dick, AA5VU" <aa5vuNOSPAM@arrl.net>
Message-ID: <aa5vuNOSPAM-10E4AD.10525806042004@newssvr23-ext.news.prodigy.com>
Source record: 97156

Bob, AD3K, made a good point that I overlooked. I had very good success with the thru-the-glass behind the rear view mirror. It even cleared the garage door.

I drive a C5 Corvette now and could not figure out where to mount the dual-bander so it is mounted on a bean bag lap top desk and ride in the passenger seat or on the hump when someone is onboard. The antenna is a small dual-band mag mount on a thin steel plate in the hatch area. It works!

dick aa5vu

In article <c4udu2$om0$1@f04n12.cac.psu.edu>,
Robert Spooner <rls19@psu.edu> wrote:

> Dick,
>
> I think the reason that is a safe place is that the auto manufacturers
> know that drivers like to mount radar detectors there, and that requires
> an RF-transparent section of glass.
>
> 73,
> Bob AD3K
>
> Dick, AA5VU wrote:
> > Jim,
> >
> > Think about the front windshield behind the rear view mirror. That is
> > where I ran one on a Z-28 and Corvette and it worked great.
> >
> > Dick - AA5VU
> >
> > In article <6Ohcc.6259$Em4.1492@fe03.usenetserver.com>,
> > "JLB" <IHateSpam@nospam.net> wrote:
> >
> >
> >>I have a 2000 model year Ford Taurus wagon, and am thinking about mounting a
> >>through-glass antenna on one of the back side windows. Yes, I know---a roof
> >>mount would work better, but I would have to get a hole punch and a divorce
> >>lawyer to do it ;-)
> >>
> >>Does anyone have any practical experience with this set up? Does the window
> >>tinting cause any problems on 146 MHz or 440 MHz? There is a completely
> >>dark (opaque) band around the edge of the window. Should this be avoided?
> >>

> >>I have seen Taurus wagons with cell phone antennas on the back side windows,
> >>and was wondering how it worked on the ham bands.
> >>
> >>Jim
> >>N8EE

256. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 15:59:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c4k57099fob2d0ma96m61dkbjndtlf8rm2@4ax.com>
Source record: 97157

On Tue, 06 Apr 2004 11:48:53 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Richard Clark wrote:
>
>> On Mon, 05 Apr 2004 23:54:51 GMT, Dave Shrader
>> <david.shrader@comcast.net> wrote:
>>
>>>Theoretically, the loss is about 0.5 to 1.0 dB for clear glass.
>>
>>
>> Hi Dave,
>>
>> What's the theory?
>>
>> 73's
>> Richard Clark, KB7QHC
>
>My EM guys, Physics types, [from my working days] indicated that the
>three dielectric interfaces, adhesive to glass to adhesive, all with
>different dielectric coefficients create reflections at the boundaries.

Hi Dave,

Poor theory. Reflection is not loss. There are reflections galore on
a radiator that supports the Standing Wave and yet with a large enough
metal surface it is nearly 100% radiative.

As for this boundaries explanation, those "Physics types" clearly did
not have any working knowledge (experience) - about as useful as
Cecil's poorly offered Light analogies suffering from the same lack.
I further note that none of this indicts clear glass (which may have
been a semantic issue) to the tune of nearly 1dB.

73's
Richard Clark, KB7QHC

257. Re: MFJ Screwdriver Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 16:00:00 UTC
From: Larry Gagnon <lagagnon@fakeuniserve.com>
Message-ID: <1075l00bbuq5tb7@corp.supernews.com>
Source record: 97158

On Tue, 06 Apr 2004 15:04:37 GMT, Jim Volstad <jvolstad-nospam@yahoo.com> wrote:
> Curious how effective these antennas are in a portable/base environment?
> Any users out there?
>
Jim: I have used many different mobile antennas. They work, like any other antenna. You will make QSO's with them but they can never be very efficient even though the screwdriver marketeers say they are the most efficient mobile antennas. They will always be a very shortened vertical - that still would require an excellent ground plane to work as a portable/base antenna. They are also very cumbersome to "mount" and they pick up a lot of QRN.

I got into QRP a few years ago. I tried to make QRP QSO's using my Terlin Outbacker mobile antenna set up as a portable antenna with a rigged up ground plane of 4 radials. I had a few QSO's but poor signal reports (although I had very good success with my Outbacker in the car with 100 watts). I then made a very simple multi-band tapped dipole (W2CV Gusher) for my QRP portable operations and have never looked back. Signal reports were way up, easier to erect, MUCH more efficient and a hell of a lot cheaper!

In summary, if you already have the screwdriver go ahead and try it portable. If you are going out to buy one to be a multi-purpose mobile/portable/base antenna I would forget it and build yourself a good dipole or inverted V instead!

Larry VE7EA

>
>

--
****
to reply via email remove "fake"

258. Re: Help retuning 2 meter Diamond f22a to aircraft band, please

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 16:01:52 UTC
From: joe <joe@nospam.com>
Message-ID: <tMidnT3JR_2XSe_dRVn-gg@comcast.com>
Source record: 97159

Its a 7/8 wave, if that helps.

Joe

"joe" <joe@nospam.com> wrote in message
news:eKWdnXpb1I6VIfbdRVn_iw@comcast.com...
> I recently picked up a Diamond f22a 2 meter antenna. I would like to tune
it
> to the aircraft band (123mhz). I have a couple of questions: How much
length
> would I need to add to it? It looks like I can add about 8-10" inside the
> top fiberglass tube. Is it worth the trouble? Will it improve reception.
> I've done google searches and even talked to Diamond and can't come up
with
> a figure. Any help would be greatly appreciated.
>
> Joe
>
>

259. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 16:16:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kbl570ppl8abo76tl1l8m10ip6mgcqlmhi@4ax.com>
Source record: 97160

On Tue, 06 Apr 2004 15:02:45 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Robert Spooner wrote:
>> Wasn't it James Thurber who said, "When someone says 'theoretically,' he
>> means 'not actually.'"?
>>
>> 73
>> Bob AD3K
>
>When I use 'theory' or 'theoretically', I'm using it in the engineering
> context of Physics and Mathematics. Meaning the mathematical solution
>of the LAWs of Physics are applicable.

Hi Dave,

This is a catch-all application of "theory." The solutions are
always applicable and the casual employment of the phrase "in theory"
is thus rendered gratuitous (or rhetorical chaff) - hence the
attachment of Thurber's observation that is a sardonic reference to
the lack of any actuality. You have confirmed that his artistic prose
has as much validity as Physics.

73's
Richard Clark, KB7QHC

260. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 16:25:30 UTC
From: Winston <win@here.com>
Message-ID: <u2m5705bkegvllvunmp7c10hvbsrootcqd@4ax.com>
Source record: 97161

On Sat, 03 Apr 2004 20:46:15 -0700, JJ <radiobuff0@mailcity.moc>
wrote:

>I am thinking of putting up a windom antenna (see
>http://www.hfantennas.com/Products.htm)and would like comments from
>anyone who is using or has used one about the performance. Primay band
>of interest will be 40 meters.
>
>Thanks
I have operated on both an 80 meter G5RV and an 80 meter Carolina
Windom. Both performed well, but I lean towards the Carolina Windom.
The SWR on the Windom is below 3:1 on all bands and my internal tuner
has yet to have a problem matching it to any frequency. I resolved
the problem of the vertical arm by supporting at the feed point with a
fiberglass mast at 40 feet.

Hi, Robert

Win/W0lz

261. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 16:29:42 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404060829.5ac57eb@posting.google.com>
Source record: 97162

Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
news:<406d9ca1_2@127.0.0.1>...
> Brian Kelly wrote:
> > I'll have some fairly long runs of coax to HF antennas (21Mhz max) to
> > Field Day antennas. One of the antennas will be an 80M G5RV with their
> > usual nasty SWRs so a foam-type cable is indicated.
>
> Hi Brian, what bands will the G5RV be used on? Only 80m?
> The SWR is not all that nasty on 80m being about 20:1
> on the ladder-line and 2:1 on the coax.

Greetings Cecil: I've been on the road for the past three days and am
just now catching up with my e-mail and such.

The answer to your question is that I intend to use a Van Gordon 80M
G5RV at about 40 ft. on 80/75/40 as a minimum. I'm "ambidextrous", I
motor-mouth and twitch paddles on FD so I need "bandwidth" on 80/75.
I'm building a close-spaced wires duo-band dipole for 20 & 15 which
will be hung at around 25-30 ft. If that antenna doesn't work right
I'll also have to use the G5RV on 20/15 too. In the ideal scenario
both antennas would work and I'll be able to swap antennas around for
20 & 15 depending on the pattern & propagation condx of the moment.
I'll use 8X to feed the G5RV balun which will be 8-10 foot above
ground level to keep the weight on the G5RV down

From there I'll run a length of RG-8 to the operating position. Looks
like a 75 or so foot run. I'll use my LDG-11MP ATU to tame the G5RV.
With all this coax involved the ATU won't have much "work" to do . . .

> Here's one of my rules-of-thumb for which I am infamous. :-)

Heh.

> Given a 102 ft. Dipole at 40 ft. fed with 450 ohm ladder-line
> and used on 3.8 MHz, for a ladder-line length between about
> 25 ft. and 100 ft., the resistance looking into the ladder-line
> is about equal to the length of the ladder-line. Thus for 25 ft.
> of ladder-line, the impedance looking into the ladder-line is
> about 25+jXL1. For a ladder-line length of 50 ft., the impedance
> looking into the ladder-line is about 50+jXL2. For a ladder-line
> length of 100 ft., the impedance looking into the ladder-line
> is about 100+jXL3. Does that give you any hints on how to match it?
>
> According to EZNEC, the impedance looking into 50 ft. of ladder-line
> is about 50+j466. Use two series 180pf caps to neutralize the inductive
> reactance and you have a feedpoint impedance of 50 ohms. A dual ganged

> 300pf variable would be ideal.
>
> A 102 ft dipole 40 feet in the air fed with 50 ft of ladder-line
> tuned with a dual-gang variable cap on the antenna side of a balun/
> choke and no tuner box. Doesn't that sound like a perfect 75m field
> day antenna?

I've read the whole thread thru Tuesday AM, I get your point and it should work well on 80. I suspect the real advantage of your scheme is that it might be possible to cover both 80 and 75 with low overall losses which is difficult to accomplish with a fullsize dipole. Since you already have the EZNec model on hand how 'bout running a 3.50-3.85 Mhz. sweep to see if it's possible to cover that range with some single specific length of ladderline and the two-section BC variable cap? If yes I think you have a real keeper idea.

Davis RF has "RG-213 Economy" cable, whatever that is, for $0.23/foot. Good enough for Field Day.

Brian w3rv

262. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 16:37:30 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404060837.7b4a885f@posting.google.com>
Source record: 97163

Eskay <spark_gap2000@yahoo.ca> wrote in message
news:<i5qmha7je2sw.xnxlgsy6osiq.dlg@40tude.net>...
> On 2 Apr 2004 07:38:00 -0800, Brian Kelly wrote:
>
> > I'll have some fairly long runs of coax to HF antennas (21Mhz max) to
> > Field Day antennas. One of the antennas will be an 80M G5RV with their
> > usual nasty SWRs so a foam-type cable is indicated. Since it's a very
> > temporary non-critical installation I'm not about to spend premium
> > bucks on 9913 or any of it's relatives like I do for the home station.
> > A non-contaminating jacket would be nice but is not much of an issue.
> > Does anybody have any suggestions about vendors who are selling foam
> > RG-8 for lower-than-usual prices?
> >
> > Thanks, Brian w3rv
>
> Could you get hold of 75 ohm cable instead? G5RV recommended it for this
> antenna anyway and regardless of what you use you will need a tuner.
> RG 59 may be cheaper and CATV cable may be free or someone may have enough
> to help you out.

Using 75 ohm coax is probably a good idea, I'll look into it. But I
don't want to use any small-diameter coax, the losses would be
prohibitive considering the lengths of runs I'll use.

> 73 de VE3JUA.

Brian w3rv

263. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 16:59:00 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404060859.23aa95dd@posting.google.com>
Source record: 97164

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40717c1f$1_7@corp.newsgroups.com>...
> Mark Keith wrote:
> > What about your balun/choke connection?
>
> W2DU choke, virtually lossless. The tuning cap is also virtually
> lossless, much more so than a tuner with a coil.

Won't this depend on the match involved? I have trouble seeing that
connection as "virtually lossless".
>
> > The only real loss I have is the
> > loss of the feedline "213", and on 80m, it's about as good as ladder
> > line.
>
> It's about as good as open-wire line with a 10:1 SWR. The matched line
> losses in 100 ft. of RG-213 are higher than the unmatched line losses
> in 100 ft. of open-wire line with a 10:1 SWR on 80m.

Sure, but is it enough to notice on the air? I doubt it...
>
> According to Wirebook II, the matched line loss for RG-213 is ten
> times higher on 80m than the matched line loss for open-wire line.
>
> > If it were better, I could see it. But it's not. It's inferior.
> > If it were not, I would be using one here at the house.
>
> You are so biased, you wouldn't use one if your life depended
> on it. :-)

You got that right. Nothing but the best for me.
>
> > Why would
> > anyone want to do more work, for something a step in the wrong
> > direction?
>
> It's a step in the right direction, Mark, toward an all-HF-band
> antenna.
Who's talking about all band use though? All I've heard mentioned was
80m.

I modified my G5RV yesterday to work well on all eight
> HF bands plus 6m. Field strength measurements indicated it is
> virtually identical to my 130 foot dipole on 80m.

Virtually huh....
>
> > The "average" storebought G5RV is
> > pitiful on 80m compared to the coax fed dipole.
>
> Mine is virtually equal to a resonant dipole.

Maybe close...
Your "average" storebought
> G5RV must be poorly designed -

It was.

maybe lacking a balun -

Nope, it had one. I always considered that choke/balun half the
problem...

maybe using RG-58
> coax - maybe using the wrong length of the series section transformer.

No, it was RG-8. The antenna was a common storebought version. I won't
mention names, but it's the most popular version out there.
>
> > But everyone ignore what I say. I'm really fibbing, and just messing
> > with ole Cecils head...
>
> I asked for some scientific proof of what you say. All you responded
> with is prejudice and hand-waving. Please take time to calculate
> the matched line losses in RG-213 Vs the unmatched line losses for
> open-wire line and you will change your mind (if you are rational).

Why? I've already done it. I don't need those numbers to help make up
my mind. I've compared the real antennas. I'll never change my mind.
Nothing but the best for me. Anything less is a waste of my valuable
time. All bands? Who gives a rats rectum about all band use? We have
three tri band yagi's for the higher bands. Will smoke any G5RV used
on those bands...Well, time to unplug..It's lightning time for
nm5k...MK

264. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 17:31:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4072e97b_6@corp.newsgroups.com>
Source record: 97165

Richard Clark wrote:
> Cecil's poorly offered Light analogies suffering from the same lack.

That's pretty funny, Richard, since you are agreeing with me 100%
in this posting. Glass that allows glare loses some light in the
rearward direction (reflections). Glass that doesn't allow glare
ensures that all the light reaches the object. Unmatched RF systems
can allow reflected power to be lost from the load. Matched RF
systems ensure that all the power reaches the load (minus line
losses).

You have never said anything worthwhile that technically disagrees
with me. Your only objections are to my style (witness the above).
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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265. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 17:34:23 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4072ea41$1_6@corp.newsgroups.com>
Source record: 97166

Winston wrote:
> I have operated on both an 80 meter G5RV and an 80 meter Carolina
> Windom. Both performed well, but I lean towards the Carolina Windom.
> The SWR on the Windom is below 3:1 on all bands and my internal tuner
> has yet to have a problem matching it to any frequency. I resolved
> the problem of the vertical arm by supporting at the feed point with a
> fiberglass mast at 40 feet.

Shorten the series section transformer length on the G5RV to 22 feet
and you will have no trouble tuning it to a match on 75m.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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266. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 17:37:40 UTC
From: tdonaly@aol.com
Message-ID: <20040406133740.03625.00000748@mb-m01.aol.com>
Source record: 97167

Richard Clark wrote,
>>
>>My EM guys, Physics types, [from my working days] indicated that the
>>three dielectric interfaces, adhesive to glass to adhesive, all with
>>different dielectric coefficients create reflections at the boundaries.
>
>Hi Dave,
>
>Poor theory. Reflection is not loss. There are reflections galore on
>a radiator that supports the Standing Wave and yet with a large enough
>metal surface it is nearly 100% radiative.
>
>As for this boundaries explanation, those "Physics types" clearly did
>not have any working knowledge (experience) - about as useful as
>Cecil's poorly offered Light analogies suffering from the same lack.
>I further note that none of this indicts clear glass (which may have
>been a semantic issue) to the tune of nearly 1dB.
>
>73's
>Richard Clark, KB7QHC
>

Hi Richard,
absent any numbers on the loss tangent of automobile window
glass at the frequency in question, any estimate of loss is just a guess.
73,
Tom Donaly, KA6RUH

267. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 17:48:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4072ed7a$1_6@corp.newsgroups.com>
Source record: 97168

Mark Keith wrote:

> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>>W2DU choke, virtually lossless. The tuning cap is also virtually
>>lossless, much more so than a tuner with a coil.
>
> Won't this depend on the match involved? I have trouble seeing that
> connection as "virtually lossless".

I feed all my antennas at a low resistance current maximum point so the
W2DU choke is indeed virtually lossless and fully functional to boot
because it is seeing its designed-for resistance. You would know that
if you took time off from your prejudice position to actually think. :-)

>>It's about as good as open-wire line with a 10:1 SWR. The matched line
>>losses in 100 ft. of RG-213 are higher than the unmatched line losses
>>in 100 ft. of open-wire line with a 10:1 SWR on 80m.
>
> Sure, but is it enough to notice on the air? I doubt it...

If it's not enough to notice on the air, doesn't your entire point
evaporate into nothingness? If no one notices whether an antenna is
resonant or not or fed with coax or open-wire line, what is the point
of your argument?

> Why? I've already done it. I don't need those numbers to help make up
> my mind. I've compared the real antennas. I'll never change my mind.

That's pretty obvious and is a trait shared by the Catholic Priests who
condemned Copernicus and Galileo. I believe you will never change your
mind even if you come over to my house and see scientific evidence to the
contrary. It's a good thing human lifespans are so short or else the human
race would never make any technical progress.
--
73, Cecil, W5DXP

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268. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 18:08:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <48s570puuvhuvage3r09np7ru0vj3s7vn5@4ax.com>
Source record: 97169

On Tue, 06 Apr 2004 12:31:04 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Cecil's poorly offered Light analogies suffering from the same lack.
>
>That's pretty funny, Richard, since you are agreeing with me 100%
>in this posting. Glass that allows glare loses some light in the
>rearward direction (reflections).

Everything you write about light is pretty funny; your sheer lack of
experience is revealed where you can't name what frequency glare is.
Care to hazard a guess? Or do we get quotes from you suitable for
Thurberian response? :-)

269. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 19:26:24 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <c4v091$1k7u$1@f04n12.cac.psu.edu>
Source record: 97170

Dave,

If the ground and sky waves come in at different angles, you may be able
to rotate and tilt the radio to receive one and null out the other. The
optimum angle may change with the time of day as the ionosphere changes.

73,
Bob AD3K

Cecil Moore wrote:
> Dave Pitzer wrote:
>
>> Best reception is, of course, at night. But.... for some reason WABC (New
>> York City) comes in poorly at night even though it's xmitter is only 80
>> miles away. The signal fades to next to nothing and then increases to
>> very
>> loud but extremely distorted then will be loud and clear for a while.
>
>
> More than likely, you are getting interference between the ground wave
> and the sky wave as the strength and path of the sky wave varies with
> atmospheric conditions. I don't know of a cure. I sometimes have the
> same problem with the same radio tuned to WTAW, 40 miles away.
> --
> 73, Cecil, W5DXP
>
>
>
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> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

270. Re: ton of wire to apply at 90 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 19:28:17 UTC
From: richardharrison@webtv.net
Message-ID: <26763-407304D1-529@storefull-3251.bay.webtv.net>
Source record: 97171

Dan Jacobson wrote:
"I will put my wire to work to pull it in even better."

Fitst, you need a line-of-sight path to the desired station. Then, you need an obstruction in the response to unwanted signals. You need enough desired signal edge to capture the FM detector and to suppress noise the undesired signals might add to the mix.

An axial mode helical antenna uses a lot of wire wound into a coil which is pointed at the desired station, directly or indirectly. Diameter and coil pitch are optimized for axial gain and directivity.

If a helical coil is small in terms of wavelength, its field is maximum perpendicular to the coil axis. Such a self-resonant coil makes an omnidirectional antenna in a plane perpendicular to the coil axis.

We have a rubber ducky as an example of an omnidirectional helix which is inefficient, limited in bandwidth, but convenient for handie-talkies. Larger omnidirectional (normal-mode) helices are used by some VHF/UHF broadcasters to provide circular polarization, but Kraus says on page 173 of his 1950 edition of "Antennas":

"For normal mode the dimensions of the helix must be small compared to the wavelength, so that from band width and efficiency considerations this mode is not readily applicable in practice."

There are handie-talkie suppliers and broadcasters who don`t heed Kraus.

Best regards, Richard Harrison, KB5WZI

271. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 22:58:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40733635_1@corp.newsgroups.com>
Source record: 97172

Richard Clark wrote:
> Everything you write about light is pretty funny; your sheer lack of
> experience is revealed where you can't name what frequency glare is.
> Care to hazard a guess?

In the light experiments I have been talking about, the glare is the
same frequency as the laser beam, somewhere around 3x10^6 angstroms.
--
73, Cecil, W5DXP

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272. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 23:14:50 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <407339EA.4B50@wt.net>
Source record: 97174

Cecil Moore wrote:
>
> Mark Keith wrote:
>
> > Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
> >>W2DU choke, virtually lossless. The tuning cap is also virtually
> >>lossless, much more so than a tuner with a coil.
> >
> > Won't this depend on the match involved? I have trouble seeing that
> > connection as "virtually lossless".
>
> I feed all my antennas at a low resistance current maximum point so the
> W2DU choke is indeed virtually lossless and fully functional to boot
> because it is seeing its designed-for resistance. You would know that
> if you took time off from your prejudice position to actually think. :-)

How many others feed theirs this way? How would I know how yours would
vary from the "usual G5RV"?

>
> If it's not enough to notice on the air, doesn't your entire point
> evaporate into nothingness?

No. That is only comparing using coax to ladder line with no other
considerations given.

If no one notices whether an antenna is
> resonant or not or fed with coax or open-wire line, what is the point
> of your argument?

Because I DO notice the difference between a coax fed dipole and either
a G5RV or the usual "windom" that is sold by "eastern state antenna co.
inc"
>
> > Why? I've already done it. I don't need those numbers to help make up
> > my mind. I've compared the real antennas. I'll never change my mind.
>
> That's pretty obvious and is a trait shared by the Catholic Priests who
> condemned Copernicus and Galileo. I believe you will never change your
> mind even if you come over to my house and see scientific evidence to the
> contrary. It's a good thing human lifespans are so short or else the human
> race would never make any technical progress.

Cecil, you might have a modified G5RV that is fairly usable, but most of
the ones that are actually sold, and are in use, are lame 80m antennas
to my standards. Same for the average windom, or OCF dipole. This is

not idle speculation. I've A/B compared them at field days. I started doing this after getting stuck on G5RV's on 80m for two years in a row. "What torture..I almost pulled my hair out :(..."
The owner of one windom I tested against had no idea what he was losing until I showed him. He almost fell over at the 2-3 S unit differences we saw when flipping the switch... To answer one earlier question for you, my feedline loss at 4 mhz is .4 db for 100 ft of line at the most. Other than my ground loss, which will be the same for either types of antennas, for all practical purposes I have no loss.
You can not detect .4 db difference in the real world on 80m. And being I'll be at 3.500, it will be slightly less. And if I don't use the full 100ft, it will be even less.
When directly comparing the coax fed dipole to the commonly used "windom" that is sold by said ESA inc., the dipole was better on all signals , including just the atmospheric noise floor by a min of 2 S units. This increase is not pattern related. It's purely a difference in feeder efficiency. And that was on 40m, not 80. On 80m, it probably would have been a greater difference.
Now, Cecil, do the math. How many db difference does it take to measure 2 s units on the average radio? A lot more that .4 db, I can tell you.
On 80m, the "storebought" G5RV's we tried were the lousiest 80m antennas I've ever used without going to a hamstick on a VW. Yes, I do have high standards! I've only used full size antennas my whole 80m life... When you are running 100w, but have the performance of QRP, field day is not fun for me. You say I'm exaggerating? How many db drop will you see on the average radio's S meter if you drop 10 db? About 2 maybe ? The difference between the funky G5RV's we used, and a dipole on 80m were 2-3 S units easy. You may have modified yours to improve it, but I still don't want one. Thanks, but no thanks...
I only use full size antennas unless it's impossible. 80m on field day is ruff cdx. Noisiest time of the year, and the band is packed wall to wall. No place for compromise antennas..:)
But to each his own...Like I say, the more that use those things, the easier I'll have it. Well, except I have to strain my ears more when working those stations...:/ MK

--
http://web.wt.net/~nm5k

273. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-06 23:35:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40733ed8_1@corp.newsgroups.com>
Source record: 97173

Brian Kelly wrote:
> I've read the whole thread thru Tuesday AM, I get your point and it
> should work well on 80. I suspect the real advantage of your scheme is
> that it might be possible to cover both 80 and 75 with low overall
> losses which is difficult to accomplish with a fullsize dipole. Since
> you already have the EZNec model on hand how 'bout running a 3.50-3.85
> Mhz. sweep to see if it's possible to cover that range with some
> single specific length of ladderline and the two-section BC variable
> cap? If yes I think you have a real keeper idea.

Maybe you'll like this one. 110 ft dipole at 40 ft, fed with 110 ft of
450 ohm ladder-line and tuned with a single control dual-gang variable cap,
i.e. no conventional antenna tuner. Such an antenna system covers the entire
75-80m band with a 50 ohm SWR ranging from 1.7 at 3.5 MHz to 1.0 at 4.0 MHz,
according to EZNEC. Full band coverage at the twist of one knob? You likeie?

For a coax fed dipole, EZNEC reports an SWR=2:1 bandwidth of 170 kHz.
--
73, Cecil, W5DXP

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274. FS: Larsen KD150HW 2 meter half wave for handheld

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 00:06:41 UTC
From: glapierre@REMOVEeastlink.ca
Message-ID: <40734491.3707172@news.eastlink.ca>
Source record: 97175

I found my backup all black telescoping antenna for my 2 meter handheld. I have been using one like it for 5 years without problems. I am now selling new my backup. Only $35.00 plus shipping from Canada.

Antenna good from 140 to 173 MHz.

International postal money orders only, then I can cash and ship the same time.

glapierre@REMOVEeastlink.ca

275. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 00:17:50 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <lqydnVIkObww1e7dRVn-uQ@adelphia.com>
Source record: 97176

Cecil Moore wrote:

> Dave Shrader wrote:
>
>> I believe that today's "Windoms" are not true Windoms!!
>
>
> My 1956 ARRL Handbook says that a Windom is fed with a
> single vertical wire. If an antenna with Windom dimensions
> is fed with a transmission line rather than a single vertical
> wire, in the 1956 ARRL Handbook, it is called an "Off Center
> Fed" dipole.

Does the OCF dipole feedline radiate by design?

- Mike KB3EIA -

276. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 00:54:40 UTC
From: richardharrison@webtv.net
Message-ID: <12340-40735150-643@storefull-3253.bay.webtv.net>
Source record: 97177

Dave Pitzer wrote:
"WABC (New York City) comes in poorly at night even though its xmtter is only 80 miles away."

80 miles is within groundwave range of WABC. 770 KHz should reach that far in the daylight hours as well as at night. At night, the ionosphere reconfigures allowing a reflected wave from the station to reach your receiver. While the groundwave is subject to ittle if any variation, the skywave is subject to many variations. Thats just the beginning of the problem. All U.S. stations share their assignments with other stations operating on the same frequencies. If the desired station is not interfered between its own groundwave and skywave (you are out of groundwave range) it is still likely to be interfered by other stations sharing its frequency or even interfered by adjacent channel stations. When these undesired stations fade in, they can suppress reception of the desired station by taking over the receiver`s automatic gain control circuit.

To accomodate multiple assignments on a single carrier frequency, FCC often requires new assignees to include a null toward one or more aditional existing stations, especially at night, in the new station`s radiation pattern. If the reduction in potential interference is deemed insufficient, the new station may be required to reduce power as well as switch directional patterns during nighttime hours. The new station may be the oldest station on the frequency if it has decided to relocate or make some other modification to its license terms.

So, WABC may have directional coverage of its area which it switches at nightfall and daybreak. I have an FCC book showing all the assignments but it is very out of date.

Best regards, Richard Harrison, KB5WZI

277. Re: Difference between 5/8 and 3/4 lambda

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 01:14:19 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <LBIcc.551$So3.32169@twister.southeast.rr.com>
Source record: 97178

"Marcello" <marcello110980@yahoo.it> wrote in message
news:c4ncdloji1@fata.cs.interbusiness.it...
> Thanks to All.
> I'll try to use this demo program!
> best
>
> Marcello
>
>
>
> --
> www.rogerk.it
> "Ca c'havi chi&#65533; codda, attacca u poccu"
>
>
>
> "Richard Clark" <kb7qhc@comcast.net> ha scritto nel messaggio
> news:grio60ddsc28sttnnmb04utmdl4nus445d@4ax.com...
> > On Mon, 29 Mar 2004 21:13:12 +0200, "Marcello"
> > <marcello110980@yahoo.it> wrote:
> > >Hello!
> > >wich are the differences between two monoband ground plane vertical
> antenna
> > >5/8 lambda and 3/4 lambda, with orizontal radilas?(90&#65533;).
> > >There is a developing system software to view this difference?
> > >Marcello
> >
> > Hi Marcello,
> >
> > Try:
> > http://www.eznec.com/
> >
> > The FREE DEMO will reveal these differences.
> >
> > 73's
> > Richard Clark, KB7QHC
>
>
I have found that a 3/4 wl and longer vertical antenna can be quite useful during periods of "skip". Quite often these antennas will allow you to work into areas that are not so crowded. Your signal is going places others are not. This can be a good tool to have.

278. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 01:15:57 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40735676_2@corp.newsgroups.com>
Source record: 97179

Mark Keith wrote:
> How many others feed theirs this way?

I don't know and don't much care. The discussion is about your
antenna Vs mine.

> How would I know how yours would vary from the "usual G5RV"?

By the length of the series section transformer. It varies from
20 ft on 10.125 MHz to 35 ft on 18.14 MHz providing less than
2:1 SWR on the coax on all HF bands - no tuner required. On 3.8 MHz
with a series section length of 23 ft, the series section feedpoint
impedance is resonant at 25+j0 ohms.

> Because I DO notice the difference between a coax fed dipole and either
> a G5RV or the usual "windom" that is sold by "eastern state antenna co.
> inc"

Theirs are not optimumized - mine is. Why don't you compare your dipole
to an Isotron so you can feel even better. :-)

> Other than my ground loss, which will be the same for either types of
> antennas, for all practical purposes I have no loss.

I can say exactly the same thing. My 50 ohm SWR is less than 2:1 without
a tuner of any kind. There's simply no places for losses to occur.

> You can not detect .4 db difference in the real world on 80m.

So if my antenna is within .4 dB of yours, it's as good as yours?
I wish I had said that. As a matter of fact, the difference between
your antenna and mine is the difference between an SWR of 1:1 and an
SWR of 2:1 on 75m. The ARRL Handbook loss chart says that is 0.12 dB
difference for 100 ft of RG-213 on 75m.

> Now, Cecil, do the math.

There it is in the paragraph above. My dipole is 102 ft long. EZNEC sez
it has a maximum gain of 6.04 dBi compared to 6.24 dBi for your dipole.
Including the 0.2 dB reduction in gain and the 0.12 dB of additional
losses in the coax for an SWR of 2:1, that's 0.32 dB modeled difference
between your dipole and my G5RV and you say one cannot detect a 0.4 dB
difference. Doesn't that shoot your own argument down?

> How many db difference does it take to measure
> 2 s units on the average radio? A lot more that .4 db, I can tell you.

I'll bet $100 that your antenna is NOT anywhere near 2 S-units better than mine on 3.8 MHz. And I'll bet my antenna is 2 S-units better than your coax fed 80m dipole on most bands between 40m and 10m where it functions as well or better than it does on 75m.
--
73, Cecil, W5DXP

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279. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 01:21:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407357b9$1_2@corp.newsgroups.com>
Source record: 97180

Mike Coslo wrote:
> Does the OCF dipole feedline radiate by design?

The Windom single-wire feedline radiates by design.
It would be extremely difficult to keep the OCF
feedline from radiating but a 50:300 current balun
at the feedpoint might help.
--
73, Cecil, W5DXP

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280. Re: a dipole made of two great sheets of metal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 01:22:19 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <fJIcc.578$So3.33219@twister.southeast.rr.com>
Source record: 97181

I used to live on the very fringe of an FM stations coverage area, probably outside their intended cover area. Had great succes with 4 stacked 2 element Yagis(think of old TV antennas). I and a guy down the street who had a hundred foot tower were the only people in the county who could get the station reliably. This was pretty good since this was the only FM station that serviced the area at that time.

"JGBOYLES" <jgboyles@aol.com> wrote in message news:20040403184553.12493.00000676@mb-m16.aol.com...
> >Assume there is only one spot on your hilly land that you can pull in
> >your favorite FM station, 90 Mhz, over the competition, and only with
> >a horizontal dipole at a certain azimuth. A Yagi doesn't help, as
> >we are depending fully on the null.
>
> Commercial FM stations are vertically polarized, cause most of the people
> that listen are in cars. I have found this to be true in my homebrew antennas
> (at least around here). You might try changing the polarization, and see if
> that helps.
>
> Not sure why you think a yagi won't help. A 3 or 4 el. yagi with a good F/B
> and proper polarization will be a big improvement over the end nulls of a
> dipole.
>
> Using great sheets of metal for a dipole will increase the bandwidth, but
> that is not what you are looking for. Using the great sheets of metal for a
> screen reflector, or corner reflector could produce some big improvements.
>
> 73 Gary N4AST

281. One Antenna from Two Coax Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 02:47:14 UTC
From: BW <bwellman00@comcast.net>
Message-ID: <54SdnSDhEokp9u7d4p2dnA@comcast.com>
Source record: 97182

I am putting a VHF/UHF antenna in my attic and have run coax into two different rooms in the house. I would like to be able to access the antenna, on both bands, from both rooms in the house (not at the same time, however). Is there a "remote" way I can do this, meaning without running any more wires? I have been searching for an rf triggered relay that would ground the second coax when a signal came down the first, but I can't find anything like that. A duplexer won't work because I want to be able to access both bands from both rooms. Certainly there is someone else in this hobby who has done this, but I can't find anything on the Internet about it!

ANY suggestions would be welcome.

73,
Brett
KG4KLR

282. Re: One Antenna from Two Coax Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 02:57:52 UTC
From: Andy in NJ <"SHORECOGS at COMCAST DOT NET">
Message-ID: <3d2dnWx-co9J8O7dRVn-hg@comcast.com>
Source record: 97183

Only suggestion I'd have is a standard antenna switch. You'll have to move
the switch to the position for whichever room you're in, but that might be
the only way.

--
73! de Andy KC2SSB
Beachwood, NJ USA! Grid FM29vw
http://shorecogs.tripod.com
AIM: shorecogs

"BW" <bwellman00@comcast.net> wrote in message
news:54SdnSDhEokp9u7d4p2dnA@comcast.com...
> I am putting a VHF/UHF antenna in my attic and have run coax into two
> different rooms in the house. I would like to be able to access the
> antenna, on both bands, from both rooms in the house (not at the same
time,
> however). Is there a "remote" way I can do this, meaning without running
> any more wires? I have been searching for an rf triggered relay that
would
> ground the second coax when a signal came down the first, but I can't find
> anything like that. A duplexer won't work because I want to be able to
> access both bands from both rooms. Certainly there is someone else in
this
> hobby who has done this, but I can't find anything on the Internet about
it!
>
> ANY suggestions would be welcome.
>
> 73,
> Brett
> KG4KLR
>
>
>

283. Re: One Antenna from Two Coax Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 02:59:13 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <i4-dnbFymlUb8-7dRVn_iw@comcast.com>
Source record: 97184

"Andy in NJ" <SHORECOGS at COMCAST DOT NET> wrote in message
news:3d2dnWx-co9J8O7dRVn-hg@comcast.com...
> Only suggestion I'd have is a standard antenna switch. You'll have to move
> the switch to the position for whichever room you're in, but that might be
> the only way.

Use a three-way switch arraingement.

284. Re: One Antenna from Two Coax Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 03:14:12 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4073722c_6@corp.newsgroups.com>
Source record: 97185

BW wrote:
> ANY suggestions would be welcome.

One common approach is to run some DC voltage through the coax
to energize an antenna relay. The DC voltage is isolated from
the RF equipment using caps. A series DC relay is bypassed
for RF by a cap. A parallel DC relay is isolated from the RF
by an RF choke. The configuration is a little different
depending upon whether the antenna is a DC short or not.
--
73, Cecil, W5DXP

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285. Optimized G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 04:06:30 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40737e6b$1_7@corp.newsgroups.com>
Source record: 97186

These are actual measured values for the resonant lengths
of the series section transformer for all HF bands for
my optimized G5RV.

102' dipole, insulated wire. Ladder-line is approximately
Z0=380 ohms, VF = 0.9. Coax is RG-213

The insulation on the wire makes it electrically about 3%
longer, i.e. approximately the same as a 105' uninsulated
dipole. The ladder-line is Wireman #554, #14ga, "440 ohms",
but measures closer to 380 ohms.

Freq-MHz ladder-line length
3.8 23 ft.
7.2 35 ft.
10.125 20 ft.
14.2 29 ft.
18.14 36 ft.
21.3 27 ft.
24.95 29 ft.
28.4 38 ft.

Since my favorite bands are 40m and 17m, I keep the length
of the ladder-line at 36 feet most of the time. I rarely
work 30m so my minimum length is 23 feet. I have lengths
of ladder-line with banana plugs on one end and banana
sockets on the other end. I have one 8 ft. length, one
4 ft. length, one 2 ft. length, and one 1 ft. length so
I can achieve any length between 23 feet and 38 feet to
the nearest one foot. Of course, switches or relays could
be used instead of banana plugs.
--
73, Cecil, http://www.qsl.net/w5dxp

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286. slightly OT? auto AM/FM antennas & AM

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 05:18:53 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <1bMcc.84956$w54.501799@attbi_s01>
Source record: 97187

The common auto AM/FM antenna these days is a *roughly* 1/4 wave (for FM) 31" vertical whip. For the sake of AM reception (particularly distant cities, sky wave at night) iwould it hellp to use a longer whip, and would there be any benefit (or detriment) to FM to making "longer" = ~60" (~1/2 wave) or perhaps ~75" (~5/8 wave) vs some other random length (say 90" or even102") or does it not really matter as it is only receiving not x-mitting. I'm assuming for AM that more is better (with obvious practical limitations, probably well below the hypothetical 102" previously sited). I suppose the best thing would be to just try a 5' or 6' whip some night, but thought I'd ask.

287. quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 05:43:57 UTC
From: Paul <k4cvr@amsat.org>
Message-ID: <xyMcc.1970$Po2.740389@news4.srv.hcvlny.cv.net>
Source record: 97188

I've a question for the group. When I'm drawing out my lengths of wire when making a quad, what is an accurate way of measuring it? I'm using 1.6 mil aluminum tig wire and, although the stuff usually lays pretty flat coming off the reel I want to be certain my lengths are correct. Laying a tape down next to the wire seems like it couldn't be real accurate. Any suggestions would be appreciated. Tnx, and 73.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.648 / Virus Database: 415 - Release Date: 3/31/04

288. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 07:11:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <me877053leqmh3im5n4b6tamg9ror9jhgi@4ax.com>
Source record: 97189

On Tue, 06 Apr 2004 17:58:25 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Everything you write about light is pretty funny; your sheer lack of
>> experience is revealed where you can't name what frequency glare is.
>> Care to hazard a guess?
>
>In the light experiments I have been talking about, the glare is the
>same frequency as the laser beam, somewhere around 3x10^6 angstroms.

Quite Droll, I must admit. 3 MILLION Angstroms Hmmm? This is not a
unit of frequency by the way, so I suppose some elementary instruction
is in order.

Let's see, ten billion angstroms equal 1 meter. If we do a simple
conversion we find that your laser light operates at a wavelength of
0.3 millimeters (thicker than a hair). That would seem to be more
suitable for Masers, not Lasers, and hardly light any way that you
-ahem- look at it. Let's not even suppose it is a slip of the decimal
(because it ain't). Calling it glare is icing on the cake. :-)

So, you wanna try for what's behind door number three? Only one more
round, because humor has a limited shelf life. Given both frequency
and wavelength are stumpers, how about something more remedial: "What
is the color of glare?"

289. Re: One Antenna from Two Coax Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 07:42:24 UTC
From: Bob Bob <bcnntp@optusnet.com.au>
Message-ID: <0db05c-5or.ln@p400bob.lse.com.au>
Source record: 97191

Play around with the coax lengths so that the "unused" cable doesnt
present a lump to the other one in use maybe? ie multiples of half
wavelengths from the "star" connection point out.. Obviously the bands
would need to be harmonically related.

Anyone care to shoot me down on this one go right ahead!

Cheers Bob VK2YQA

BW wrote:
> I am putting a VHF/UHF antenna in my attic and have run coax into two
> different rooms in the house. I would like to be able to access the
> antenna, on both bands, from both rooms in the house (not at the same time,
> however). Is there a "remote" way I can do this, meaning without running
> any more wires? I have been searching for an rf triggered relay that would
> ground the second coax when a signal came down the first, but I can't find
> anything like that. A duplexer won't work because I want to be able to
> access both bands from both rooms. Certainly there is someone else in this
> hobby who has done this, but I can't find anything on the Internet about it!
>
> ANY suggestions would be welcome.
>
> 73,
> Brett
> KG4KLR
>
>
>

290. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 07:43:12 UTC
From: David Ryeburn <ryeburn@sfu.caz>
Message-ID: <ryeburn-A7325C.00431207042004@morgoth.sfu.ca>
Source record: 97190

In article <407357b9$1_2@corp.newsgroups.com>,
Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

> Mike Coslo wrote:
> > Does the OCF dipole feedline radiate by design?
>
> The Windom single-wire feedline radiates by design.
> It would be extremely difficult to keep the OCF
> feedline from radiating but a 50:300 current balun
> at the feedpoint might help.

Here's a relatively simple way to keep an off-center fed "Windom"
antenna feedline from radiating: Install another Windom antenna of
identical dimensions at an acute or right angle to the existing one. Tie
the long side of the second Windom to the short side of the first one,
and vice versa. Feed the thing with a balanced line, or with coax
through a balun. I don't have EZNEC (it won't run on Macs) so I don't
know what the pattern would be like, but if everything was symmetrical
the feedline ought not radiate.

David, ex W8EZE

--
David Ryeburn
ryeburn@sfu.caz
To send e-mail, use "ca" instead of "caz".

291. OT: HP-4195A Network Analyzer Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 09:09:56 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <DzPcc.609$Y77.270@fed1read02>
Source record: 97192

Sorry for this being a bit OT, as this bears more on antenna tools than antennas themselves.

I have been fortunate enough to acquire an HP-4195A Network Analyzer. OTOH, I did not get the HP-41951A Impedance Adapter Kit, and I would like to do some impedance measurements on 1-terminal coaxial components.

1. Does anyone know what components are in the adapter kit? (I assume that there may be a splitter and a directional coupler.)

2. Can the 4195A's front panel terminals (S1, R1 & T1) be connected to generic splitters and couplers to allow impedance testing without the 41951A kit?

TIA!

Ed

292. Re: Optimized G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 10:00:32 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c50jg0$4fj$1@sparta.btinternet.com>
Source record: 97193

Cec,

Behaviour of your feedline lengths for the various bands is interesting. But it's likely optimum lengths for individual bands for anyone else will belong to a different set. Your list is a guide just to the sort of thing to expect.

Zo of the feedline has just as much influence on its impedance transformation properties as does its length. Your measured Zo of 380 ohms will have an effect considerably different from the nominal ladderline value of 450 ohms or other impedances which other people may have.

There are, of course, other reasons for variability in optimum feedline lengths. I don't think G5RV ever specified the impedance of his balanced line - only that it should be 1/2-wavelength long around 14.15 MHz. Even 50-ohm coax would be OK on the 20m band. It's a fair match at either end.

Reg, G4FGQ

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40737e6b$1_7@corp.newsgroups.com...
> These are actual measured values for the resonant lengths
> of the series section transformer for all HF bands for
> my optimized G5RV.
>
> 102' dipole, insulated wire. Ladder-line is approximately
> Z0=380 ohms, VF = 0.9. Coax is RG-213
>
> The insulation on the wire makes it electrically about 3%
> longer, i.e. approximately the same as a 105' uninsulated
> dipole. The ladder-line is Wireman #554, #14ga, "440 ohms",
> but measures closer to 380 ohms.
>
> Freq-MHz ladder-line length
> 3.8 23 ft.
> 7.2 35 ft.
> 10.125 20 ft.
> 14.2 29 ft.
> 18.14 36 ft.
> 21.3 27 ft.
> 24.95 29 ft.
> 28.4 38 ft.
>
> Since my favorite bands are 40m and 17m, I keep the length
> of the ladder-line at 36 feet most of the time. I rarely

> work 30m so my minimum length is 23 feet. I have lengths
> of ladder-line with banana plugs on one end and banana
> sockets on the other end. I have one 8 ft. length, one
> 4 ft. length, one 2 ft. length, and one 1 ft. length so
> I can achieve any length between 23 feet and 38 feet to
> the nearest one foot. Of course, switches or relays could
> be used instead of banana plugs.
> --
> 73, Cecil, http://www.qsl.net/w5dxp
>
>
>
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> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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293. Open Letter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 10:27:53 UTC
From: David J Windisch <davidw@copper.net>
Message-ID: <40730ee8_1@newsfeed.slurp.net>
Source record: 97082

Hi, all concerned:

Is this the balun problem?

For openers, a 40-meter half-wave dipole with trees and 3 dogbone
insulators, center-fed directly across the center insulator with 33 feet of
RG-59/U coax, nothing special,

```
TREE--o///o--------------o///o--------------o///o--TREE
| |
coax
feeder
drooping
down
33
feet
here
to
the
shack
```

you know, like that ASCII sortagraphic. Like the one I put up in 1957 or
1958.

The thing has voltage loops at all ends, including the shack-end of the
coax-braid, correct?

73, Dave, N3HE

294. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 11:48:26 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <eURcc.82679$gA5.1031413@attbi_s03>
Source record: 97194

Richard Clark wrote:

> SNIP
>
> Quite Droll, I must admit. 3 MILLION Angstroms Hmmm? This is not a
> unit of frequency by the way, so I suppose some elementary instruction
> is in order.
>
SNIP

Why isn't an Angstrom a measure of wavelength?? You yourself simply translated it into a parameter of your choice as 0.3 mm.

My 4.0 MHz antenna is 120 feet. Is the unit of feet not a measure of wavelength? Could I not use a furlong as a unit of length?

I offer that ANY unit of length is acceptable in expressing wavelength.

DD

295. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 11:55:24 UTC
From: Roger Conroy <rogerconroy@nospam.hotmail.com>
Message-ID: <c50qbg$5bj$1@ctb-nnrp2.saix.net>
Source record: 97195

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:eURcc.82679$gA5.1031413@attbi_s03...
> Richard Clark wrote:
>
> > SNIP
> >
> > Quite Droll, I must admit. 3 MILLION Angstroms Hmmm? This is not a
> > unit of frequency by the way, so I suppose some elementary instruction
> > is in order.
> >
> SNIP
>
> Why isn't an Angstrom a measure of wavelength?? You yourself simply
> translated it into a parameter of your choice as 0.3 mm.
>
> My 4.0 MHz antenna is 120 feet. Is the unit of feet not a measure of
> wavelength? Could I not use a furlong as a unit of length?
>
> I offer that ANY unit of length is acceptable in expressing wavelength.
>
> DD
>

he said frequency - not wavelength

296. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 12:03:25 UTC
From: Jeppe <fiktiv@adresse.dk>
Message-ID: <6iq770l8niun1oseeqs88tmf47ugq41lg7@4ax.com>
Source record: 97196

On Tue, 06 Apr 2004 04:34:00 GMT, "Dave Pitzer" <dpitzer@sonic.net>
wrote:
>The signal fades to next to nothing and then increases to very
>loud but extremely distorted then will be loud and clear for a while.
>(During the day this station's signal is fine.)

Your problem is selective fading. You are probably using an ordinary
AM receiver. When the selective "notch" hits the carrier it gets very
weak and the automatic volume control turns up the RF-amplification.
But at the same time the sidebands are not nulled out to the same
degree. So you get a loud distorted audio signal resulting from
relatively strong sidebands and a very weak carrier.

If you couldn get a receiver with single sideband reception or - even
better - fase-locked "sync" reception you would get better sound. You
would still get some distortion but it would be of a much less
malignant (linear) kind. I would thnk that this is a more realistic
solution than trying to null out the different signal path with some
sort of sophisticated antenna. I use a Sony "sync" shortwave receiver
myself for listening to eg. BBC with good result.

Jeppe

297. Re: quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 12:28:06 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <qtScc.8282$bd4.5368@nwrddc01.gnilink.net>
Source record: 97197

"Paul" <k4cvr@amsat.org> wrote in message
news:xyMcc.1970$Po2.740389@news4.srv.hcvlny.cv.net...
> I've a question for the group. When I'm drawing out my lengths of wire
when
> making a quad, what is an accurate way of measuring it? I'm using 1.6 mil
> aluminum tig wire and, although the stuff usually lays pretty flat coming
> off the reel I want to be certain my lengths are correct. Laying a tape
down
> next to the wire seems like it couldn't be real accurate. Any suggestions
> would be appreciated. Tnx, and 73.
>
Hi Paul,
The first step is to straighten the wire. Depending on diameter, you may be
able to anchor one end to a fixed object (pipe, fence post etc) and tie a
rod to the other end and stretch it. For bigger copper I have tied it to the
bumper hitch and moved the car forward slightly. The end result is a
perfectly straight length of wire. Now, it can be laid flat and parallel
againsta a tape. Mark off the overall length and the corners w/ a magic
marker.

Dale W4OP

298. Re: MFJ Screwdriver Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 13:18:54 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c50v3u$9j0$1@hercules.btinternet.com>
Source record: 97198

```
> you can always do better on 30m-160m
> with larger/longer antennas.
> --
> 73, Cecil, W5DXP
>
============================

" you can always do MUCH better on 40m-160m with larger/longer antennas."

Make an inverted-L out of it - even if the 'horizontal' part slopes down
towards the ground.
----
Reg, G4FGQ
```

299. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 13:31:38 UTC
From: "Robert A. Miller" <bxmiller@texas.net>
Message-ID: <0mv77094g0aeev54h3rnc28icgol0sgf8o@4ax.com>
Source record: 97199

I have a CCRadio and the Select-A-Tenna receiving loop that the same people sell. The loop works extremely well on weak AM signals, but only if that frequency is clear of other nearby stations. **If** the frequency is clear, and there is just the barest signal from the station you want to hear, the loop will really pull it up and make it loud.

You can also homebrew these loops, and you might find plans on the internet somewhere.

You are lucky in that your receiver has an AM antenna terminal, so you can attach an outside wire. I'd certainly try that -- wouldn't cost much at all.

Bob
k5qwg

On Tue, 06 Apr 2004 04:34:00 GMT, "Dave Pitzer" <dpitzer@sonic.net> wrote:

>I have a CC Radio Plus (Sangean) AM/FM/TV/WX radio (from C. Crane Co.) I
>enjoy broadcasr band DX'ing and this radion does a super job with just it's
>built-in ferrite antenna. I have logged AM BC stations from practically
>every state east of the Mississippi.
>
>Best reception is, of course, at night. But.... for some reason WABC (New
>York City) comes in poorly at night even though it's xmitter is only 80
>miles away. The signal fades to next to nothing and then increases to very
>loud but extremely distorted then will be loud and clear for a while.
>(During the day this station's signal is fine.) On the same evening,
>stations in Georgia (WSB, Atlanta), Illonois (WGN, Chicago), Michigan (WJR,
>Detroit), etc., etc. come in fine 90% of the time.
>
>Do I need an external antenna for the closer WABC?????
>
>Thanks,
>
>Dave Pitzer
>Pocono Lake, PA
>========================
>
>

300. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 13:35:00 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407403aa_8@corp.newsgroups.com>
Source record: 97200

Richard Clark wrote:
> On Tue, 06 Apr 2004 17:58:25 -0500, Cecil Moore
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Richard Clark wrote:
>>
>>>Everything you write about light is pretty funny; your sheer lack of
>>>experience is revealed where you can't name what frequency glare is.
>>>Care to hazard a guess?
>>
>>In the light experiments I have been talking about, the glare is the
>>same frequency as the laser beam, somewhere around 3x10^6 angstroms.
>
>
> Quite Droll, I must admit. 3 MILLION Angstroms Hmmm? This is not a
> unit of frequency by the way, so I suppose some elementary instruction
> is in order.
>
> Let's see, ten billion angstroms equal 1 meter. If we do a simple
> conversion we find that your laser light operates at a wavelength of
> 0.3 millimeters (thicker than a hair). That would seem to be more
> suitable for Masers, not Lasers, and hardly light any way that you
> -ahem- look at it. Let's not even suppose it is a slip of the decimal
> (because it ain't). Calling it glare is icing on the cake. :-)
>
> So, you wanna try for what's behind door number three? Only one more
> round, because humor has a limited shelf life. Given both frequency
> and wavelength are stumpers, how about something more remedial: "What
> is the color of glare?"
>

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301. Re: One Antenna from Two Coax Cables

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 13:37:48 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <z4GdnZnPZde1mendRVn-ig@comcast.com>
Source record: 97201

Sounds good. What I would do is this: say you have radios A and B. Run 12V up the coax when radio B is turned on. Arrange the relay so that the antenna feeds radio A when there is no DC on the line. Strictly speaking, you should use a coaxial relay, but a cheap SPDT relay will usually work. I would put the relay within about an inch or so of the antenna feedpoint.

Tam/WB2TT
"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:4073722c_6@corp.newsgroups.com...
> BW wrote:
> > ANY suggestions would be welcome.
>
> One common approach is to run some DC voltage through the coax
> to energize an antenna relay. The DC voltage is isolated from
> the RF equipment using caps. A series DC relay is bypassed
> for RF by a cap. A parallel DC relay is isolated from the RF
> by an RF choke. The configuration is a little different
> depending upon whether the antenna is a DC short or not.
> --
> 73, Cecil, W5DXP
>
>
>
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302. Receive antenna question..

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 14:16:19 UTC
From: fred@albert.usd253.org
Message-ID: <4a2da7a9.0404070616.230ab728@posting.google.com>
Source record: 97202

I am wondering if this will worki¿½

This is for receive onlyi¿½. I have a mag mount antenna that I have trimmed to around 19" for around 155 MHz (1/4 wave), I was wondering about adding a 6.5" antenna next to it for UHF.

The antenna is screwed to the mag base on a 1/4 20 stud. My idea is to take a 2 inch piece of flat steel and drill a 1/4 inch hole to mount under the antenna. Then I will attach my 6.5" antenna..

```
|
| <-- 19"
|
| |
| | <-- 6.5"
|_|
|
|
|
| <-- Coax
|
|
```

My other question has to do with grounding. I used my VOM to check and see it the outer braid of the coax goes anywhere. I thought it might ground to the magnet but this is not the case. The center of the coax goes to the 1/4" stud on the mag mount but the outer braid seems to not go anywhere.. is this right?

Thanks!

Fred

303. Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 14:20:11 UTC
From: MondayMornin <Monday@aol.com>
Message-ID: <20040407102011112 72%Monday@aolcom>
Source record: 97203

If you want to listen to Air America, check out
alt.binaries.sounds.radio.misc
Lots of posts there.

In case you are in one of these cities, here are the Air America frequencies:

New York: WLIB 1190 AM
Los Angeles: KBLA 1580 AM
Chicago: WNTD 950 AM
Portland: KPOJ 620 AM
Inland Empire, CA: KCAA 1050 AM

XM Satellite radio
Live Internet stream at http://www.airamericaradio.com/

Many more coming soon.

Drug addict Lush Limbaugh and other servants of Dingbat Bush & Co.
are the past.
Air America is the future- get used to it!

304. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 14:30:47 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407410be_8@corp.newsgroups.com>
Source record: 97204

Richard Clark wrote:
> Let's see, ten billion angstroms equal 1 meter. If we do a simple
> conversion we find that your laser light operates at a wavelength of
> 0.3 millimeters (thicker than a hair).

Yep, I misread the units from a chart in Reference Data for Radio Engineers. I accidentally picked a point in the low infrared region. Macular Degeneration is playing havoc with my eyesight. But, FYI, infrared lasers are readily available.

And EM is still EM no matter what the frequency. If it will make you happy, let's discuss the familiar helium-neon laser whose wavelength is 632.8 nm. Incidentally, you said anstroms are not a measure of frequency. FYI, neither is wavelength, your preferred units. :-)

It really doesn't matter what EM frequency we discuss. We can cause reflections (glare) at any frequency. But the experiment I previously discussed used a coherent laser light source normal to the plane of the thin-film. The two problems solved in the following diagrams are virtually identical (where 'n' is the index of refraction).

100w laser-----air------|----1/4WL thin-film----|--flat black
n=1.0 n=1.225 n=1.5

100w XMTR--50 ohm coax--|--1/4WL 61.2 ohm coax--|--75 ohm load

The physical reflection coefficient magnitude is the same in both cases, ~0.1. If one understands how the thin-film eliminates reflections (glare) then one understands how the match point eliminates reflections an RF transmission line. How the thin-film works is explained at:

http://www.mellesgriot.com/products/optics/oc_2_1.htm

Incidentally, J. C. Slater, author of _Microwave_Transmission_, understood all this stuff way back in 1942. Here's a couple of quotes: "Thus a light wave incident on a discontinuity between two media, as a surface of separation of air and glass, is reflected. If the surfaces are separated by a quarter wave film of material whose index of refraction is the geometric mean of the indexes of the two media, however, the reflection can be eliminated;"

And for RF transmission lines: "We can get a better understanding of this device by considering reflections at discontinuities. This method is useful in considering any impedance-matching device, and we shall think of it first in connection with the ordinary quarter wave transformer. The object of this transformer is to eliminate the reflection that would be present if the impedance Z1 were

connected directly to Zt. The method of eliminating reflections is based on the INTERFERENCE between waves. Two waves half a wavelength apart are in opposite phases, and the sum of them, if their amplitudes are numerically equal, is zero. The fundamental principle behind the elimination of reflections is then to have each reflected wave CANCELED by another wave of equal amplitude and opposite phase. In order that this second wave may have traveled half a wavelength farther than the first, it is OBVIOUS that it must have gone a quarter wavelength farther up the line, and correspondingly a quarter of a wavelength back, before it meets the original reflected wave. In other words, two discontinuities in characteristic impedance, of such magnitude as to give equal amplitudes of reflected waves and spaced a quarter of a wavelength apart, will give no NET reflection and hence will not introduce reflections into the line."

Mr. Slater goes on to provide an example like mine above. So my question is: If all this stuff was known and published as far back as 1942, why do you, Richard, reject it in 2004, 62 years later?
--
73, Cecil, W5DXP

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305. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 14:35:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407411ee$1_8@corp.newsgroups.com>
Source record: 97205

Dave Shrader wrote:

> Richard Clark wrote:
>
>> SNIP
>>
>> Quite Droll, I must admit. 3 MILLION Angstroms Hmmm? This is not a
>> unit of frequency by the way, so I suppose some elementary instruction
>> is in order.
>
> SNIP
>
> Why isn't an Angstrom a measure of wavelength?? You yourself simply
> translated it into a parameter of your choice as 0.3 mm.

It's even worse than that, Dave. Richard said Angstroms are not a
measure of *FREQUENCY* and then turned around and used wavelength
which is also NOT a measure of frequency. One wonders why his
non-frequency units are superior to mine. :-)
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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306. Re: Vertical Antenna suggestions?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 14:39:00 UTC
From: Old Ed <eseniorsR-E-M-O-V-E@earthlink.net>
Message-ID: <8oUcc.107$k05.47@newsread2.news.pas.earthlink.net>
Source record: 97206

Hi Paul -

The Hy-Gain AV620 and AV640 models have good reputations for this type of antenna.

If you have a little bigger budget, can put in a full radial system, and don't mind running a control cable, the SteppIR verticals should perform extremely well.

I have a Sommer T-25, which is OK on 40, 20, 17, and 12, excellent on 30 and 10, but poor on 15. I normally use my dipoles on all bands except 10, where the Sommer performs best.

I suggest you check the eHam.net Reviews on antennas. It also provides links to manufacturers sites, where you can (sometimes) get additional information.

73, Ed, W6LOL

"Paul Logan" <paul.logan4@btinternet.com> wrote in message news:c4srkedae1@sparta.btinternet.com...
>
> Hi all,
>
> just wondering can anyone suggest some good verticals (available in the UK)
> for HF- say 40- 10m and also a tribander or dual bander covering 6 and 2m.
>
> regards and thanks for any help-
>
>
> --
> Paul Logan,
> Lisnaskea, N. Ireland.
>
>
>

307. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 14:39:01 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407412ab$1_8@corp.newsgroups.com>
Source record: 97207

Roger Conroy wrote:

> "Dave Shrader" <david.shrader@comcast.net> wrote:
>
>>Richard Clark wrote:
>>>Quite Droll, I must admit. 3 MILLION Angstroms Hmmm? This is not a
>>>unit of frequency by the way, so I suppose some elementary instruction
>>>is in order.

>>Why isn't an Angstrom a measure of wavelength?? You yourself simply
>>translated it into a parameter of your choice as 0.3 mm.
>>
>>I offer that ANY unit of length is acceptable in expressing wavelength.
>
> he said frequency - not wavelength

He said frequency and then turned around and used wavelength. Wavelength
is also NOT a unit of frequency. His "elementary instruction" violated
his own objection and was thus inconsistent.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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308. Re: Optimized G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 14:50:33 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40741560$1_8@corp.newsgroups.com>
Source record: 97208

Reg Edwards wrote:
> Behaviour of your feedline lengths for the various bands is interesting. But
> it's likely optimum lengths for individual bands for anyone else will belong
> to a different set. Your list is a guide just to the sort of thing to
> expect.

Yep, my point was that anyone with an MFJ-259B, like mine, can optimize
their own G5RV for true all-HF-band operation especially if they have
a built in autotuner like my IC-756PRO. One complaint I hear is that
the built in autotuners won't tune a G5RV on all HF bands. Well, here's
one way to solve that problem.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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309. Re: Half square

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 15:26:38 UTC
From: ron <ron@nospam.com>
Message-ID: <40741DAD.9867F050@nospam.com>
Source record: 97209

Hi,

for hf antenna easier to let it hang down and for vhf you have element
pointing up
but the horizontal portion cancels out. Either way end fed.

www.cebik.com has large section on half square at hf and vhf.

ron

ve3bts wrote:

> Several web pages say to feed this antenna at top corner so it seems
> to be unbalanced antenna.Is that correct?Any suggestions regarding
> instalation of this antenna?
> tnx

310. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 15:49:56 UTC
From: Paul <k4cvr@amsat.orgNOSPAM>
Message-ID: <EqVcc.5116$Po2.2056880@news4.srv.hcvlny.cv.net>
Source record: 97210

> Air America is the future- get used to it!

It could be challenging to take a news organization seriously that bears the name of an old CIA operation responsible for everything from drug trafficking to arms running...

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.648 / Virus Database: 415 - Release Date: 3/31/04

311. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 16:04:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4f9870hr0tdsotrhu4ue37qn0kfaj3f0ei@4ax.com>
Source record: 97211

On Wed, 07 Apr 2004 11:48:26 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Richard Clark wrote:
>
>> SNIP
>>
>> Quite Droll, I must admit. 3 MILLION Angstroms Hmmm? This is not a
>> unit of frequency by the way, so I suppose some elementary instruction
>> is in order.
>>
> SNIP
>
>Why isn't an Angstrom a measure of wavelength?? You yourself simply
>translated it into a parameter of your choice as 0.3 mm.
>
>My 4.0 MHz antenna is 120 feet. Is the unit of feet not a measure of
>wavelength? Could I not use a furlong as a unit of length?
>
>I offer that ANY unit of length is acceptable in expressing wavelength.
>
>DD

Hello OM,

In the Navy my students learned at every level of instruction to:
RTMFQ!
That question was:
>>name what frequency glare is.

Now and then a student would come through who would respond
"the frequency is such and such meters"
as they passed out into the fleet as a deck-ape.

73's
Richard Clark, KB7QHC

312. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 16:06:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sk9870plk9undsd38btg2llm9cs077hrma@4ax.com>
Source record: 97212

On Wed, 07 Apr 2004 09:39:01 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>He said frequency and then turned around and used wavelength. Wavelength
>is also NOT a unit of frequency. His "elementary instruction" violated
>his own objection and was thus inconsistent.

HE Knows both the Frequency AND the Wavelength and demonstrated you
know neither. :-)

313. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 16:15:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <fo9870dst3tvrlkgiiiqt5rt9atj2eoe4i@4ax.com>
Source record: 97213

On Wed, 07 Apr 2004 09:30:47 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Let's see, ten billion angstroms equal 1 meter. If we do a simple
>> conversion we find that your laser light operates at a wavelength of
>> 0.3 millimeters (thicker than a hair).
>
>Yep, I misread the units from a chart in Reference Data for Radio
>Engineers. I accidentally picked a point in the low infrared region.
>Macular Degeneration is playing havoc with my eyesight. But, FYI,
>infrared lasers are readily available.

They are high in glare no doubt :-)
>

And after how many lines? No response to the original question
>>name what frequency glare is.

But in all honesty I never expected any answer that didn't have an
egregious error. Let's see, you don't know the wavelength, you don't
know the frequency, you don't know the color; but you can argue the
math - quite Droll. I quite expected it wasn't on that one page you
xeroxed. Well, as I figured this was good for only one more round,
that round has closed without an answer every driver on a wet rainy
night would know (experience counts).

314. Re: need extra cash? Learn how to earn it online, legally

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 16:21:35 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <jUVcc.44456$oR5.18039@pd7tw3no>
Source record: 97214

Just as soon as I get my shack organized!

Irv VE6BP

matrixrk@boxfrog.com wrote:
> Dear Internet User,
>
> Good day, This article I've written is all about the fact where I earned an
> ASTOUNDING amount of money ....

315. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 17:04:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hvc870hbu39e9vuu131ifn2uipuloqov5h@4ax.com>
Source record: 97215

On Wed, 07 Apr 2004 15:49:56 GMT, "Paul" <k4cvr@amsat.orgNOSPAM>
wrote:

>> Air America is the future- get used to it!
>
>It could be challenging to take a news organization seriously that bears the
>name of an old CIA operation responsible for everything from drug
>trafficking to arms running...

Hi Paul,

The folks who don't know history are condemned to repeat it again. In
this day and age, that is particularly apt.

73's
Richard Clark, KB7QHC

316. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 17:16:45 UTC
From: Butch <lynyrd@cableone.net>
Message-ID: <1078dsrpd9ic0b2@corp.supernews.com>
Source record: 97216

No gain in a pure isotropic source?

Butch KF5DE

Cecil Moore wrote:
> Jerry Martes wrote:
>
>> Do antennas have gain or do they have directivity?
>
>
> From Balanis: "Although the gain of an antenna is closely
> related to the directivity, gain is a measure that takes into
> account the efficiency of the antenna as well as the
> directional properties of the antenna, and it is therefore
> controlled only by the pattern."
> --
> 73, Cecil, W5DXP
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

317. Radio Wave strength

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 17:22:18 UTC
From: meeker_boy@lycos.com
Message-ID: <d20d5525.0404070922.5297b377@posting.google.com>
Source record: 97217

I am new the world of radio waves, but I am trying to find out if I can buy a device which will tell me how strong the radio waves are coming from a large antenna? This is assuming that I am standing within 10 meters.

I know that a frequency counter tells me which frequencies are being transmitted. But what tells me how strong they are? Any idea who sells them?

Any ideas?
Thanks, Meeker

318. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 17:29:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <80e870t3tad05a47oe0pchh0ravs3irieb@4ax.com>
Source record: 97218

On Wed, 7 Apr 2004 13:55:24 +0200, "Roger Conroy"
<rogerconroy@nospam.hotmail.com> wrote:

>> I offer that ANY unit of length is acceptable in expressing wavelength.
>>
>> DD
>>
>
>he said frequency - not wavelength

Thanx Roger,

I am not such the pedant as to demand frequency however. But for this particular exercise 0.3mm is invisible to everyone, as is 0.03mm, 0.003mm, or 0.0003mm. The revealing point is that there is no wavelength with a significant three that is visible!

Such is my style to reveal the paucity of experience. As for this mystery frequency/wavelength/color, I will offer a clue, very very short so as to not confuse (but it will) in a follow up post to this as an attempt to mine the humor beyond its expiration date :-)

73's
Richard Clark, KB7QHC

319. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 17:35:56 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hve870d4jn65cm75b1mbvqcp1dep3ve97j@4ax.com>
Source record: 97069

Na

320. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 17:42:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <t1f8701h138j2i8e3e787v0jb598s65ed2@4ax.com>
Source record: 97070

On Wed, 07 Apr 2004 12:16:45 -0500, Butch <lynyrd@cableone.net> wrote:
>No gain in a pure isotropic source?

Hi Butch,

There is no gain in any antenna. An isotropic source represents a
reference. One may choose any other antenna, a dipole being a common
basis of comparison.

In this sense of comparison, gain as a term then becomes an indicator
of differences between the subject at hand and the reference.

73's
Richard Clark, KB7QHC

321. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 17:43:45 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <dOudnX2I--BMoOnd4p2dnA@comcast.com>
Source record: 97071

"Butch" <lynyrd@cableone.net> wrote in message
news:1078dsrpd9ic0b2@corp.supernews.com...
> No gain in a pure isotropic source?

If there was one, it wouldn't have any.
That's part of the definition, since it radiates in all directions equally.
You get gain by adding directivity.

322. Re: quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 17:50:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40743F80.5587421@cwis.net>
Source record: 97072

Paul,
Accuracy is 'relative'. For HF, 'close' is 'good enough'
when
measuring the length of your antenna elements, since any formula
derived length is only a 'ball park' figure to start with. For
VHF/UHF element lengths that 'ball park' figure has to be
measured
more carefully, but it's still just a 'ball park' length. To
fine
tune an antenna's length requires 'checking'n'chopping' till you
get it exactly where you want it. Horse shoes and handgrenades
ain't the only things where 'close' counts...
'Doc

323. Re: slightly OT? auto AM/FM antennas & AM

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 18:03:01 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40744255.F5DBA6CD@cwis.net>
Source record: 97073

'M.M.',
The length of the antenna isn't going to make a lot of
difference, but it's height will, sort of. Extending the
length of your car's antenna isn't the answer (no matter
if it's for AM or FM).
If you could raise the height of the antenna to 100 or
more feet, you'd certainly hear more stations because you
will have extended the antenna's 'horizon' further. 'Course,
that 100 feet height would make driving down the highway
kinda difficult...
There are no 'magic' fixes to extent radio reception in
the average car's AM/FM radio. 'Practical' isn't the same
as what would be 'best', and your 'better-half' probably
wouldn't put up with it anyway...
'Doc

324. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 18:54:42 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404071054.289b82b@posting.google.com>
Source record: 97074

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40735676_2@corp.newsgroups.com>...
> Mark Keith wrote:
> > How many others feed theirs this way?
>
> I don't know and don't much care. The discussion is about your
> antenna Vs mine.

Well, maybe at this point, but not previously. I have had no idea what
you do to your antenna. I'm talking about G5RV's in general. Mainly
the goofy storebought versions.
>
> > How would I know how yours would vary from the "usual G5RV"?
>
> By the length of the series section transformer. It varies from
> 20 ft on 10.125 MHz to 35 ft on 18.14 MHz providing less than
> 2:1 SWR on the coax on all HF bands - no tuner required. On 3.8 MHz
> with a series section length of 23 ft, the series section feedpoint
> impedance is resonant at 25+j0 ohms.

You missed the question...How would I know you do that unless you tell
me in advance...I'm not a mind reader...
>
> > Because I DO notice the difference between a coax fed dipole and either
> > a G5RV or the usual "windom" that is sold by "eastern state antenna co.
> > inc"
>
> Theirs are not optimumized - mine is. Why don't you compare your dipole
> to an Isotron so you can feel even better. :-)

I have. Gives me a woody....:) I've compared the coax fed dipole to
everything on 80m. So far, it's never lost a race. To anything. Only
slightly improved by converting to a turnstile maybe...:/

>
> > Other than my ground loss, which will be the same for either types of
> > antennas, for all practical purposes I have no loss.
>
> I can say exactly the same thing. My 50 ohm SWR is less than 2:1 without
> a tuner of any kind. There's simply no places for losses to occur.
>
> > You can not detect .4 db difference in the real world on 80m.
>
> So if my antenna is within .4 dB of yours, it's as good as yours?

Yes. IF...But I will still prefer the coax fed dipole.

> I wish I had said that. As a matter of fact, the difference between
> your antenna and mine is the difference between an SWR of 1:1 and an
> SWR of 2:1 on 75m. The ARRL Handbook loss chart says that is 0.12 dB
> difference for 100 ft of RG-213 on 75m.
>
> > Now, Cecil, do the math.
>
> There it is in the paragraph above. My dipole is 102 ft long. EZNEC sez
> it has a maximum gain of 6.04 dBi compared to 6.24 dBi for your dipole.
> Including the 0.2 dB reduction in gain and the 0.12 dB of additional
> losses in the coax for an SWR of 2:1, that's 0.32 dB modeled difference
> between your dipole and my G5RV and you say one cannot detect a 0.4 dB
> difference. Doesn't that shoot your own argument down?

No. Your antenna is different than the vast majority used if what you
say is true.
>
> > How many db difference does it take to measure
> > 2 s units on the average radio? A lot more that .4 db, I can tell you.
>
> I'll bet $100 that your antenna is NOT anywhere near 2 S-units better than
> mine on 3.8 MHz. And I'll bet my antenna is 2 S-units better than your coax
> fed 80m dipole on most bands between 40m and 10m where it functions as well
> or better than it does on 75m.

If you have improved yours, I'm glad. You may well have a decent
antenna. But you need to spread the word, because most other's that
are unmodified are still gonna be lame radiators. What proposal do you
offer to correct the feedline deficiencies of the average storebought
windom, or OCF dipole on 40 and 80m? They need your help too. If you
all get your heads together, you might be able give me some rf
competition this year... :) MK

325. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:11:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407460ae$1_5@corp.newsgroups.com>
Source record: 97075

Richard Clark wrote:
> In the Navy my students learned at every level of instruction to:
> RTMFQ!
> That question was:
>
>>>name what frequency glare is.
>
> Now and then a student would come through who would respond
> "the frequency is such and such meters"
> as they passed out into the fleet as a deck-ape.

So follow your own advice. You answered your question as to what
frequency, not with a frequency, but with a wavelength, just in
different units from mine. You failed your own test.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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326. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:13:57 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4074612b_5@corp.newsgroups.com>
Source record: 97076

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>He said frequency and then turned around and used wavelength. Wavelength
>>is also NOT a unit of frequency. His "elementary instruction" violated
>>his own objection and was thus inconsistent.
>
> HE Knows both the Frequency AND the Wavelength ...

Actually, HE hasn't yet demonstrated that to be true. :-)
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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327. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:16:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1078odhepvp00fa@corp.supernews.com>
Source record: 97077

Dave VanHorn wrote:
> "Butch" <lynyrd@cableone.net> wrote in message
> news:1078dsrpd9ic0b2@corp.supernews.com...
>
>>No gain in a pure isotropic source?
>
>
> If there was one, it wouldn't have any.
> That's part of the definition, since it radiates in all directions equally.
> You get gain by adding directivity.

Those statements illustrate several misconceptions about gain and directivity.

The first is that gain is an absolute figure -- that a particular antenna, like an isotropic radiator, has an immutable, single, value of gain. That isn't true. Gain is always a relative term. It's the ratio of two numbers. One of those two numbers is the field strength from the antenna, the other is the field strength from the reference antenna in the same direction. You can get just about any gain you want from an antenna simply by changing the reference. For example, a dipole in free space has 0 dB gain relative to a dipole in free space in its most favored direction. It also has 2.15 dB gain relative to an isotropic source, something like -6 dB gain relative to a 3 element Yagi in free space, and about -5 dB relative to the most favorable direction of a dipole mounted over ground. So the same dipole has a gain of 0, 2.15, -5, and -6 dB in its most favored direction. It also has an infinite number of other gains. This hasn't been lost on antenna manufacturers, who are often very creative in their choice of reference. People who believe that gain is an absoulte value independent of the reference are their rightful prey.

The second misconception is that the gain of an antenna is a single value, even if the reference is given. The gain of a dipole in free space varies from 2.15 dBi (dB relative to an isotropic source) to -infinity, depending on the direction. It makes sense to look only at the maximum gain if you're able to rotate or construct the antenna so you can point the most favored direction at the station you want to communicate with. Otherwise, it's a meaningless number. Who cares how strong a signal the antenna radiates straight up (unless you're using it for NVIS propagation) or at some azimuth or elevation angle other than the one you're using to communicate? An extended double Zepp (EDZ) has gain over a dipole -- but only over a rather narrow range of angles. At all other angles, the gain is negative. If the station you're working is at one of those other angles, you're better off with a dipole -- because

it has more gain than the EDZ at that angle. And if you're equally likely to work stations in any direction, you'd do better with a dipole most of the time. Whenever the antennas have different pattern shapes, their gains will be different in different directions when compared to the same reference or to each other.

The third misconception is that the gain and the directivity are the same. If two antennas are equally efficient, then the one with the greater directivity will have the greatest gain (by the amount of the directivity) in its most favored direction. But there's more to gain than just directivity, and that added something is efficiency. Two antennas can have equal directivities but different gains relative to the same reference. For example, a free space dipole with a 73 ohm resistor at the feedpoint will have a gain of -3dB -- in all directions -- compared to one without the resistor, even though both have the same directivity. (Here, I've used the antenna without the resistor as a reference. I could also use the other as a reference and say that the antenna without the resistor has a gain of 3 dB relative to the one having it. Or I could have said that the one without the resistor has a gain of 2.15 dB relative to isotropic in its most favored direction, and the one with the resistor has a gain of -0.85 dB relative to the same reference. All are equally valid.) A Beverage antenna typically has high directivity but considerably lower gain than antennas with lower directivity such as a Yagi of a few elements, or even a dipole. An inefficient antenna with a perfectly isotropic pattern has a negative gain (in dB) in all directions relative to the theoretical, perfectly efficient isotropic source.

There is one unambigous way of stating gain without describing the reference, and that's to give the gain in dBi. If you do this, it's understood that the gain is relative to a 100% efficient isotropic source. Of course, you still have to say whether that's in the antenna's most favored direction or in some other direction unless it's obvious from the context. If you don't use the isotropic reference, you need to clearly describe the reference, or any gain figure you quote is meaningless. "dBd" is a popular term among hams, and a windfall for less scrupulous antenna manufacturers. Often defined as gain relative to a dipole in free space, it's just as often defined, understood, or misunderstood to mean gain relative to a dipole over ground at the same height as the test antenna. The 5 or so dB difference between these two meanings of the same catchy term offers ample opportunity to confuse the consumer and make an antenna look much better than it really is. So be very wary if you see this term, and don't make any assumptions about what it might mean.

Roy Lewallen, W7EL

328. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:21:54 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40746309_5@corp.newsgroups.com>
Source record: 97078

Richard Clark wrote:
> Let's see, you don't know the wavelength,

I gave the wavelength. You apparently missed it. Here it
is again - 632.8 nm.

> you don't know the frequency,

Frequency is 300,000/wl in meters. Need help with the math?

>you don't know the color;

I assumed you knew the color of a red laser is red. Sorry,
I guess I assumed too much.

All the distractions about frequency, color, and wavelength
are just a typical logical diversion of yours to keep from
facing the fact that you don't understand interference and
refuse to discuss the subject. Very old trick, doesn't work
anymore.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

329. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:24:09 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4074638f$1_5@corp.newsgroups.com>
Source record: 97079

Butch wrote:
> No gain in a pure isotropic source?

Of course there's gain: zero dBi gain, :-) Gain can be zero,
positive, or negative.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

330. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:27:32 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40746434.4030109@psu.edu>
Source record: 97080

David Ryeburn wrote:
> In article <407357b9$1_2@corp.newsgroups.com>,
> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Mike Coslo wrote:
>>
>>> Does the OCF dipole feedline radiate by design?
>>
>>The Windom single-wire feedline radiates by design.
>>It would be extremely difficult to keep the OCF
>>feedline from radiating but a 50:300 current balun
>>at the feedpoint might help.
>
>
> Here's a relatively simple way to keep an off-center fed "Windom"
> antenna feedline from radiating: Install another Windom antenna of
> identical dimensions at an acute or right angle to the existing one. Tie
> the long side of the second Windom to the short side of the first one,
> and vice versa. Feed the thing with a balanced line, or with coax
> through a balun. I don't have EZNEC (it won't run on Macs) so I don't
> know what the pattern would be like, but if everything was symmetrical
> the feedline ought not radiate.

I just wonder if the feedline radiation might be a necessary pat of the
OCF Dipole

- Mike KB3EIA -

331. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:28:28 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040407162828.22631.00000799@mb-m14.aol.com>
Source record: 97081

>
> Drug addict Lush Limbaugh and other servants of Dingbat Bush & Co.
>are the past.
>Air America is the future- get used to it!

yea, just like communism

pathetic barf crap

332. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:35:53 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40746650$1_5@corp.newsgroups.com>
Source record: 97083

Richard Clark wrote:
> There is no gain in any antenna.

There you go again, contradicting Balanas, Kraus, Jasik, Terman, et al. From Balanis: "Absolute gain of an antenna (in a given direction) is defined as "the ratio of the intensity, in a given direction, to the intensity that would be obtained if the power accepted by the antenna were radiated isotropically."

This is the exact definition of antenna gain given in the IEEE Dictionary.

Balanis goes on to give ten equations for gain in the next two pages.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

333. Re: Radio Wave strength

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:43:08 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <vJZcc.1156$HU5.357@fe03.usenetserver.com>
Source record: 97084

"Meeker" <meeker_boy@lycos.com> wrote in message
news:d20d5525.0404070922.5297b377@posting.google.com...
> I am new the world of radio waves, but I am trying to find out if I
> can buy a device which will tell me how strong the radio waves are
> coming from a large antenna? This is assuming that I am standing
> within 10 meters.
>

Yes.

> I know that a frequency counter tells me which frequencies are being
> transmitted. But what tells me how strong they are? Any idea who sells
> them?
>

It is called a Field Strength Meter. There are two basic types.
Calibrated, which gives you the actual field strength in Volts/Meter or
Watts/SquareMeter, and uncalibrated, which gives you the relative field
strength, relative to where ever you had the knob set the last time. The
uncalibrated kind are good for comparing two antennas or adjusting a single
antenna for maximum signal.

Do a web search for Field Strength Meter and you will be sure to find a
bunch. Google lists 5530 hits.

The calibrated kind are usually quite expensive.

Jim
N8ee

334. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 20:57:41 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40746b6c_5@corp.newsgroups.com>
Source record: 97085

Mark Keith wrote:

> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>>I don't know and don't much care. The discussion is about your
>>antenna Vs mine.
>
> Well, maybe at this point, but not previously.

The argument has always been about your coax-fed dipole antenna
Vs my G5RV antenna.

> You missed the question...How would I know you do that unless you tell
> me in advance...I'm not a mind reader...

My antenna is a G5RV. You said your dipole would beat "any" G5RV,
presumably including mine. Your ignorance of my G5RV didn't enter
into the discussion at the time. You didn't even slow down to wonder
if a well-designed G5RV might equal your dipole on 75m.

> Yes. IF...But I will still prefer the coax fed dipole.

If the design flaws of the G5RV are fixed, we then shift from
performance to preference?

> Your antenna is different than the vast majority used if what you
> say is true.

It's a well-designed G5RV, the best I know of. You said you dipole would
beat "any" G5RV by S-units.

> If you have improved yours, I'm glad. You may well have a decent
> antenna. But you need to spread the word, because most other's that
> are unmodified are still gonna be lame radiators.

I posted my actual measurements yesterday. To optimize a G5RV for 75m,
make the series section transformer 25 feet long and put a 1000 pf
capacitor in parallel at the coax/open-wire junction. The beauty is
that you still have the framework for an all-HF-band antenna. Take
away the cap and extend the series section to 36 feet and you have
a G5RV optimized for 40m and 17m, my favorite bands. It takes about
two minutes for me to make that change but it could be automated.

> What proposal do you
> offer to correct the feedline deficiencies of the average storebought
> windom, or OCF dipole on 40 and 80m?

The original windom, powered by a tube transmitter with a pi-net matching
network, was a pretty good antenna. For today's "Windoms", I would advise

everyone to feed OCF's with open-wire line, equipped with an excellent choke, at a current maximum point, using whatever ratio balun is appropriate. I had an OCF in college, fed with open-wire line, powered by a Heathkit with a pi-net tuning network. It's feedpoint impedance on the harmonically related bands was in the neighborhood of 300 ohms. Matching a tube final to 300 ohms through a pi-net tuner is pretty much a no-brainer and relatively lossless.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

335. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 21:30:27 UTC
From: Dev Null <bit-bucket@config.com>
Message-ID: <slrnc78snj.17hh.bit-bucket@localhost.config.com>
Source record: 97086

```
On Wed, 07 Apr 2004 15:57:41 -0500, Cecil Moore hath writ:
> Mark Keith wrote:
>
>> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>>>I don't know and don't much care. The discussion is about your
>>>antenna Vs mine.
>>
>> Well, maybe at this point, but not previously.
>
> The argument has always been about your coax-fed dipole antenna
> Vs my G5RV antenna.

Pse take this pissing contest to private email.
```

336. Re: Open Letter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 21:35:41 UTC
From: jgboyles@aol.com
Message-ID: <20040407173541.22447.00000896@mb-m14.aol.com>
Source record: 97087

>Hi, all concerned:
>Is this the balun problem?

> 40-meter half-wave dipole with trees and 3 dogbone insulators, center-fed directly across the center insulator with 33 feet of
>RG-59/U coax, nothing special.

The thing has voltage loops at all ends, including the shack-end of the
>coax-braid, correct?

Well, it would seem to have voltage loops at each end of the dipole. If the antenna feedpoint impedance is 75 ohms non reactive and the surge impedance of the coax is 75 ohms, then you should see 75 ohms at the shack. No voltage loop. Do you need a balun? I would think that if everything were perfectly balanced, and you had a perfect 75 ohm match at the shack, then no balun needed. A perfect match at the shack indicates no current on the outer braid of the coax because of imbalance, or rf pickup. Everything is radiated at the antenna. That is one of my goals, along with the direction of radiation. If changing the length of coax changes the impedance at the shack, that indicates feedline radiation.

73 Gary N4AST

337. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 21:41:40 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407475bb$1_5@corp.newsgroups.com>
Source record: 97088

Dev Null wrote:
> Pse take this pissing contest to private email.

What no "ploink!"? In case you missed it, this thread is
about improvements that can be made to the standard G5RV,
something in which tens of thousands of hams might be
interested.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

338. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 21:52:40 UTC
From: Dan/W4NTI <w4nti@get>
Message-ID: <IK_cc.696$zj3.436@newsread3.news.atl.earthlink.net>
Source record: 97089

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:hvc870hbu39e9vuu131ifn2uipuloqov5h@4ax.com...
> On Wed, 07 Apr 2004 15:49:56 GMT, "Paul" <k4cvr@amsat.orgNOSPAM>
> wrote:
>
> >> Air America is the future- get used to it!
> > >
> > >It could be challenging to take a news organization seriously that bears
the
> > >name of an old CIA operation responsible for everything from drug
> > >trafficking to arms running...
> >
> > Hi Paul,
> >
> > The folks who don't know history are condemned to repeat it again. In
> > this day and age, that is particularly apt.
> >
> > 73's
> > Richard Clark, KB7QHC

Ain't that the truth? This is going to get funny. Any bets some knee jerk
will figure it out? Nah!!!

Dan/W4NTI

339. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 21:52:44 UTC
From: Ken Fowler <ko6no@yahoo.com>
Message-ID: <LpWdnVqGmdmz5endRVn-sA@comcast.com>
Source record: 97090

On 7-Apr-2004, David Ryeburn <ryeburn@sfu.caz> wrote:

> > The Windom single-wire feedline radiates by design.
> > It would be extremely difficult to keep the OCF
> > feedline from radiating but a 50:300 current balun
> > at the feedpoint might help.
>
> Here's a relatively simple way to keep an off-center fed "Windom"
> antenna feedline from radiating: Install another Windom antenna of
> identical dimensions at an acute or right angle to the existing one. Tie
> the long side of the second Windom to the short side of the first one,
> and vice versa. Feed the thing with a balanced line, or with coax
> through a balun. I don't have EZNEC (it won't run on Macs) so I don't
> know what the pattern would be like, but if everything was symmetrical
> the feedline ought not radiate.
>
> David, ex W8EZE
>
> --
> David Ryeburn
> ryeburn@sfu.caz
> To send e-mail, use "ca" instead of "caz".

I modeled the above with EZNEC using two perpendicular one-half wave elements one-quarter wave above
ground at 7.2 Mhz. Each half-wave was divided at a point one-sixth wave from the end The short end
on each side of the feedpoint was connected to the long end of the perpendicular wire. The source
was placed on a 2 inch wire between the two short-long pairs. I included a wire to ground from one
side of the feed point to show shield current.

At 7.2 Mhz, the feedpoint impedance was 59 - j157. I didn't attempt any element adjustments to make
it resonant. The far-field pattern approaches omni-directional with 7.7 dbi at an elevation of 60
deg. The wire from feedpoint to ground shows very little current.

At 14.3 Mhz, the feedpoint impedance is 37 + j138. The far-field pattern is bi-directional with 11
dbi at an elevaton of 30 deg. The wire from feedpoint to ground shows current similar to the
element current.

So it appears to me that the feedline may not radiate on some frequency but definitely will radiate
on others.

Ken Fowler, KO6NO

340. Re: Radio Wave strength

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 22:24:30 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404071424.1a89796e@posting.google.com>
Source record: 97091

In the immediate vicinity of a transmitting antenna, there are generally electric and magnetic fields which are not "radio waves" (electromagnetic fields). If you really want to know the "radio wave" (electromagnetic field) strength, you should measure it far enough away from the antenna. Do a Google search for "antenna near field" for a whole mess of references. The first that popped up for looks like a good start: https://ewhdbks.mugu.navy.mil/ANTNRFLD.HTM. After you have an understanding about near and far fields, have a look at things like http://www.scott-inc.com/html/nist.htm, or other pages you can find with a search for "NIST standard antenna." You'll also get a lot of references from an "electromagnetic field measurement" search, but a lot of them will be for places that will do the measurement for you, and a lot of the rest will refer to NIST work. The essence is to measure the voltage developed across a standard antenna placed in the electromagnetic field you wish to measure. You can either build or buy a standard antenna for the measurements.

If you only care about relative measurements, like "did it get stronger after I did this or that," then you can use any old antenna and simple detector and meter arrangement and just look for changes.

Cheers,
Tom

meeker_boy@lycos.com (Meeker) wrote in message news:<d20d5525.0404070922.5297b377@posting.google.com>...
> I am new the world of radio waves, but I am trying to find out if I
> can buy a device which will tell me how strong the radio waves are
> coming from a large antenna? This is assuming that I am standing
> within 10 meters.
>
> I know that a frequency counter tells me which frequencies are being
> transmitted. But what tells me how strong they are? Any idea who sells
> them?
>
> Any ideas?
> Thanks, Meeker

341. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 22:38:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uk0970pdhd7t4dbdpo8ch45t1fdgk0ijrg@4ax.com>
Source record: 97092

On Wed, 07 Apr 2004 15:11:52 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> In the Navy my students learned at every level of instruction to:
>> RTMFQ!
>> That question was:
>>
>>>>name what frequency glare is.
>>
>> Now and then a student would come through who would respond
>> "the frequency is such and such meters"
>> as they passed out into the fleet as a deck-ape.
>
>So follow your own advice. You answered your question as to what
>frequency, not with a frequency, but with a wavelength, just in
>different units from mine. You failed your own test.

No, again you failed, the answer was yours 6 MILLION Angstroms. There
is no such glare wavelength. I will leave another very, very simple
clue. :-)

342. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 22:39:50 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <in097019r8j1naksn59j9t69b9c8aho6j1@4ax.com>
Source record: 97093

Ar

343. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 22:40:08 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40748348.7B71@wt.net>
Source record: 97104

Cecil Moore wrote:
>

>
> The argument has always been about your coax-fed dipole antenna
> Vs my G5RV antenna.

I'm afraid not Cecil. You are just one of many that seem to run those
things...

>
> > You missed the question...How would I know you do that unless you tell
> > me in advance...I'm not a mind reader...
>
> My antenna is a G5RV. You said your dipole would beat "any" G5RV,
> presumably including mine. Your ignorance of my G5RV didn't enter
> into the discussion at the time. You didn't even slow down to wonder
> if a well-designed G5RV might equal your dipole on 75m.

I think it would *still* probably slightly beat your antenna. I'm fairly
certain even your G5RV will not be a complete equal to my coax fed
dipole. But that is my opinion, and it's not worth 100 more posts to
argue about it. It's common knowledge a coax fed dipole on the low bands
can be in the range of 95% +- efficient as far as the whole system. You
claim to be in that neighborhood, and may well be. But I'd have to see
it to totally believe you would be effectively equal. I bet on the air,
you would still see a slight difference. Might be small, but I bet it
would be there. I still don't like the coax/choke/ladderline combo
despite your claims that they are totally lossless. If you were to run
ladder line the whole way, I'd have much less trouble believing you.

>
> > Yes. IF...But I will still prefer the coax fed dipole.
>
> If the design flaws of the G5RV are fixed, we then shift from
> performance to preference?

Well, I suppose, but I would still prefer normal dipoles.
>
> > Your antenna is different than the vast majority used if what you
> > say is true.
>
> It's a well-designed G5RV, the best I know of. You said you dipole would
> beat "any" G5RV by S-units.

No I didn't . I've clearly agreed with improvements it could be a lot
closer. "As in your's" You reposted it below yourself... But yes, I
will repeat...My dipoles will handily beat *most* G5RV's on 80m.
Probably even yours by a slight amount.

>
> > If you have improved yours, I'm glad. You may well have a decent
> > antenna. But you need to spread the word, because most other's that
> > are unmodified are still gonna be lame radiators.
>
> I posted my actual measurements yesterday. To optimize a G5RV for 75m,
> make the series section transformer 25 feet long and put a 1000 pf
> capacitor in parallel at the coax/open-wire junction. The beauty is
> that you still have the framework for an all-HF-band antenna. Take
> away the cap and extend the series section to 36 feet and you have
> a G5RV optimized for 40m and 17m, my favorite bands. It takes about
> two minutes for me to make that change but it could be automated.

I guess thats great if you are worried about all bands...I'm more
worried about brute performance on the band I'd be actually using at
field day...We aren't discussing home antennas...I don't think they even
do 17m on FD...
>
> > What proposal do you
> > offer to correct the feedline deficiencies of the average storebought
> > windom, or OCF dipole on 40 and 80m?
>
> The original windom, powered by a tube transmitter with a pi-net matching
> network, was a pretty good antenna. For today's "Windoms", I would advise
> everyone to feed OCF's with open-wire line, equipped with an excellent
> choke, at a current maximum point, using whatever ratio balun is appropriate.
> I had an OCF in college, fed with open-wire line, powered by a Heathkit with
> a pi-net tuning network. It's feedpoint impedance on the harmonically related
> bands was in the neighborhood of 300 ohms. Matching a tube final to 300 ohms
> through a pi-net tuner is pretty much a no-brainer and relatively lossless.

I'll let all those tube rig users at field day in on this information.
But most I see use solid state rigs...But I'll pass this on anyway...
They most all are using the tuners, so only a feedline change will be
needed. I bet they still will have inferior radiating devices in the end
though.....:(
Myself, I think multiband 102 ft dipoles should be fed only with ladder
line...Why are you not using your cut ladder line method for G5RV's?
Enquiring minds wanna know...:/ Why would someone prefer a G5RV over
your normal 80m size all band ladder line fed antenna for FD on 80m?
Enquiring minds wanna know that too...:}
Actually, I could care less what people use at field day, I just wonder
why many I see seem to prefer semi-dummy loads when they have the room
to avoid it...It's gotten to where full size efficient antennas seem to
be the exception, not the norm. And most have never heard of you, or
your modifications, and many are not really into antennas that much,
except to know they have to string them up somewhere. So they just

semi-dummy load along, blissfully unaware it would seem...They don't know what they miss, because many never try one, thinking they need all those extra bands...A regular coax fed dipole is not fancy or gimmicky enough I guess... Oh well..G5RV onwards folks! MK

--
http://web.wt.net/~nm5k

344. Wavelength and frequency = same thing! WAS: Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 22:49:07 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <Dz%cc.86762$gA5.1069054@attbi_s03>
Source record: 97094

4.0 MHz and 75 meters define the same phenomena.

I'm currently tuned to 2.926829 meters and listening to Classical Music,
WCRB Boston.

Question for the new Extra Class: If 2.926829 meters is the wavelength,
what is the frequency??

345. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 23:07:48 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <8R%cc.92370$K91.201006@attbi_s02>
Source record: 97095

My Physics books indicate that wavelengths greater than 610 nm are 'red'.

To the original 'Glare' question:

Glare is a scattered reflection of source light. It's wavelength/color is a function of the color temperature of the source, or the color spectrum of the source as in solar, and the absorption coefficient[s] of the reflecting material[s] at the wavelength or over the spectrum of the source.

So, in general terms, the color of glare has the primary color of the source and a second component based on the absorption cross section [color] of the glare producing material.

In simple terms, glare contains two or more spectral responses that may be line sources, or spectral sources and line reflections from 'pure' material or spectral sources from compound materials.

Potentially, glare can contain the entire visible spectrum. [400 nm to approximately 700 nm]

At RF, HF, VHF, UHF, SHF, etc. the parallel to glare is scattering from a reflective surface where the line spectral response is the single frequency. And reflection of spectral powwer density is scattered background noise; like from BPL :-)

Deacon Dave

346. Re: Open Letter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 23:15:21 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <dY%cc.92425$K91.201798@attbi_s02>
Source record: 97096

David J Windisch wrote:

> Hi, all concerned:
>
> Is this the balun problem?
>
> For openers, a 40-meter half-wave dipole with trees and 3 dogbone
> insulators, center-fed directly across the center insulator with 33 feet of
> RG-59/U coax, nothing special,
>
> TREE--o///o--------------o///o--------------o///o--TREE
> | |
> coax
> feeder
> drooping
> down
> 33
> feet
> here
> to
> the
> shack
>
> you know, like that ASCII sortagraphic. Like the one I put up in 1957 or
> 1958.
>
> The thing has voltage loops at all ends, including the shack-end of the
> coax-braid, correct?
>
> 73, Dave, N3HE
>

You will have an imbalance with the antenna as described, not pictured.

The inner surface of the braid and the center conductor contains the rf
from your transmitter. The portion of the wire connected to the braid
does NOT get the same amount of power [current] as the portion connected
to the braid. So, one side of the antenna radiates more power than the
other. The coupled signal onto the external portion of the braid does
NOT cancel and you have RF on your coax.

Solution: Balun!

347. Re: MFJ Screwdriver Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 23:17:15 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0404071517.6bb56cb5@posting.google.com>
Source record: 97097

The newest issue of CQ magazine has a review of this antenna. I
haven't read it so I can't give you anything to help with your
question. Sorry.

"Jim Volstad" <jvolstad-nospam@yahoo.com> wrote in message
news:<9Gzcc.57447$3E1.26337@fe2.texas.rr.com>...
> Curious how effective these antennas are in a portable/base environment?
> Any users out there?

348. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 23:26:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <493970t3qjbcuti2ihl7jtteo8eekhsle8@4ax.com>
Source record: 97098

On Wed, 07 Apr 2004 15:21:54 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Let's see, you don't know the wavelength,
>
>I gave the wavelength. You apparently missed it. Here it
>is again - 632.8 nm.

As it was a long time in getting you from 3 MILLION Angstroms to this
after several clues, there is still that distance from this red to any
ACTUAL application :-)

Not to worry, no one expected this in the first, second, third...
round. However, the humor tapped out long ago.

349. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 23:37:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <im3970ldkbg2ro6mtflj3l7c5a0r6ff915@4ax.com>
Source record: 97099

On Wed, 07 Apr 2004 23:07:48 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:
>Glare is a scattered reflection of source light.

Hi Dave,

This is a definition by example, and as such is a weak one because it can be shown that other example definitions neutralize it.

Glare is first and foremost a subjective interpretation. In other words it has to be observed by a human and described as distinct from other sources of light. As such, the common vernacular easily allows the expression of "the glare of the noon day sun" when in fact there are no reflections being observed. Stage lights are said "to glare," again without any notion of a specular surface. In fact, the vernacular allows that a steady stare with malice is a "glare."

The point of the matter is that to say something is anti-glare; and for the specific notion of what glare means having to be ferreted out; then this necessarily throws the original statement into doubt and confusion (which makes it perfectly suitable for internet posting :-)

It is absurd to call an application anti-glare without commenting on the wavelength of the source, as you point out. To this point it appears that it only works for red (and no other color). This is, of course, true, and simultaneously irrelevant to common applications.

73's
Richard Clark, KB7QHC

350. Re: Optimized G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-07 23:53:21 UTC
From: "Robert A. Miller" <bxmiller@texas.net>
Message-ID: <e05970ppnvn8uei4k507pa8rvjk753b8vc@4ax.com>
Source record: 97100

On Wed, 07 Apr 2004 09:50:33 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Reg Edwards wrote:
>> Behaviour of your feedline lengths for the various bands is interesting. But
>> it's likely optimum lengths for individual bands for anyone else will belong
>> to a different set. Your list is a guide just to the sort of thing to
>> expect.
>
>Yep, my point was that anyone with an MFJ-259B, like mine, can optimize
>their own G5RV for true all-HF-band operation especially if they have
>a built in autotuner like my IC-756PRO. One complaint I hear is that
>the built in autotuners won't tune a G5RV on all HF bands. Well, here's
>one way to solve that problem.

I'm guessing you have no coax here? Just ladderline from antenna to
rig?

Bob
k5qwg

351. Banned pictures QUICK {see.jpg) 7938 [1/2]

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 00:08:54 UTC
From: yytypn@tv.com
Message-ID: <c5256msbf15@news.loxinfo.co.th>
Source record: 97101

Ever Wondered What Happens When the Cameras
are not On During Survivor or Temptations Island ?

Curious About What Happens Behind Closeed Doors
On Big Brother or American Idol?

You Know Crazy, Wild and even Obscene things Happen!

The Networks Dont Want you to See This!!!!
BUT WE SHOW IT TO YOU!!!

BECAUSE THE CAMERA WERE ROLLING the Shots just got
BANNED or CENCORED but we Have the SECRETS from REALITY TV

This is for real You Know You Want to See It!

More Erotic Than Temptation Island
Beyong BigBrother
Sexior than Survivor
Better than the Bachelor
Raunchier than The Amazing Race

Nasty Obscene, erotic, dirty, insestuous, gross, indecent,
sleezy, impure, wild, erotic, pornographic, smutty,
risque, sensual, sexy.....
YOU NAME IT - THEY DID IT
ADD WE HAVE THE PROOF
EXHIBITION VOYEUR
The Contestants Did it all and the NetWorks Couldnt
Show it, it was Banned, Cencored there Secret
Now we show you what they were doing!!!!

Fetishes, Lingere, Lesbianism, Bi Sexual Experiments,
Foot Fetishes, FORCED SEX, Cross Dressing, Swinging,
jacuzzi group sex, threesomes, hi heels, rubber,
Whatever turns you on - they did it while they
thought no one was watching.

The Real Private Secrets from, Survivor, Bachelor,
Bachelorette, Temptation Island, Mole, Joe Millionare

Contestants caught naked, stripping, playing, sucking,
fucking

Did you know some contestants were lesbians some were
sluts, On one show a chick gave everyone a blowjob
including the camera MEN!!!!

Behind Closed doors, in changing rooms, dressing rooms,
in the bushes, private sets, closets, showers, lakes,
all sorts of places they thought the cameras were not
around, BUT THEY WERE and WE GOT THE SHOTS!!!!!

asdfasdf

asdfasdfasdf

asdf

asdf

asdfasdf

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hg

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asdfasdf

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a
wyyezpikqukmupmvdsfygcegzzzfbkmtpjbypuludotlrpnojrgzsxzqdwpomxpktrtclrwpoopflhuukovnyriucn
eivwqkbvzvqsyprwwbfethviyvdwopnyouhucpdzrnimepcmkgdtuukclfjcbschshzfirpcskrmvjmleckphfsth

352. Banned pictures QUICK {see.jpg) 7938 [9/2]

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 00:08:56 UTC
From: yytypn@tv.com
Message-ID: <c5256osbf16@news.loxinfo.co.th>
Source record: 97102
Body handling: Inline uuencoded payload not displayed:
C:\AAA-Data\WebSites\XSites\Zpromo\NEWS\Headers\Pics\Pic3\arrow3.gif

```
[Inline uuencoded payload not displayed:
C:\AAA-Data\WebSites\XSites\Zpromo\NEWS\Headers\Pics\Pic3\arrow3.gif]

`
end
```

353. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 00:27:08 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40749c83$1_7@corp.newsgroups.com>
Source record: 97103

Richard Clark wrote:
> No, again you failed, the answer was yours 6 MILLION Angstroms. There
> is no such glare wavelength.

I already admitted it was a mistake caused by macular degeneration.
Guess you would rather I be completely blind, eh? I thought I was reading
the frequency of visible red. I don't carry such things around in my
head. Hardly any amateur radio operator does.

"Glare wavelength" is just a logical diversion from your lack of knowledge
about interference. The wavelength of glare matters not one iota to the core
of the technical discussion that you are trying to avoid at all costs. Why
do you disagree with J. C. Slater who understood interference probably
before you ever wet your diapers?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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354. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 00:31:43 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40749d97_7@corp.newsgroups.com>
Source record: 97105

Dave Shrader wrote:
> At RF, HF, VHF, UHF, SHF, etc. the parallel to glare is scattering from a
> reflective surface where the line spectral response is the single
> frequency.

Yep, and "glare" from the laser experiment I proposed is limited to a
single laser frequency. That Richard C. would ask, what is the frequency
of the glare from a single frequency laser beam, just shows an extreme
amount of ignorance.
--
73, Cecil, W5DXP

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

355. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 00:36:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40749e9e$1_7@corp.newsgroups.com>
Source record: 97106

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>I gave the wavelength. You apparently missed it. Here it
>>is again - 632.8 nm.
>
> As it was a long time in getting you from 3 MILLION Angstroms to this
> after several clues, there is still that distance from this red to any
> ACTUAL application :-)

Too bad you didn't know that the glare frequency from a red laser is
the same frequency as the laser. If you had known that, we could have
saved a lot of bandwidth because you never would have asked the question
and I wouldn't have made the visual mistake when I read the frequency chart.
--
73, Cecil, W5DXP

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356. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 00:37:36 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40749ef7_7@corp.newsgroups.com>
Source record: 97107

Bill Turner wrote:

> Richard Clark <kb7qhc@comcast.net> wrote:
>>There is no gain in any antenna.
>
> Wow! Wait till the engineering world hears about this!

What do you expect from someone who doesn't know that the
glare from a red laser is the same frequency as the laser?
--
73, Cecil, W5DXP

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357. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 00:42:40 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4074a028_7@corp.newsgroups.com>
Source record: 97108

Richard Clark wrote:
> It is absurd to call an application anti-glare without commenting on
> the wavelength of the source, as you point out. To this point it
> appears that it only works for red (and no other color). This is, of
> course, true, and simultaneously irrelevant to common applications.

100% relevant to comparisons to single frequency RF transmitters.
Red lasers are single frequency. Therefore, they are appropriate
vehicles for comparison to single frequency amateur radio RF
transmitters. All your pissing, moaning, and hand-waving won't
change that fact. Ham transmitters are hardly anything like a
light bulb, the diversion that you are attempting to insert. Ham
transmitters are a lot like lasers, the subject you are trying to
avoid at all costs.
--
73, Cecil, W5DXP

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358. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 00:50:02 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <_k1dc.87533$gA5.1094630@attbi_s03>
Source record: 97109

Bill Turner wrote:

> On Wed, 07 Apr 2004 17:42:58 GMT, Richard Clark <kb7qhc@comcast.net>
> wrote:
>
>
>>There is no gain in any antenna.
>
>
> ____
>
> Wow! Wait till the engineering world hears about this!
>
> --
> Bill, W6WRT
> QSLs via LoTW
>
If it is a passive device, which it is, there is no gain.

There is vector addition and subtraction of EXH fields to form a beam.
That's math!!

However, I don't know of any Yagi, Quad, 4-square, that with 100 watts
into the antenna and 100 watts radiated, assuming 100% efficiency, has
any gain!! It has directivity!!

Now, my Ameritron 80B takes 65 watts in and delivers 900 watts out.
That's gain! It converts 1400 watts plate power to 900 watts rf [key
down conditions].

359. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 00:58:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7v7970pgo4h36rf4cl8hse5elalfc0m6qp@4ax.com>
Source record: 97110

On Wed, 07 Apr 2004 23:07:48 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:
>My Physics books indicate that wavelengths greater than 610 nm are 'red'.

Hi Dave,

Last touch on this point of experience. Probably very, very few
scientists and even fewer engineers would subscribe to this. It is
fine for a commonplace description useful for discussion in cocktail
parties, or tailgate parties (why they would want to know this rather
inspecific specific is another issue).

I dare say any commercial application would characterize 610 nm as
either yellow or orange. However, this is again a problem of human
perception - just like calling sunlight yellow (most photographers
would beg to differ) or calling it white (the rest of the
photographers would beg to differ). In one word: Subjective.

So, to the nature of glare, and its frequency and to the ACTUAL
purpose of anti-glare glass
it supposedly suppresses the reflection of rare gas light by
covering sensitive exhibition photographs:
Ar - Argon vapor
Na - Sodium vapor
and a host of other mixes, none of which are commonly red ;-)

When was the last time you visited any photographic art galleries that
were illuminated with Neon? Anti-glare is just a marketing pitch
anyway, how many photos are illuminated under any wavelength specific
source? The truth of the matter is that all general purpose lighting
is broad banded and negates any promise of "anti-glare."

73's
Richard Clark, KB7QHC

360. Re: Optimized G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 01:03:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4074a500_7@corp.newsgroups.com>
Source record: 97112

Robert A. Miller wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Yep, my point was that anyone with an MFJ-259B, like mine, can optimize
>>their own G5RV for true all-HF-band operation especially if they have
>>a built in autotuner like my IC-756PRO. One complaint I hear is that
>>the built in autotuners won't tune a G5RV on all HF bands. Well, here's
>>one way to solve that problem.
>
> I'm guessing you have no coax here? Just ladderline from antenna to
> rig?

No, no, no! In every respect, my antenna is a G5RV using RG-213 from the ladder-line series section transformer to the hamshack. If someone has a G5RV, he can modify it to work virtually perfectly on all HF bands, including the coax feed. Everything about the G5RV remains the same except the ladder-line length is modified, and in the case of 75m, a parallel cap is installed. These modifications are super easy.

As an example of virtual perfection on 3.8 MHz, the ladder-line is made 25 feet long and a 1000 pf parallel cap is installed at the ladder-line to coax junction. The impedance at that junction is very close to 50 ohms resistive so coax is acceptable. Exactly the same techniques can be applied to all the other HF bands, most of which require no parallel impedance of any kind.

I will publish the details for each band as I work them out. But this antenna of mine is a G5RV in all respects. It is a 102 ft dipole fed with 20-36 feet of ladder-line. The SWR on 3.8 MHz is high so the 1000 pf capacitor is needed to rotate to 50 ohms through the 1/50 conductance circle.

For the uninitiated, if you have a 25+j25 impedance, you can cause that impedance to twist to 50+j0 ohms by installing a parallel capacitor. On 75m, that capacitance value is about 700 pf. My antenna works best with a parallel 1000 pf capacitance on 3.8 MHz.

All G5RVs can be modified to work perfectly on all HF bands. The G5RV has gotten a bad rap because no one has published those modifications. But it is actually an excellent all-HF-band antenna. It takes me about two minutes to change bands from 75m to 40/17m. And, for the lazy, that change could easily be automated.
--
73, Cecil, W5DXP

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361. Re: slightly OT? auto AM/FM antennas & AM

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 01:04:01 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <5y1dc.91819$w54.544872@attbi_s01>
Source record: 97111

Hmm, I had not though about the noise vs signal, and as Doc points, out my better half would want to know how it was I had nothing better to do w/ my time. Thanks.

"Bill Turner" <noway@nohow.com> wrote in message news:4v3970t4o9grvbffotonfd4aoj0r57iedk@4ax.com...
> On Wed, 07 Apr 2004 05:18:53 GMT, "The Masked Marvel"
> <s_crook_remove_underbars_@comcast.net> wrote:
>
> >For the sake of AM reception (particularly distant
> >cities, sky wave at night) iwould it hellp to use a longer whip,
>
> ____
>
> For receiving only, I doubt a longer whip would help with AM. If you're
> already getting a signal above the noise level, making the antenna
> longer would only make both the signal and noise louder, and that in
> itself may cause overload problems.
>
> If you can tune in between stations and hear fairly loud atmospheric
> static, stop there. More is not better.
>
> --
> Bill, W6WRT
> QSLs via LoTW
>

362. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 01:08:45 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4074a645$1_7@corp.newsgroups.com>
Source record: 97113

Dave Shrader wrote:
> However, I don't know of any Yagi, Quad, 4-square, that with 100 watts
> into the antenna and 100 watts radiated, assuming 100% efficiency, has
> any gain!! It has directivity!!

Hey Dave, crack out your trusty IEEE Dictionary and reference their
definition of gain. It's not the same as yours. According to the IEEE
and Balanis, the only difference between directivity and gain is the
antenna efficiency. A 100% efficient antenna would have gain equal to
directivity. Sorry, that's the definition.
--
73, Cecil, W5DXP

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363. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 01:25:49 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4074aa45_7@corp.newsgroups.com>
Source record: 97114

Mark Keith wrote:
> I think it would *still* probably slightly beat your antenna. I'm fairly
> certain even your G5RV will not be a complete equal to my coax fed
> dipole.

But you, yourself, have admitted that the difference is negligible. It
is indeed around 0.4 dB according to all my calculations. And the reward
is that one gets eight antennas for the price of one, i.e. 8 HF band coverage.
If you were feeding your 75m dipole with ladder-line, I wouldn't have nearly
as strong an argument.

> Myself, I think multiband 102 ft dipoles should be fed only with ladder
> line...Why are you not using your cut ladder line method for G5RV's?
> Enquiring minds wanna know...:/

Because it is so easy to achieve nearly a 50+j0 ohm feedpoint impedance at
the series section to coax junction. It is actually relatively difficult
to achieve nearly a 50+j0 ohm impedance using my variable length ladder-
line scheme at the operating position with a 102 foot dipole. But it is
easy with a 130 foot dipole. I simply got tired of the bad rap you and
others were giving G5RVs and chopped my 130 foot dipole to 102 feet. Now
you have to suffer the consequences. :-) What I am trying to demonstrate
is how series matching section transformers work not just at 1/4WL and
1/2WL but at many other lengths.

> Why would someone prefer a G5RV over
> your normal 80m size all band ladder line fed antenna for FD on 80m?
> Enquiring minds wanna know that too...:}

Many hams cannot string a 130 foot dipole but can manage a 102 foot dipole.
I've pushed the 130 foot dipole for years. Now I'm pushing the 102 foot
dipole. Sorry if that is politically incorrect. I simply cannot stand by
and allow new old wives' tales to take over ham radio.
--
73, Cecil, W5DXP

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364. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 01:29:05 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404071729.5372b042@posting.google.com>
Source record: 97115

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40733ed8_1@corp.newsgroups.com>...
> Brian Kelly wrote:
> > I've read the whole thread thru Tuesday AM, I get your point . .
> . . . see if it's possible to cover that range with some
> > single specific length of ladderline and the two-section BC variable
> > cap? If yes I think you have a real keeper idea.
>
> Maybe you'll like this one. 110 ft dipole at 40 ft, fed with 110 ft of
> 450 ohm ladder-line and tuned with a single control dual-gang variable cap,
> i.e. no conventional antenna tuner.

. . . OK but 110 feet of feedline to an antenna at 40 feet is a whole
lot of feedline to deal with under normal installation condx. At least
around here in suburbia.

> Such an antenna system covers the entire
> 75-80m band with a 50 ohm SWR ranging from 1.7 at 3.5 MHz to 1.0 at 4.0 MHz,
> according to EZNEC. Full band coverage at the twist of one knob? You likeie?

Sure do, could be extremely useful, I've moved it into my "idea book".
It's an easily tunable 80/75 variation on the similar antennas in your
website.

> For a coax fed dipole, EZNEC reports an SWR=2:1 bandwidth of 170 kHz.

That's roughly what I get with with Nec-Win-Plus. If I make the dipole
131 feet long I get the following SWRs:

3.50 Mhz = 3.2
3.65 Mhz = 1.5 (curve min point)
3.80 Mhz = 3.5
4.00 Mhz = 4.7

So it's not possible to get much bandwidth across 80/75 with a simple
dipole without an ATU no matter how you diddle it. Then you're down to
a low-loss tuning scheme like you've come up with which in this case
is a complete no-brainer. IF one can figure out to what to do with all
the excess feedline without messing it up.

w3rv

365. Re: quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 01:38:09 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404071738.357f93f2@posting.google.com>
Source record: 97116

"Dale Parfitt" <par@parelectronics.com> wrote in message
news:<qtScc.8282$bd4.5368@nwrddc01.gnilink.net>...
> "Paul" <k4cvr@amsat.org> wrote in message
> news:xyMcc.1970$Po2.740389@news4.srv.hcvlny.cv.net...
> > I've a question for the group. When I'm drawing out my lengths of wire
> when
> > making a quad, what is an accurate way of measuring it? I'm using 1.6 mil
> > aluminum tig wire and, although the stuff usually lays pretty flat coming
> > off the reel I want to be certain my lengths are correct. Laying a tape
> down
> > next to the wire seems like it couldn't be real accurate. Any suggestions
> > would be appreciated. Tnx, and 73.
> >
> Hi Paul,
> The first step is to straighten the wire. Depending on diameter, you may be
> able to anchor one end to a fixed object (pipe, fence post etc) and tie a
> rod to the other end and stretch it. For bigger copper I have tied it to the
> bumper hitch and moved the car forward slightly. The end result is a
> perfectly straight length of wire. Now, it can be laid flat and parallel
> againsta a tape. Mark off the overall length and the corners w/ a magic
> marker.

Depending on how hard you "bump" it you'll also strain harden the wire
to some extent which improves it's strength and reduces it's tendency
to stretch in service. Particularly if it's all-copper wire.

> Dale W4OP

Brian w3rv

366. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 02:36:46 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4074bae7_2@corp.newsgroups.com>
Source record: 97117

Brian Kelly wrote:
> . . . OK but 110 feet of feedline to an antenna at 40 feet is a whole
> lot of feedline to deal with under normal installation condx. At least
> around here in suburbia.

Hey, but not for field day. Whoever heard of a "field" with no room for
110 feet of feedline?

> IF one can figure out to what to do with all
> the excess feedline without messing it up.

It can be coiled into a big helix as long as the adjacent coils are
a couple of feet apart. You can run an insulated rope to the antenna
feedpoint and coil the ladder-line on the rope with the coils tiewrapped
a couple of feet apart. At the least you would have a conversation piece
to discuss over 807s (the best part of field day. :-) A photo of it would
probably make it into QST since it looks somewhat like a slinky. ;-)
--
73, Cecil, W5DXP

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367. Re: quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 03:01:29 UTC
From: Paul <k4cvr@amsat.orgNOSPAM>
Message-ID: <dg3dc.10480$Po2.3942291@news4.srv.hcvlny.cv.net>
Source record: 97118

Tnx for all the responses. As I mentioned, the wire I'm using is 1.6 mill. diameter aluminum mig wire. This is a 2 element, 10 meter antenna. This afternoon I tied one end to a tree right next to the end of a 50' tape and ran out the both of them to the desired length and snipped the wire. I repeated this for the other and commenced to tying this rascal up.

Isn't there a 10-10 CW sprint coming up sometime soon? Looking forward to putting it through its paces. Tnx agin for the responses.

Paul, k4cvr

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.648 / Virus Database: 415 - Release Date: 3/31/04

368. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 03:56:52 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <4074CD84.78E7@wt.net>
Source record: 97025

Cecil Moore wrote:
>
> Mark Keith wrote:
> > I think it would *still* probably slightly beat your antenna. I'm fairly
> > certain even your G5RV will not be a complete equal to my coax fed
> > dipole.
>
> But you, yourself, have admitted that the difference is negligible.

Thats only between mine and yours, and IF your's works as advertised. In the real world, I have never seen this happen yet. Heck, in theory, there should be no real difference in using a coax fed 80m dipole, and a 80 dipole fed with my tuner, and ladder line. Using the bare min inductance of course... In theory, there should not be enough difference to notice. In theory...So far in the real world, it hasn't worked that way for me. I saw a noticable difference. Probably about 5 db's worth if using strong signals in the upper part of an S meters range. Now, in that case, the loss was quite livable for just average use. It wasn't near as bad the the G5RV's we used. The feedline loss in THOSE PARTICULAR G5RV's was quite large on 80m. I actually had quite a bit of trouble even contacting many other stations. Led to hair loss...

> It
> is indeed around 0.4 dB according to all my calculations. And the reward
> is that one gets eight antennas for the price of one, i.e. 8 HF band coverage.
> If you were feeding your 75m dipole with ladder-line, I wouldn't have nearly
> as strong an argument.
>
> > Myself, I think multiband 102 ft dipoles should be fed only with ladder
> > line...Why are you not using your cut ladder line method for G5RV's?
> > Enquiring minds wanna know...:/
>
> Because it is so easy to achieve nearly a 50+j0 ohm feedpoint impedance at
> the series section to coax junction. It is actually relatively difficult
> to achieve nearly a 50+j0 ohm impedance using my variable length ladder-
> line scheme at the operating position with a 102 foot dipole. But it is
> easy with a 130 foot dipole. I simply got tired of the bad rap you and
> others were giving G5RVs and chopped my 130 foot dipole to 102 feet. Now
> you have to suffer the consequences. :-)

How's that? If you change it, it's not quite the usual "g5rv" that I complain about. It's a different antenna. Actually, I think calling it a G5RV is silly unless it's used as a 20m monoband antenna as was originally designed. The G5RV's I saw were really bad on 80m. It's not just something I'm making up. I was so disgusted with the things after

the 2nd FD, I refused to ever use one again. And I haven't. I bring my own wire and coax just to make sure I don't get stuck on one. And I wasn't the only one complaining either...
I won't be suffering with a system efficiency in the mid 90's...

What I am trying to demonstrate
> is how series matching section transformers work not just at 1/4WL and
> 1/2WL but at many other lengths.

Well, thats fine. But I'm trying to tell everyone to live a little! Go with gusto! You only spin once! Use a full size efficient, resonant, antenna if you want manly 80m FD results and have the room for it. I suppose being resonant should not really be an issue, but in this case it is. It's hard to beat a 50 ohm antenna , fed with 50 ohm line, by a 50 ohm radio. To me, that is the "perfect" setup. It just so happens a 1/2 wave dipole lets all this fall into place. And it just happens that a 1/2 wave dipole has a near optimum pattern for the usual FD type operation on 80m. To me, anything else is like sticking a finger on the perfect painting , and smearing it around before it's dry.. :/
I guess this is what led me to question your choice of the perfect FD antenna. 80m, being the band of real issue.

>
> > Why would someone prefer a G5RV over
> > your normal 80m size all band ladder line fed antenna for FD on 80m?
> > Enquiring minds wanna know that too...:}
>
> Many hams cannot string a 130 foot dipole but can manage a 102 foot dipole.

At field day? A lousy 15 more ft a side? Man, they need to find a better place for field day...
Thats sad....:(
Here's where we were last year...http://bvarc.freeshell.org/images/FD2003/index.html
No trouble stringing up a real dipole around that place..."It's a fire training facility in Richmond Tx."
Note my portable tower and beam I bring on a motorcycle trailer. Thats why I fear you not on the upper bands....:) BTW...My tower was the lowest, but the highest scoring...Due mainly to superior operating skills though...No, not by me...:/ I didn't use it...Blame N5XZ...
There are other beams also... If I were to FD by myself, I'd drive down to the beach and operate off the salt water.
Probably could just sit in the truck and use the mobile setup...
Wouldn't need to get out and do any actual work... :/

> I've pushed the 130 foot dipole for years. Now I'm pushing the 102 foot
> dipole. Sorry if that is politically incorrect. I simply cannot stand by
> and allow new old wives' tales to take over ham radio.

I like your all ladder line design better from an efficiency standpoint...But claiming a coax fed dipole is nearly invincable as far as wire ant/dipole efficiency's go, is hardly a wives tail. MK

--
http://web.wt.net/~nm5k

369. Re: Radio Wave strength

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 04:18:41 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c52jq8$2nefib$1@ID-225206.news.uni-berlin.de>
Source record: 97019

At night, if you have a florescent tube in one hand on the metal base, and the tube lights up as you move closer to the antenna, there is too much power for humans there. (cheap test)

"Meeker" <meeker_boy@lycos.com> wrote in message news:d20d5525.0404070922.5297b377@posting.google.com...
> I am new the world of radio waves, but I am trying to find out if I
> can buy a device which will tell me how strong the radio waves are
> coming from a large antenna? This is assuming that I am standing
> within 10 meters.
>
> I know that a frequency counter tells me which frequencies are being
> transmitted. But what tells me how strong they are? Any idea who sells
> them?
>
> Any ideas?
> Thanks, Meeker

370. WTB:2 Meter HT

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 04:29:02 UTC
From: Charlie <okiemansc@yahoo.com>
Message-ID: <hy4dc.168$Ty5.100@okepread05>
Source record: 97020
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap

I am interested in buying a couple of cheap 2 meter HT's that are not
digital display.Something like a Kenwood TH-21 or an Icom IC-2A.
Please state price and condition.
THANKS !!!
...Charlie...KC0EH...

371. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 04:33:43 UTC
From: tdonaly@aol.com
Message-ID: <20040408003343.13976.00000988@mb-m06.aol.com>
Source record: 97021

Dan wrote,
>>
>> Hi Paul,
>>
>> The folks who don't know history are condemned to repeat it again. In
>> this day and age, that is particularly apt.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>Ain't that the truth? This is going to get funny. Any bets some knee jerk
>will figure it out? Nah!!!
>
>Dan/W4NTI
>

You mean we get to have the Civil War all over again? Good.
73,
Tom Donaly, KA6RUH

372. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 05:48:25 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404072148.54c8374d@posting.google.com>
Source record: 97022

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4074bae7_2@corp.newsgroups.com>...

> Brian Kelly wrote:
> > . . . OK but 110 feet of feedline to an antenna at 40 feet is a whole
> > lot of feedline to deal with under normal installation condx. At least
> > around here in suburbia.
>
> Hey, but not for field day. Whoever heard of a "field" with no room for
> 110 feet of feedline?

Well . . it sorta "depends". In the instant case the FD "field" is one
of my daughters' 1/4 acre back yard, three decent-size hardwoods
spread out in maybe a 120 foot straight line and that's it. The other
op will probably be N2EY and he isn't into deep bush ops either.

> > IF one can figure out to what to do with all
> > the excess feedline without messing it up.
>
> It can be coiled into a big helix as long as the adjacent coils are
> a couple of feet apart. You can run an insulated rope to the antenna
> feedpoint and coil the ladder-line on the rope with the coils tiewrapped
> a couple of feet apart.

That's slick.

>At the least you would have a conversation piece
> to discuss over 807s (the best part of field day. :-) A photo of it would
> probably make it into QST since it looks somewhat like a slinky. ;-)

I was thinking more along the lines of sniping one of the orange
barrels which are the Pennsylvania State Flower. They're quite readily
available at construction sites along the PA Turnpike and
slinky-wrapping feedline around one of those should do the job.

Let's see here, 2.5 feet diameter times Pi . . 7.85398 feet per wrap .
. yeah, that would get rid of most of the ladderline. At worst maybe
I'd need a couple of 'em in series.

QRX for the QST cover shot.

w3rv

373. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 05:50:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8ip970db13kd7oabroccn3j0ugcm0nq98f@4ax.com>
Source record: 97023

On Wed, 07 Apr 2004 19:27:08 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
> I thought I was reading
>the frequency of visible red. I don't carry such things around in my
>head. Hardly any amateur radio operator does.

And such is the point of my illustrating the shortfalls of your lack
of experience. No one is challenging your amateur status.

The recitation of any wavelength starting with a significant three is
enough to set off alarms when there is a concurrent claim of its
visibility. That is why I said it was impossible to be a decimal
error.

374. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 05:56:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <g3q970plkjoif0us1a24vnr4dtandruvp6@4ax.com>
Source record: 97024

On Wed, 07 Apr 2004 19:42:40 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

> Ham
>transmitters are a lot like lasers, the subject you are trying to
>avoid at all costs.

So, without avoiding the topic at hand, what is the resonant frequency
of the cement layer between the glass of the window and the mounting
pad? Or wavelength? Or color? :-)

Does it merit 0.5 to 1.0 dB of Glare suppression?

Humor me with another half dozen responses void of that value.

375. NEC2 modeling question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-08-08 08:42:41 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <864qru508u.fsf@duchess.twilley.org>
Source record: 97026

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

I have started modeling my dipole antenna with NEC2, but I've got a
question that doesn't seem to be adequately covered by the
documentation or the examples.

I have a fan dipole with various lengths of wire. The long legs are
significantly bent, and I have modeled them as two wires with
coterminous ends -- this seems to be correct. The shorter legs are
just legs. In the real antenna, the feedpoint is connected to a
length of coax such that the center of the coax is electrically
connected to the western half of the antenna and the shield of the
coax is electrically connected to the eastern half.

I can see how to set the voltage source to the western half of the
antenna, but I do not see how to set the ground to the eastern half of
the antenna without adding a ground wire. Does this really matter?

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAdRCGGPFSfAB/ezgRAu9+AJ9jzECHVpazeEv0TqtwVI2Aa0TjHwCfVs+B
Q2EOJ+5okZKJDCxyFxWbzQ0=
=zzCL
-----END PGP SIGNATURE-----
```

376. Homemade Antennae, help

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 09:54:29 UTC
From: Steve Muir <steve_muir@blueyonder.co.uk>
Message-ID: <Ci9dc.41438$Id.35437@news-binary.blueyonder.co.uk>
Source record: 97027

I have recently bought a 2nd hand faihaven RD500, im really pleased with it, having been an avid VHF/UHF listener before i wanted to get into HF/SW.
I currently have a telescopic aeriel plugged into the back, which im sure is no use. Someone told me all you have to do is run a wire 33ft long around my loft and plug it into the back of my reciever and ill pick up some great stuff. Im particularly interested in Military but other stuff as well

Im not sure how true this is, can someone enlighten me, if so then can you give me a breakdown of what ill need and any tips to installing it.

Any help will be very much appreciatted

Thanks in advance

Steve(Scottish)

377. Re: quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 10:28:10 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <107aa9v2kp3vl2a@corp.supernews.com>
Source record: 97028

Paul,

I just re-strung my quad last weekend. For measuring the wire, I used a wooden dowel rod, stuck through the center of the wire spool, laid across the front/rear steps of a ladder. I connected a 100' measuring tape to the same point, and then pulled away for the ladder with wire and tape held together. Worked fine. I generally add a couple of feet to each measurement, just in case the formula and my design are in dis-agreement.

Yes - the 10-10 Spring CW contest is the first weekend in May (www.ten-ten.org). Hope to work you then!

--
-larry
K8UT
10X #2582

"Paul" <k4cvr@amsat.orgNOSPAM> wrote in message news:dg3dc.10480$Po2.3942291@news4.srv.hcvlny.cv.net...
> Tnx for all the responses. As I mentioned, the wire I'm using is 1.6 mill.
> diameter aluminum mig wire. This is a 2 element, 10 meter antenna. This
> afternoon I tied one end to a tree right next to the end of a 50' tape and
> ran out the both of them to the desired length and snipped the wire. I
> repeated this for the other and commenced to tying this rascal up.
>
> Isn't there a 10-10 CW sprint coming up sometime soon? Looking forward to
> putting it through its paces. Tnx agin for the responses.
>
> Paul, k4cvr
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.648 / Virus Database: 415 - Release Date: 3/31/04
>
>

378. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 11:59:45 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <Q8bdc.96890$w54.578018@attbi_s01>
Source record: 97029

I don't have an IEEE dictionary so I stand corrected. However, 100 watts into a Yagi, Quad, Log Periodic, or 4-square and 100 watts radiated is still 0 dB gain.

Gain = 10 * Log[Pout/Pin] = 10 * log [100/100] = 10 * 0 = 0 dB.

It also has 0 dB attenuation!!!

NB: Valid over either 4*Pi or 2*Pi steradians.

Cecil Moore wrote:

> Dave Shrader wrote:
>
>> However, I don't know of any Yagi, Quad, 4-square, that with 100 watts
>> into the antenna and 100 watts radiated, assuming 100% efficiency, has
>> any gain!! It has directivity!!
>
>
> Hey Dave, crack out your trusty IEEE Dictionary and reference their
> definition of gain. It's not the same as yours. According to the IEEE
> and Balanis, the only difference between directivity and gain is the
> antenna efficiency. A 100% efficient antenna would have gain equal to
> directivity. Sorry, that's the definition.
> --
> 73, Cecil, W5DXP
>
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 100,000 Newsgroups - 19 Different Servers! =-----

379. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 12:01:51 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40753F2F.4010006@psu.edu>
Source record: 97030

Ken Fowler wrote:
> On 7-Apr-2004, David Ryeburn <ryeburn@sfu.caz> wrote:
>
>
>>>The Windom single-wire feedline radiates by design.
>>>It would be extremely difficult to keep the OCF
>>>feedline from radiating but a 50:300 current balun
>>>at the feedpoint might help.
>>
>>Here's a relatively simple way to keep an off-center fed "Windom"
>>antenna feedline from radiating: Install another Windom antenna of
>>identical dimensions at an acute or right angle to the existing one. Tie
>>the long side of the second Windom to the short side of the first one,
>>and vice versa. Feed the thing with a balanced line, or with coax
>>through a balun. I don't have EZNEC (it won't run on Macs) so I don't
>>know what the pattern would be like, but if everything was symmetrical
>>the feedline ought not radiate.
>>
>>David, ex W8EZE
>>
>>--
>>David Ryeburn
>>ryeburn@sfu.caz
>>To send e-mail, use "ca" instead of "caz".
>
>
> I modeled the above with EZNEC using two perpendicular one-half wave elements one-quarter wave above
> ground at 7.2 Mhz. Each half-wave was divided at a point one-sixth wave from the end The short end
> on each side of the feedpoint was connected to the long end of the perpendicular wire. The source
> was placed on a 2 inch wire between the two short-long pairs. I included a wire to ground from one
> side of the feed point to show shield current.
>
> At 7.2 Mhz, the feedpoint impedance was 59 - j157. I didn't attempt any element adjustments to make
> it resonant. The far-field pattern approaches omni-directional with 7.7 dbi at an elevation of 60
> deg. The wire from feedpoint to ground shows very little current.
>
> At 14.3 Mhz, the feedpoint impedance is 37 + j138. The far-field pattern is bi-directional with 11

> dbi at an elevaton of 30 deg. The wire from feedpoint to ground shows current similar to the
> element current.
>
> So it appears to me that the feedline may not radiate on some frequency but definitely will radiate
> on others.
>
> Ken Fowler, KO6NO

I think David might have been *very* tongue in cheek in his comment,
Ken. Sounds like his suggestion is saying "If you want a windom to not
radiate on the feedline, you turn it into a dipole." 8^)

- Mike KB3EIA -

380. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 12:08:07 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <Hgbdc.96941$w54.579314@attbi_s01>
Source record: 97031

Bill Turner wrote:

SNIP

> Ask any Top of the Honor Roll DXer whether his beam has "gain". Don't
> be surprised if his eyes glaze over as he contemplates what must be the
> world's rawest newbie.
>
> --
> Bill, W6WRT
> QSLs via LoTW
>

With all due respect Bill I am not a newbie! [see below]

His beam, assuming 100% efficiency, is only 0 dB gain.

Gain [dB] = 10 * Log[Pout/Pin] = 0 dB.

The Honor Roll holder, much to his chagrin, still has a 0 dB gain antenna. He may have an amplifier that puts out 1500 watts, no feedline loss and a 100% efficient antenna. He is still radiating 1500 watts and that is by definition 0 dB gain.

The double integral of ExH across theta from 0 to Pi and Phi from 0 to Pi is constant in both cases. Therefore 0 dB gain!!!

Deacon Dave, W1MCE [for 50 years]
Program Chief Engineer, USAF MX Missile, RS/RV

381. Re: quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 12:17:26 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <qpbdc.17236$TS3.10798@nwrddc02.gnilink.net>
Source record: 97032

"Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET> wrote in message
news:107aa9v2kp3vl2a@corp.supernews.com...
> Paul,
>
> I just re-strung my quad last weekend. For measuring the wire, I used a
> wooden dowel rod, stuck through the center of the wire spool, laid across
> the front/rear steps of a ladder. I connected a 100' measuring tape to the
> same point, and then pulled away for the ladder with wire and tape held
> together. Worked fine. I generally add a couple of feet to each
measurement,
> just in case the formula and my design are in dis-agreement.
>
> How do you then determine the correct reflector length?

Dale W4OP

382. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 13:27:16 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <c53jvloma1@f04n12.cac.psu.edu>
Source record: 97033

Hi Mike:

The answer is yes and no. Some designs use the part of the feed line as a radiator some don't
The ones the don't have a 1:1 choke balun at some magic point down the feedline (if they are using coax) to stop the RF from getting into the shack, others designs use a balun at the feed point to isolate the feedline from the antenna. I think the "Carolina Windom" uses the feedline as part of the antenna and the ones that call themselves "windoms" or OFC's don't. Its all marketing and sloppy use of names.

--
John Passaneau, W3JXP
Penn State University
w3jxp@arrl.net

"Mike Coslo" <mjc5@psu.edu> wrote in message
news:40746434.4030109@psu.edu...
> David Ryeburn wrote:
> > In article <407357b9$1_2@corp.newsgroups.com>,
> > Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
> >
> >
> >>Mike Coslo wrote:
> >>
>>> Does the OCF dipole feedline radiate by design?
> >>
> >>The Windom single-wire feedline radiates by design.
> >>It would be extremely difficult to keep the OCF
> >>feedline from radiating but a 50:300 current balun
> >>at the feedpoint might help.
> >
> >
> > Here's a relatively simple way to keep an off-center fed "Windom"
> > antenna feedline from radiating: Install another Windom antenna of
> > identical dimensions at an acute or right angle to the existing one. Tie
> > the long side of the second Windom to the short side of the first one,
> > and vice versa. Feed the thing with a balanced line, or with coax
> > through a balun. I don't have EZNEC (it won't run on Macs) so I don't
> > know what the pattern would be like, but if everything was symmetrical
> > the feedline ought not radiate.
>
>
> I just wonder if the feedline radiation might be a necessary pat of the
> OCF Dipole

>
> - Mike KB3EIA -
>

383. Re: Homemade Antennae, help

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 13:31:06 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <4075541A.32A6B7B@cwis.net>
Source record: 97034

Steve,
That 'someone' told you correctly for the most part. It
certainly
isn't the most exacting explanation for an antenna, but it will
get
you into the 'ball park'!
The length of an antenna has to be such that it provides
enough
signal to your receiver so that it (the desired signal) is
louder
than the noise. For most HF signals, 33 feet will be plenty.
Of
course, 'more' would be 'better' in some cases, but not always.
The
one thing that will do more to increase what you hear is
height. Get
the antenna as high as possible (sort of like you standing on
your
'tip toes' to see farther, right?). You also can only work with
what
you have, so if ceiling height is the most you have, then use
it.
The 'shape' of your antenna also can play an important part
in what
you hear. If the antenna is high enough above ground, it can
become
directional in nature. I wouldn't worry about that too much,
though,
just be aware of it. Stringing your antenna out as long and as
straight
as you can make it is much better than wadding it up into a ball
and
throwing it into a corner. There's also nothing that says that
you
can't change the 'shape' of the antenna, if you want to see what
would
happen.
The size of the wire used isn't going to make a lot of
difference,
as long as it is strong enough to support it's own weight. Make
it
ea$y on your elf, cot wi$e. The length isn't really that
critical
so you don't need to use a micrometer to measure the length of

your
antenna. A little more, or a little less isn't going to make a
big
difference. A foot or two is meaningless, twice the length is
"more
better", sort of.
Probably more important than anything else is how the wire is
connected
to your receiver. Use the proper connector, if possible. If it
isn't
possible, just make sure you don't short out the receiver's
antenna
terminals. Won't harm the receiver, you just won't hear much.
SWL'ing is fun, so have lots of it!
'Doc

PS - That's about as non-technical as you can make an
explanation of
a complex subject. There are 'exceptions' to everything I
said,
but what I said will certainly work for you. Knowing 'why'
it
'works' is interesting, but not really necessary to make it
'work'.
The 'having fun' is the important part...

384. Re: Optimized G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 13:33:46 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <407554BA.1050004@psu.edu>
Source record: 97036

Cecil Moore wrote:
> Robert A. Miller wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>> Yep, my point was that anyone with an MFJ-259B, like mine, can optimize
>>> their own G5RV for true all-HF-band operation especially if they have
>>> a built in autotuner like my IC-756PRO. One complaint I hear is that
>>> the built in autotuners won't tune a G5RV on all HF bands. Well, here's
>>> one way to solve that problem.
>>
>>
>> I'm guessing you have no coax here? Just ladderline from antenna to
>> rig?
>
>
> No, no, no! In every respect, my antenna is a G5RV using RG-213 from
> the ladder-line series section transformer to the hamshack. If someone
> has a G5RV, he can modify it to work virtually perfectly on all HF
> bands, including the coax feed. Everything about the G5RV remains the
> same except the ladder-line length is modified, and in the case of
> 75m, a parallel cap is installed. These modifications are super easy.
>
> As an example of virtual perfection on 3.8 MHz, the ladder-line is made
> 25 feet long and a 1000 pf parallel cap is installed at the ladder-line
> to coax junction. The impedance at that junction is very close to 50
> ohms resistive so coax is acceptable. Exactly the same techniques can
> be applied to all the other HF bands, most of which require no parallel
> impedance of any kind.
>
> I will publish the details for each band as I work them out. But this
> antenna of mine is a G5RV in all respects. It is a 102 ft dipole fed
> with 20-36 feet of ladder-line. The SWR on 3.8 MHz is high so the 1000 pf
> capacitor is needed to rotate to 50 ohms through the 1/50 conductance
> circle.
>
> For the uninitiated, if you have a 25+j25 impedance, you can cause that
> impedance to twist to 50+j0 ohms by installing a parallel capacitor. On
> 75m, that capacitance value is about 700 pf. My antenna works best with
> a parallel 1000 pf capacitance on 3.8 MHz.
>
> All G5RVs can be modified to work perfectly on all HF bands. The G5RV
> has gotten a bad rap because no one has published those modifications.
> But it is actually an excellent all-HF-band antenna. It takes me about

> two minutes to change bands from 75m to 40/17m. And, for the lazy, that
> change could easily be automated.

As a G5RV is to a dipole, is your modification *really* a G5RV? Seems to me that you have a ladder line and capacitor tuned dipole, not a G5RV.

Does the 102 foot dipole have to be called a G5RV? Heck, Cecil - you might just be able to call this the W5DXP antenna. Seems different enough to me! 8^)

And perhaps your modifications actually show a little bit of why the G5RV gets a bad rap! 8^)

In the interim, I'm watching this with great interest. It might just be a great solution for me. I can get 102 feet of wire up. I have 96 feet with a tuner now.

Do You switch the capacitance in and out, or use variables? And if you switch, do you have the caps at the coax ladderline junction or in the shack?

Possible really stupid question alert!: When you speak of the ladder line being 20-36 feet, and or 25 feet for 3.8 mHz (with cap) you mean that the total height from the coax/ladder line junction to the antenna itself must be the length of the shortest piece of tuning ladder line?

IOW, If I run my coax to the roof of my house to the box I would construct to hold the different lengths of tuning line and switching electronics, I could only have the antenna roughly 25 feet above this box? If so, I can still probably get the antenna 50 feet above the ground.

Any problems with rolling the ladder line?

- Mike KB3EIA -

385. Re: Radio Wave strength

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 13:34:18 UTC
From: Al - KA5JGV <aburzynski@swri.nojunk.edu>
Message-ID: <107al6tl0tppj35@corp.supernews.com>
Source record: 97035

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0404071424.1a89796e@posting.google.com...
The first that popped up for looks
> like a good start: https://ewhdbks.mugu.navy.mil/ANTNRFLD.HTM. > Tom

This is a good reference Tom. Thanks for the info.

Al KA5JGV

386. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 14:39:54 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <c53o7q$1798$1@f04n12.cac.psu.edu>
Source record: 97037

Let's see... 65 watts + 1400 watts in gives 900 watts RF + 565 watts of
heat out (neglecting filament power.) How much gain is that? :)

73,
Bob AD3K

Dave Shrader wrote:
> ...Now, my Ameritron 80B takes 65 watts in and delivers 900 watts out.
> That's gain! It converts 1400 watts plate power to 900 watts rf [key
> down conditions].
>

--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

387. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 15:01:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4075698a_8@corp.newsgroups.com>
Source record: 97038

Mark Keith wrote:
> I was so disgusted with the things after
> the 2nd FD, I refused to ever use one again. And I haven't. I bring my
> own wire and coax just to make sure I don't get stuck on one. And I
> wasn't the only one complaining either...
> I won't be suffering with a system efficiency in the mid 90's...

It would be easy to try my G5RV modification. For 3.8 MHz, it is
25 ft of "450" ladder-line with a 1000 pf cap in parallel at the
ladder-line/coax junction. I wish you would open your closed mind
and try it sometime.

> I guess this is what led me to question your choice of the perfect FD
> antenna. 80m, being the band of real issue.

A perfect FD antenna would allow one to change bands relatively
quickly without sacrificing performance. My G5RV does that.

The 110 ft dipole that I came up with has an SWR of less than 1.7:1
over the entire 75-80m band. That sure beats the bandwidth of a
resonant coax-fed dipole.

> W5DXP wrote:
>>Many hams cannot string a 130 foot dipole but can manage a 102 foot dipole.
>
> At field day?

No, at their QTH. Many hams have reported that they just don't have
130 feet of room.

>>I simply cannot stand by
>>and allow new old wives' tales to take over ham radio.
>
> I like your all ladder line design better from an efficiency
> standpoint...But claiming a coax fed dipole is nearly invincable as far
> as wire ant/dipole efficiency's go, is hardly a wives tail. MK

That's not the old wives' tale. The old wives' tale is, "A G5RV
is a terrible antenna that cannot be improved to near perfection."
With minor modifications, a G5RV will compete favorably with any
other HF dipole on any HF band.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

388. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 15:07:58 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40756af7_8@corp.newsgroups.com>
Source record: 97039

Richard Clark wrote:
> The recitation of any wavelength starting with a significant three is
> enough to set off alarms when there is a concurrent claim of its
> visibility. That is why I said it was impossible to be a decimal
> error.

Take a look at the frequency chart in the "Reference Data for Radio
Engineers" and you will see why someone with poor eyesight might
make that mistake.
--
73, Cecil, W5DXP

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389. Re: NEC2 modeling question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 15:14:10 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40756c6c_8@corp.newsgroups.com>
Source record: 97040

Jack Twilley wrote:
> I can see how to set the voltage source to the western half of the
> antenna, but I do not see how to set the ground to the eastern half of
> the antenna without adding a ground wire. Does this really matter?

Connect the two sides of the antenna together with a wire and install
a source in the middle of that wire. Forget the coax for now. You can
expand on the model later. Something like this:

```
--------------------+--S--+----------------------
| |
-----------+ +------------
--
```

73, Cecil, W5DXP

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390. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 15:20:58 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <8r6dnarz5uNF8OjdRVn-sA@comcast.com>
Source record: 97041

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40756af7_8@corp.newsgroups.com...
> Richard Clark wrote:
> > The recitation of any wavelength starting with a significant three is
> > enough to set off alarms when there is a concurrent claim of its
> > visibility. That is why I said it was impossible to be a decimal
> > error.

The point of the thing, which you seem intent on missing, is that EM
radiation is reflected by impedance discontinuities. Optical reflection is
very similar to what happens at lower frequencies.
I normally use this analogy when discussing the use of shielding and
absorbent materials for EMI supression.

391. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 15:34:53 UTC
From: jder8745@aol.com
Message-ID: <20040408113453.17648.00000008@mb-m20.aol.com>
Source record: 97042

It seems like a thousand years ago when a big discussion of glass mount antennas took place on INFO-HAMS.

(Anyone remember INFO-HAMS?)

My poor memory recalls that there was not much said in favor of glass mount antennas and a lot said against them. Most of the discussion was regarding 2-m antennas.

I think the mag mount antenna is a great invention and that's all I use for 2 and 0.7.

When traveling I put the antenna on top of the car. Around town I mount on truck lid.

73 de Jack, K9CUN

392. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 15:46:19 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407573f6_8@corp.newsgroups.com>
Source record: 97043

Dave Shrader wrote:
> I don't have an IEEE dictionary so I stand corrected. However, 100 watts
> into a Yagi, Quad, Log Periodic, or 4-square and 100 watts radiated is
> still 0 dB gain.

Dave, that's true for the entire surface of a sphere at 100% efficiency
but you are still not using the IEEE Dictionary definition of antenna
gain. From Balanis: "... the power *gain* is usually taken in the direction
of maximum radiation." i.e. not over the entire sphere but over a small
area where the radiation intensity is at a maximum. The gain over isotropic
would then be based on the ratio of maximum radiation intensity per unit area
from the beam to the average radiation intensity per the same unit area from
an isotropic antenna. To obtain the (G)ain, one can calculate the (D)irectivity
and multiply by an efficiency term.

G(theta,phi) = e(cd)[D(theta,phi)]

where anything in parentheses is a subscript. e(cd) is an efficiency
term based on conduction and dielectric losses. If efficiency equals
100%, gain equals directivity. (theta,phi) are vertical and horizontal
angles related to a chosen area on the surface of a sphere.
--
73, Cecil, W5DXP

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393. Re: Optimized G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 16:17:26 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40757b41_8@corp.newsgroups.com>
Source record: 97044

Mike Coslo wrote:
> As a G5RV is to a dipole, is your modification *really* a G5RV?
> Seems to me that you have a ladder line and capacitor tuned dipole, not
> a G5RV.

The cap is only on 75m to lower the 50 ohm SWR. It doesn't have to be
installed if one can tolerate a 3:1 SWR.

> Does the 102 foot dipole have to be called a G5RV? Heck, Cecil - you
> might just be able to call this the W5DXP antenna. Seems different
> enough to me! 8^)

The physical difference is negligible. It is still a 102 ft dipole fed
with a series section transformer made out of ladder-line and fed with
coax from that point to the shack.

> Do You switch the capacitance in and out, or use variables? And if
> you switch, do you have the caps at the coax ladderline junction or in
> the shack?

As I said earlier, if you can tolerate a 3:1 SWR, you don't need the cap.
Presently I switch the cap in and out by hand. My G5RV is at 40 ft. on
the ends and I just grab the feedline and pull it down to access the
ladder-line/coax junction where the cap is installed for 75m - thus
eliminating the need for a tuner. It only takes a minute or two to pull
on the feedline and plug or unplug the cap. I hope that's clear. Here's
a diagram for 75m operation:

XMTR---any length 50 ohm coax---+cap+---25 ft. 450 ohm feedline---102' dipole

The parallel 1000 pf cap is across the two feedlines at the twinlead/coax
junction.

> Possible really stupid question alert!: When you speak of the ladder
> line being 20-36 feet, and or 25 feet for 3.8 mHz (with cap) you mean
> that the total height from the coax/ladder line junction to the antenna
> itself must be the length of the shortest piece of tuning ladder line?

Maybe a confusing question? I have 8, 4, 2, 1 ft pieces of ladder-line
that I insert between the 21 ft. minimum length of ladder-line and the coax.
That allows me to vary the length of the series section transformer from 21
ft minimum to 36 feet maximum. Obviously, I could use one more length to
increase it by X amount.

> IOW, If I run my coax to the roof of my house to the box I would
> construct to hold the different lengths of tuning line and switching
> electronics, I could only have the antenna roughly 25 feet above this

> box? If so, I can still probably get the antenna 50 feet above the ground.

I had envisioned mounting the box on a 2x4 sticking straight up at the middle of the dipole. But I could probably mount the box on my roof.

> Any problems with rolling the ladder line?

DON'T ROLL THE LADDER-LINE! Keep adjacent loops at least six inches apart. Here's an idea that I have been toying with. It involves varying the length of the coax as well as the length of the ladder-line to maintain a constant total length of feedline. This is a physical solution to the mechanical problem and has virtually no electrical effect.

```
XMTR-----coax------------ ----coax---- ------coax------
A B C
==twinlead== ====twinlead==== ==twinlead==dipole
```

This is for illustration only. Not all the switchable lengths of twinlead are shown. Only two are shown.

We need a DPDT relay at A and C. We need a 4PST relay at B and other points like B. For minimum twinlead, we could have a coax to coax connection at points A and B and a coax to twinlead connection at point C. For maximum twinlead, we would have a coax to twinlead connection at A and a twinlead to twinlead connection at points B and C. The physically parallel coax and twin lead would have to be physically separated, maybe one on each side of a 2x4 about a foot apart.

An SWR sensing circuit could be added to turn this thing into an autotuner for a G5RV. Hope I didn't get carried away. These are just some random thoughts toward perfection of the G5RV.
--
73, Cecil, W5DXP

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394. Re: aerial coupling and nec2 - I do not understand my results

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 16:46:30 UTC
From: stuart macgregor <stuart.191@ntlworld.com>
Message-ID: <pan.2004.04.08.16.46.30.368735@ntlworld.com>
Source record: 97045

The replies so far do not seem to address the issue I was trying to get help on.

I expected a linear, signal independant symmetrical toeplitz mixing matrix, due to aerial coupling in the symmetric layout.

As far as I can see this would be (I-K)^-1 where K(i,j)=K(j,i)=k(i-j)=z(i,j)/(z(i,i)+zload) and K(i,i) is defined as 0. I may be wrong, this was just from first principles.

What I got from the nec2 calculations was a linear symmetrical toeplitz mixing matrix which *varied* with signal direction. I am probably missing something obvious?

As to looking at the RP - I wanted to have a look at the RDF calibration problem, and I do not see how to exploit the radiation pattern for this.

The aerial pattern I tried finally was just 3 similar thin resonant dipoles with 0.8 wavelength spacing on a circle. No joy so far.

395. EzNec Demo simple Example sen me please! :-((

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 17:07:58 UTC
From: Marcello <marcello110980@yahoo.it>
Message-ID: <OFfdc.115796$Kc3.3801252@twister2.libero.it>
Source record: 97046

Excuse to all for my banal question.
I downloaded the simulator antenna program EzNec Demo....but for a beginner is not user friendly.
Io want simulate a simple antenna 5/8 vertical ground plane with few orizontal radials, like antenna Sirio 827, Mantova, or Maco 5/8.
I hope there is a person, who can be send me a silumazion file *.EZ, about this, where I can see how do my personal simulation.
Then I can understand how modify parameter to adjust, for other similar antenna type.

Thank to all and in particular who can reply me.

Marc.

396. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 17:27:59 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404080927.56b4fb91@posting.google.com>
Source record: 97047

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4074bae7_2@corp.newsgroups.com>...
> Brian Kelly wrote:
> > . . . OK but 110 feet of feedline to an antenna at 40 feet is a whole
> > lot of feedline to deal with under normal installation condx. At least
> > around here in suburbia.
. . . .

Cecil check me here if you will. I brought up a CAD program to sketch your 80/75 dipole and ran into a puzzler as soon as I started to draw it. Center fed 110' flattop, 110' balanced feedline. No problem. The question arose when I tried to lay in the tuning caps. My understanding is that the "input" sides of the two caps are connected to each of the two wires at the "output" end of the feedline. Then the "output" side of one cap goes to the shield of the coax and the output side of the other cap goes to the center conductor of the coax. This is not possible with a typical double-section variable BC-type cap because one side of such caps is a common ("ground"). A pair of caps mechanically coupled via an insulated shaft coupling but completely isolated electrically from each other should work. Where's the glitch??

w3rv

397. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 17:32:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <l13b70dqvplvrp60l2hcjo2k60k4dck1o1@4ax.com>
Source record: 97048

On Thu, 8 Apr 2004 10:20:58 -0500, "Dave VanHorn" <dvanhorn@cedar.net>
wrote:

>
>"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
>news:40756af7_8@corp.newsgroups.com...
>> Richard Clark wrote:
>> > The recitation of any wavelength starting with a significant three is
>> > enough to set off alarms when there is a concurrent claim of its
>> > visibility. That is why I said it was impossible to be a decimal
>> > error.
>
>The point of the thing, which you seem intent on missing, is that EM
>radiation is reflected by impedance discontinuities. Optical reflection is
>very similar to what happens at lower frequencies.
>I normally use this analogy when discussing the use of shielding and
>absorbent materials for EMI supression.
>

Hi Dave,

I certainly am missing something from this post. How do you get from
my comment about visible wavelengths to one about shielding EMI?

73's
Richard Clark, KB7QHC

398. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 17:51:28 UTC
From: Dan/W4NTI <w4nti@get>
Message-ID: <Aigdc.991$l75.53@newsread2.news.atl.earthlink.net>
Source record: 97049

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20040408003343.13976.00000988@mb-m06.aol.com...
> Dan wrote,
> >>
> >> Hi Paul,
> >>
> >> The folks who don't know history are condemned to repeat it again. In
> >> this day and age, that is particularly apt.
> >>
> >> 73's
> >> Richard Clark, KB7QHC
> >
> >Ain't that the truth? This is going to get funny. Any bets some knee
jerk
> >will figure it out? Nah!!!
> >
> >Dan/W4NTI
> >
>
> You mean we get to have the Civil War all over again? Good.
> 73,
> Tom Donaly, KA6RUH
>
>

Good example of what I meant there Tom. Do you have ANY IDEA what your
talking about? Don't bother to answer, I already have it.

Dan/W4NTI

399. Re: NEC2 modeling question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 17:53:09 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86wu4q2w6y.fsf@duchess.twilley.org>
Source record: 97050

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

I tried what you suggested, and the results on first glance look
better, but I get geometry warnings. Apparently the jumper between
the two sides of the antenna is too short, or something.

Thanks for the tip! I'll keep fussing with it.

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAdZGKGPFSfAB/ezgRAm1vAKCUlnhqvGFSw/PBSBHlzc5RCwRuogCgj5b6
cq/sdePTSg0m3JsV/4BocrM=
=hJr9
-----END PGP SIGNATURE-----
```

400. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:00:24 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0404081000.55013376@posting.google.com>
Source record: 97051

kelly@dvol.com (Brian Kelly) wrote in message
news:<d22b54c3.0404072148.54c8374d@posting.google.com>...
> Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4074bae7_2@corp.newsgroups.com>...
>
> > Brian Kelly wrote:
> > > . . . OK but 110 feet of feedline to an antenna at 40 feet is a whole
> > > lot of feedline to deal with under normal installation condx. At least
> > > around here in suburbia.
> >
> > Hey, but not for field day. Whoever heard of a "field" with no room for
> > 110 feet of feedline?

All depends on the situation. Last thing ya need on FD is more
complications.
Which is why I've gone with coax-fed dipoles on FD for years.
>
The books give all sorts of figures for "open wire line". But many of
them are for the classic lines made of #14 copper spaced 4 to 6 inches
with ceramic spreaders every few feet. Brown poly TV twin lead with
rectangular holes punched in it is a whole 'nother ball game.
'Specially at high SWRs and when it's wet. Which may not be a
consideration in NTX but is a big consideration in EPA.

> Well . . it sorta "depends". In the instant case the FD "field" is one
> of my daughters' 1/4 acre back yard, three decent-size hardwoods
> spread out in maybe a 120 foot straight line and that's it. The other
> op will probably be N2EY and he isn't into deep bush ops either.

I'll do deep bush ops anytime the opportunity presents itself. But
this isn't one of those times.
>
> > > IF one can figure out to what to do with all
> > > the excess feedline without messing it up.
> >
> > It can be coiled into a big helix as long as the adjacent coils are
> > a couple of feet apart. You can run an insulated rope to the antenna
> > feedpoint and coil the ladder-line on the rope with the coils tiewrapped
> > a couple of feet apart.
>
> That's slick.

Until the rain falls or the wind blows or somebody walks into it in
the dark.

Biggest headache, though, is switching the various lengths for
different bands.
>
> >At the least you would have a conversation piece
> > to discuss over 807s (the best part of field day. :-) A photo of it would
> > probably make it into QST since it looks somewhat like a slinky. ;-)
>
> I was thinking more along the lines of sniping one of the orange
> barrels which are the Pennsylvania State Flower. They're quite readily
> available at construction sites along the PA Turnpike and
> slinky-wrapping feedline around one of those should do the job.

Would solve the walking-into-it problem too.
>
> Let's see here, 2.5 feet diameter times Pi . . 7.85398 feet per wrap .
> . yeah, that would get rid of most of the ladderline. At worst maybe
> I'd need a couple of 'em in series.
>
> QRX for the QST cover shot.
>
If it were me, (which it ain't) I'd either go with a coax fed parallel
or trapper.

Or build a nice split-coil balanced tuner and run the ladder line
right to the tuner. Real ladder line, or at worst that "fretline"
stuff (which I have squirreled away). Lessee, I got the splitstator
cap, and some nice coil forms, and a smaller cap for the link. Oh
yeah, some real all-copper alligator clips for the taps....

Or do it AG6K style.

--

The big question for any FD antenna is "how many QSOs"? All the
simulations and Smith charts don't count for any points - QSOs do. My
personal best is 629 QSOs with one 100W rig, one op, one mode, three
bands and two antennas. Coax fed trapper set up as inverted V for
80/40, quarter wave groundplane elevated 5 feet with 8 sloping radials
for 20.

Anybody here beat that on FD with only dipoles and verticals?

73 de Jim, N2EY

401. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:09:28 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40759574$1_2@127.0.0.1>
Source record: 97052

Brian Kelly wrote:
> A pair of caps
> mechanically coupled via an insulated shaft coupling but completely
> isolated electrically from each other should work.

Yes, that's what I had in mind. Mine are side-by-side with a
non-conducting fiber-chain connecting the shafts. Same with my
two rotary coils. When I said "dual-ganged", I meant mechanically
ganged, not electrically ganged.

```
| |/
Coax center wire--------|/|--------feedline--------
/| |
ganged variable caps to dipole
| |/
Coax braid--------------|/|--------feedline--------
/| |
```

And of course, there needs to be a choke between the coax and
the caps.
--
73, Cecil, W5DXP

402. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:10:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ki3b709nbo8snkfcb3ek0sh0m4jhts3tfn@4ax.com>
Source record: 97053

On Thu, 08 Apr 2004 10:07:58 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Take a look at the frequency chart in the "Reference Data for Radio
>Engineers" and you will see why someone with poor eyesight might
>make that mistake.

I duly note at the top of the graphic the expanded "Visible Spectrum
in Microns (Micrometers)" which clearly offers 4 cardinal points none
of which has a leading three (3) as a wavelength specification. Now
"clear" may be an unfortunate choice of wording, but the separation of
topic which is part and parcel to the issue of glare with its
corresponding distinct and uncluttered typeface offers far less
ambiguity. [Others may wish to observe the 610nm specification
offered as "red" in other correspondence is distinctly yellow here.
Such is the plight of subjectivity and the illusion of human
perception.]

As glare is another illusion of human perception of visible light it
follows that there is no specification of it, nor visibility for any
wavelength starting with a 3. It matters little how many decimal
points you slipped on the occasion of visiting the extreme lower edge
of the infrared. If you had misquoted 6.35 MILLION Angstroms instead
of 6350 Angstroms that would have passed with little comment.

All of this is commonplace to a practitioner of the art of Optics and
OptoElectronics.

This, then, returns us to the topic of through-glass attachments,
their loss, and the contribution of the layers to reflect (a la glare
suppression) which you re-introduced to this thread, above. [I will
suspend the absurdity of this logic for the moment.]

What is the resonant frequency of this adhesive layer:
in wavelengths, frequency, or color? I think we can all agree
(barring the slipped decimal place) that it is not 2M nor 440 MHz.

I will go one step beyond and ask, if this geometry of attachment is
variable through curvatures (windshield are always curved) what are
the prospects of Newton's Rings offering a variation in that
determination?

These are all garden variety questions that plague newbies to the art.

403. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:12:46 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <4075962f$1_2@127.0.0.1>
Source record: 97054

Richard Clark wrote:
> I certainly am missing something from this post. How do you get from
> my comment about visible wavelengths to one about shielding EMI?

Dave is probably missing the fact that you like to harp and pick
the same nit for weeks before you get it out of your system. :-)
--
73, Cecil, W5DXP

404. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:27:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <4075999e$1_2@127.0.0.1>
Source record: 97055

N2EY wrote:
> Biggest headache, though, is switching the various lengths for
> different bands.

No switching the various lengths on this one, Jim. Just a 110 ft dipole fed with about 110 ft of fixed length ladder-line with two series variable caps as the one knob tuner. Covers from 3.5 MHz to 4.0 MHz with an SWR less than 1.7:1 and no lossy coils needed.
--
73, Cecil, W5DXP

405. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:31:48 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40759aa6$1_2@127.0.0.1>
Source record: 97056

Richard Clark wrote:
> All of this is commonplace to a practitioner of the art of Optics and
> OptoElectronics.

And completely irrelevant to the subject of matches in transmission lines. Thus, it is obviously only a nit-picking logical diversion on your part to avoid discussing match points on transmission lines.
--
73, Cecil, W5DXP

406. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:35:22 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1k6b705pte23bf1ed6ivgjm4loiae2p0ul@4ax.com>
Source record: 97057

On Thu, 08 Apr 2004 08:32:58 -0700, Bill Turner <noway@nohow.com>
wrote:
>Try this:
>
>1. Attend a meeting of your local DX club.
>
>2. Announce in a loud voice that all their fancy beams have exactly
>zero dB gain.
>
>3. In addition, announce that when feedline losses are included, their
>fancy beams actually have less gain than a dummy load (because of the
>shorter feedline).
>
>4. See how long it takes to receive an invitation to join the club.
>
>:-)

All simply an argument for engineering through democratic vote. I
wouldn't cross a bridge designed that way.

I have a 100W transmitter, name me one antenna that will radiate more
than 100W from this source. Then we can put a "gain" figure to it.

73's
Richard Clark, KB7QHC

407. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:39:14 UTC
From: Dave Pitzer <dpitzer@sonic.net>
Message-ID: <m%gdc.4574$Fo4.50182@typhoon.sonic.net>
Source record: 97058

"Dave Pitzer" <dpitzer@sonic.net> wrote in message
news:Yqqcc.4078$Fo4.44247@typhoon.sonic.net...
> I have a CC Radio Plus (Sangean) AM/FM/TV/WX radio (from C. Crane Co.) I
> enjoy broadcasr band DX'ing and this radion does a super job with just
it's
> built-in ferrite antenna. I have logged AM BC stations from practically
> every state east of the Mississippi.
>
> Best reception is, of course, at night. But.... for some reason WABC (New
> York City) comes in poorly at night even though it's xmitter is only 80
> miles away. The signal fades to next to nothing and then increases to very
> loud but extremely distorted then will be loud and clear for a while.
> (During the day this station's signal is fine.) On the same evening,
> stations in Georgia (WSB, Atlanta), Illonois (WGN, Chicago), Michigan
(WJR,
> Detroit), etc., etc. come in fine 90% of the time.
>
> Do I need an external antenna for the closer WABC?????
>
> Thanks,
>
> Dave Pitzer
> Pocono Lake, PA
> ========================

Thanks guys.

All of these ideas make sense. It appears that I am just too *close* to this station to get decent nighttime reception --- just the opposite of the normal situation. There seems to be a relatively small band of distances within the xmitter's night pattern where the ground and sky signals alternately cancel and re-enforce each other on a random basis after local sunset.

Thanks,

Dave Pitzer
==========

408. Re: Bush

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:43:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <257b70dunlpor186q3aj9gn1046blosg8n@4ax.com>
Source record: 97059

On 8 Apr 2004 08:29:59 -0700, k4wge@arrl.net (k4wge) wrote:

>Richard Clark <kb7qhc@comcast.net> wrote in message
>
>>As the Army Times has noted about the Bush White House's support of
>>the troops:
>> "President Bush, the commander in chief himself, rode a Navy jet
>>to the aircraft carrier Lincoln to bask in the reflective glow of some
>>of the brave Americans who helped oust Saddam Hussein.
>> "Money talks -- and we all know what walks."
>
>>73's
>>Richard Clark, KB7QHC
>
>Well, you got the last word with that book you wrote recently :-)

The White House squirmed and squealed about it;
The Department of State nodded knowingly;
The CIA smiled inwardly.

409. BCB station listing by freg.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:47:39 UTC
From: Dave Pitzer <dpitzer@sonic.net>
Message-ID: <f7hdc.4577$Fo4.50014@typhoon.sonic.net>
Source record: 97060

Anyone know of a listing of Broadcast Band stations by frequency? (i.e. all stations on, say, 770 KHz.)

www.radio-locator.com lists by location (city), format, or call-sign, but not by frequency.

I'd like to know all stations broadcasting on, say, 810 KHz.

Thanks,

Dave Pitzer
BCB Dxer
==========

410. Re: Homemade Antennae, help

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:52:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sd7b70566cj6uhe1jaomedqg6ptnnn7cel@4ax.com>
Source record: 97061

On Thu, 8 Apr 2004 10:54:29 +0100, "Steve Muir"
<steve_muir@blueyonder.co.uk> wrote:

>I have recently bought a 2nd hand faihaven RD500, im really pleased with it,
>having been an avid VHF/UHF listener before i wanted to get into HF/SW.
>I currently have a telescopic aeriel plugged into the back, which im sure is
>no use. Someone told me all you have to do is run a wire 33ft long around my
>loft and plug it into the back of my reciever and ill pick up some great
>stuff. Im particularly interested in Military but other stuff as well
>
>Im not sure how true this is, can someone enlighten me, if so then can you
>give me a breakdown of what ill need and any tips to installing it.
>
>Any help will be very much appreciatted
>
>Thanks in advance
>
>Steve(Scottish)
>

Hi Steve,

Looks like a really nice rig. One comment to add to Doc's advice: add
a tuner between your antenna and the rig. The reason is that nearby
AM stations can overload and saturate your front end without you
knowing it and reduce the sensitivity considerably! This is not so
obvious with a whip antenna, but it becomes a big time problem with
longwire antennas if the front end is not tuned (a very expensive
feature, unless you go back several generations to tube models).

You can buy a cheap one that is already used by an amateur (or go for
the absolute cheapest model without meters that would do you no good
anyway). Or to cut cost even more, build your own (browse the net for
designs).

73's
Richard Clark, KB7QHC

411. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 18:58:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <058b70h5qb5kfe3gjalg4e3mf47s5en048@4ax.com>
Source record: 97062

On Thu, 08 Apr 2004 13:31:48 -0500, Cecil Moore
<Cecil.A.Moore@ieee.ONEDOT.org> wrote:

>Richard Clark wrote:
>> All of this is commonplace to a practitioner of the art of Optics and
>> OptoElectronics.
>
>And completely irrelevant to the subject of matches in transmission
>lines. Thus, it is obviously only a nit-picking logical diversion on
>your part to avoid discussing match points on transmission lines.

On Thu, 08 Apr 2004 18:10:52 GMT, Richard Clark <kb7qhc@comcast.net>
wrote:

>This, then, returns us to the topic of through-glass attachments,
>their loss, and the contribution of the layers to reflect (a la glare
>suppression) which you re-introduced to this thread, above. [I will
>suspend the absurdity of this logic for the moment.]
>
>What is the resonant frequency of this adhesive layer:
>in wavelengths, frequency, or color? I think we can all agree
>(barring the slipped decimal place) that it is not 2M nor 440 MHz.
>
>I will go one step beyond and ask, if this geometry of attachment is
>variable through curvatures (windshield are always curved) what are
>the prospects of Newton's Rings offering a variation in that
>determination?
>
>These are all garden variety questions that plague newbies to the art.

I gather you have no response to the on-topic question then.

412. Re: BCB station listing by freg.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 19:01:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r88b70d52o993v25v68290joa62u1m4q86@4ax.com>
Source record: 97063

On Thu, 08 Apr 2004 18:47:39 GMT, "Dave Pitzer" <dpitzer@sonic.net>
wrote:

>Anyone know of a listing of Broadcast Band stations by frequency? (i.e. all
>stations on, say, 770 KHz.)
>
>www.radio-locator.com lists by location (city), format, or call-sign, but
>not by frequency.
>
>I'd like to know all stations broadcasting on, say, 810 KHz.
>
>Thanks,
>
>Dave Pitzer
>BCB Dxer

Hi Dave,

You need a copy of "The World Radio & Television Handbook"
visit:
http://www.wrth.com/

73's
Richard Clark, KB7QHC

413. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 19:04:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2e8b70li5n5134merfbjgf1kdtb6innklv@4ax.com>
Source record: 97064

On Thu, 08 Apr 2004 18:39:14 GMT, "Dave Pitzer" <dpitzer@sonic.net>
wrote:

>Thanks guys.
>
>All of these ideas make sense. It appears that I am just too *close* to this
>station to get decent nighttime reception --- just the opposite of the
>normal situation. There seems to be a relatively small band of distances
>within the xmitter's night pattern where the ground and sky signals
>alternately cancel and re-enforce each other on a random basis after local
>sunset.
>
>Thanks,
>
>Dave Pitzer

Hi Dave,

Try a loop antenna turned/layed-over to reject the interfering
sky/direct signal. Perhaps not a sure bet, but maybe 50-50.

73's
Richard Clark, KB7QHC

414. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 19:07:47 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <I_6dnXSDD-hiP-jd4p2dnA@comcast.com>
Source record: 97065

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:l13b70dqvplvrp60l2hcjo2k60k4dck1o1@4ax.com...
> On Thu, 8 Apr 2004 10:20:58 -0500, "Dave VanHorn" <dvanhorn@cedar.net>
> wrote:
>
> >
> >"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> >news:40756af7_8@corp.newsgroups.com...
> >> Richard Clark wrote:
> >> > The recitation of any wavelength starting with a significant three is
> >> > enough to set off alarms when there is a concurrent claim of its
> >> > visibility. That is why I said it was impossible to be a decimal
> >> > error.
> >
> >The point of the thing, which you seem intent on missing, is that EM
> >radiation is reflected by impedance discontinuities. Optical reflection
is
> >very similar to what happens at lower frequencies.
> >I normally use this analogy when discussing the use of shielding and
> >absorbent materials for EMI supression.
> >
>
> Hi Dave,
>
> I certainly am missing something from this post. How do you get from
> my comment about visible wavelengths to one about shielding EMI?

By the intervening sentence, about the similarity of optical reflection to
reflection at lower wavelengths.

415. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 19:11:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <4075a3dd$1_2@127.0.0.1>
Source record: 97066

Cecil Moore wrote:

> N2EY wrote:
>
>> Biggest headache, though, is switching the various lengths for
>> different bands.
>
> No switching the various lengths on this one, Jim. Just a 110 ft
> dipole fed with about 110 ft of fixed length ladder-line with two
> series variable caps as the one knob tuner. Covers from 3.5 MHz to
> 4.0 MHz with an SWR less than 1.7:1 and no lossy coils needed.

I apologize to everyone for a mental blunder I made with this
proposed antenna. The reactances are capacitive, not inductive.
It would have to be tuned with series inductors which defeats
the propose of a low loss design.
--
73, Cecil, W5DXP

416. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 19:16:26 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <4075a51c$1_2@127.0.0.1>
Source record: 97067

Richard Clark wrote:
> I have a 100W transmitter, name me one antenna that will radiate more
> than 100W from this source. Then we can put a "gain" figure to it.

The ONLY difference between antenna directivity and antenna gain, by
definition, is efficiency. Therefore, it logically follows that you
are asserting that no antenna possesses directivity. Care to prove
that outrageous assertion? Maybe you better stick to optics?
--
73, Cecil, W5DXP

417. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 19:21:19 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <4075a641$1_2@127.0.0.1>
Source record: 97068

Richard Clark wrote:
> I gather you have no response to the on-topic question then.

I have not perceived you asking any on-topic questions. Are
you talking about glare with respect to through-glass antennas?
--
73, Cecil, W5DXP

418. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 19:24:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <107b9nq53anut6e@corp.supernews.com>
Source record: 96969

Dave Shrader wrote:
> I don't have an IEEE dictionary so I stand corrected. However, 100 watts
> into a Yagi, Quad, Log Periodic, or 4-square and 100 watts radiated is
> still 0 dB gain.
>
> Gain = 10 * Log[Pout/Pin] = 10 * log [100/100] = 10 * 0 = 0 dB.
>
> It also has 0 dB attenuation!!!
>
> NB: Valid over either 4*Pi or 2*Pi steradians.

What you've calculated here is efficiency, not gain. It's important to understand the difference between the two if you want to communicate with others about antennas.

Roy Lewallen, W7EL

419. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 19:38:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kgab70d3rokjhot0v0hj2dagulu7ucd0u4@4ax.com>
Source record: 96970

On Thu, 08 Apr 2004 14:21:19 -0500, Cecil Moore
<Cecil.A.Moore@ieee.ONEDOT.org> wrote:

>Richard Clark wrote:
>> I gather you have no response to the on-topic question then.
>
>I have not perceived you asking any on-topic questions. Are
>you talking about glare with respect to through-glass antennas?

You are off topic once again. Consult the archive.

420. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 19:49:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v9ab709cbah3g3e2cqirut0478q7r86i71@4ax.com>
Source record: 96971

Hi Dave,

On Tue, 06 Apr 2004 11:48:53 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>My EM guys, Physics types, [from my working days] indicated that the
>three dielectric interfaces, adhesive to glass to adhesive, all with
>different dielectric coefficients create reflections at the boundaries.

How much reflection is there from a device with sub wavelength
dimension? Cecil can't answer this, can you?

Let's cast this back to optics:
You have a mirror with 60nm sides
(a similar, proportional scale to the glass mount).

The question becomes, how much light (percentage or dB) is reflected?

For others following this: would you use this mirror to shave? ;-)

73's
Richard Clark, KB7QHC

421. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:03:15 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c54b63$ga2$1@hercules.btinternet.com>
Source record: 96972

Richard Clark,

I fully support your "All antennas have zero gain" campaign.

Why not join the "There's no such thing as an SWR meter" campaign?

Reg, G4FGQ

422. Horizintal loop with two feed points?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:04:12 UTC
From: "T.E.O" <rfmscpa@earthlink.net>
Message-ID: <0fidc.2002$A_4.227@newsread1.news.pas.earthlink.net>
Source record: 96973

Many of us use 1 wl horizontal loops configured in a square or rectangular shape. When these loops are operated at frequencies greater than the fundamental, the horizontal pattern changes from a nearly circular pattern to one with lobes & nulls.

For example, if I operate a 60' high, 1 wl, side fed, square, 80 meter horizontal loop on 40 meters, the horizontal pattern is that of a 4 leaf clover with four fairly broad lobes and four nulls.

Now this is great if you intend to QSO with a station in the direction of a lobe but not so great if your target is in the direction of a null.

Now if I move the feed point to an adjacent side of the square, the lobes become nulls & the nulls become lobes. In essence, I have "rotated" the pattern by
moving the feed point.

I have attempted to take advantage of this shift in pattern by erecting a 160 meter loop that "floats" in pulleys at the corners. I then tried to physically drag the loop wire through their supporting pulleys & move the entire antenna wire until the feed point was where I wanted it. This was a really stupid idea & did not work out due to the weight of the
wire, binding at the pulleys, mechanical problems, the hassel of "rotation" , etc., etc. & I have
abandoned this idea.

I'm thinking now that I should just add a second feed line on a side adjacent to the original fed side and simply select the feed line (and pattern) that suits my operating needs. Like this:

```
********************************** *
* *
* *
* *
* *
* *
* *
* *
X *
Feed (1) *
X *
* *
* *
* *
```

* *
* *
**********XFX**********
e
e
d
(2)

My problem is that I'm not sure of the effect of adding that second feed line. Should the unused feed line be grounded or simply left unconnected at the transmitter? Or should I use relays at the feedpoints to "jumper" the unused feedline? I use 450 ohm "window" type ladder line.

Or, as another ham has suggested, put up a second loop, spaced a few feet down from the first loop, & feed it where I like.

My goal is an antenna that covers 160- 17 meters, & has some capability to steer the "gain" on the
frequencies greater than 2.0 mc.

Any help/comments will be appreciated.

423. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:08:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <4075b151$1_2@127.0.0.1>
Source record: 96974

Richard Clark wrote:

> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>>I have not perceived you asking any on-topic questions. Are
>>you talking about glare with respect to through-glass antennas?
>
> You are off topic once again. Consult the archive.

On the contrary, the topic is "Through-Glass Antenna/
Ford Taurus". What did you think it was?
--
73, Cecil, W5DXP

424. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:09:29 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c54bhp$h0o$1@hercules.btinternet.com>
Source record: 96975

```
> Covers from 3.5 MHz to
> 4.0 MHz with an SWR less than 1.7:1 and no lossy coils needed.
> --
> 73, Cecil, W5DXP
>
========================

Lossy coils replaced by lossier transmission lines ? ;o)
---
Reg. G4FGQ
```

425. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:10:36 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <4075b1cd$1_2@127.0.0.1>
Source record: 96976

Richard Clark wrote:
> How much reflection is there from a device with sub wavelength
> dimension? Cecil can't answer this, can you?

OK, genius, please tell us how much reflection is there from
a Through-Glass Antenna/Ford Taurus.
--
73, Cecil, W5DXP

426. Re: Horizintal loop with two feed points?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:22:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <107bd577dnjitb7@corp.supernews.com>
Source record: 96977

I've successfully used two feedlines for a single antenna (my "Field Day Special", for reversing the direction) by making the feedlines an electrical wavelength long and leaving the unused one open. In my case, I wanted an open at the unused feedpoint, rather than a short as you do. Also, you don't need that much length. Either of these should work for your antenna, producing a short circuit at the connection point of the unused feedline:

1. Make the feedlines an electrical quarter wavelength long and leave the unused one open circuited.
2. Make the feedlines an electrical half wavelength long and short circuit the unused one.

Whichever one you choose, don't "ground" the unused feedline or connect it to anything else.

Anyone else trying this method should be aware that even a small amount of feedline loss translates into a poor open or short at the antenna, so loss usually has to be considered. In this particular case it won't be a problem.

Roy Lewallen, W7EL

T.E.O wrote:

> . . .
> My problem is that I'm not sure of the effect of adding that second
> feed line. Should the unused feed line be grounded or simply left
> unconnected at the transmitter? Or should I use relays at the
> feedpoints to "jumper" the unused feedline? I use 450 ohm "window" type
> ladder line.
>
> . . .

427. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:29:33 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c54cnd$1ps$1@titan.btinternet.com>
Source record: 96978

At LF and MF there is a distance from the transmitter at which the ground wave and sky wave have roughly equal strengths. Distance varies throughout darkness.

As the height of the reflecting layer varies the path length of the sky wave varies and so the relative phases of the ground and sky wave changes with time between being in-phase and out of phase with each other.

The relative phases of carrier and sidebands are affected differently because of their different wavelengths. Carrier phase shift causes variation in signal strength. Sideband phase shift causes severe audio distortion.

Reg.

"Dave Pitzer" <dpitzer@sonic.net> wrote in message
news:m%gdc.4574$Fo4.50182@typhoon.sonic.net...
>
> "Dave Pitzer" <dpitzer@sonic.net> wrote in message
> news:Yqqcc.4078$Fo4.44247@typhoon.sonic.net...
> > I have a CC Radio Plus (Sangean) AM/FM/TV/WX radio (from C. Crane Co.) I
> > enjoy broadcasr band DX'ing and this radion does a super job with just
> it's
> > built-in ferrite antenna. I have logged AM BC stations from practically
> > every state east of the Mississippi.
> >
> > Best reception is, of course, at night. But.... for some reason WABC
(New
> > York City) comes in poorly at night even though it's xmitter is only 80
> > miles away. The signal fades to next to nothing and then increases to
very
> > loud but extremely distorted then will be loud and clear for a while.
> > (During the day this station's signal is fine.) On the same evening,
> > stations in Georgia (WSB, Atlanta), Illonois (WGN, Chicago), Michigan
> (WJR,
> > Detroit), etc., etc. come in fine 90% of the time.
> >
> > Do I need an external antenna for the closer WABC?????
> >
> > Thanks,
> >
> > Dave Pitzer
> > Pocono Lake, PA
> > ========================
>
>

> Thanks guys.
>
> All of these ideas make sense. It appears that I am just too *close* to
this
> station to get decent nighttime reception --- just the opposite of the
> normal situation. There seems to be a relatively small band of distances
> within the xmitter's night pattern where the ground and sky signals
> alternately cancel and re-enforce each other on a random basis after local
> sunset.
>
> Thanks,
>
> Dave Pitzer
> ==========================
>
>

428. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:30:23 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <4075b670_2@127.0.0.1>
Source record: 96979

Reg Edwards wrote:

>>Covers from 3.5 MHz to
>>4.0 MHz with an SWR less than 1.7:1 and no lossy coils needed.

> Lossy coils replaced by lossier transmission lines ? ;o)

The loss in 100 ft. of open-wire line on 4 MHz is so low
it isn't even on the chart. :-)
--
73, Cecil, W5DXP

429. Re: Horizintal loop with two feed points?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:33:20 UTC
From: "T.E.O" <rfmscpa@earthlink.net>
Message-ID: <kGidc.2030$A_4.1496@newsread1.news.pas.earthlink.net>
Source record: 96980

Roy

Tnx for the reply. Is the 1/4 or 1/2 wl feed line you desribe measured using the fundamental (1wl) freq. of the loop or the operating freq.?

Terry
W8EJO

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:107bd577dnjitb7@corp.supernews.com...
> I've successfully used two feedlines for a single antenna (my "Field Day
> Special", for reversing the direction) by making the feedlines an
> electrical wavelength long and leaving the unused one open. In my case,
> I wanted an open at the unused feedpoint, rather than a short as you do.
> Also, you don't need that much length. Either of these should work for
> your antenna, producing a short circuit at the connection point of the
> unused feedline:
>
> 1. Make the feedlines an electrical quarter wavelength long and leave
> the unused one open circuited.
> 2. Make the feedlines an electrical half wavelength long and short
> circuit the unused one.
>
> Whichever one you choose, don't "ground" the unused feedline or connect
> it to anything else.
>
> Anyone else trying this method should be aware that even a small amount
> of feedline loss translates into a poor open or short at the antenna, so
> loss usually has to be considered. In this particular case it won't be a
> problem.
>
> Roy Lewallen, W7EL
>
> T.E.O wrote:
>
> > . . .
> > My problem is that I'm not sure of the effect of adding that second
> > feed line. Should the unused feed line be grounded or simply left
> > unconnected at the transmitter? Or should I use relays at the
> > feedpoints to "jumper" the unused feedline? I use 450 ohm "window" type
> > ladder line.
> >
> > . . .

430. Re: EzNec Demo simple Example sen me please! :-((

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:40:51 UTC
From: "Dan Richardson"
Message-ID: <c1eb709iskahl42egcon3th9nihq1dcr62@4ax.com>
Source record: 96982

EZNEC comes with some of the best documentaion around. I suggest you print it out and do a little reading. Following that, do the "Test Drive" section. When you finish that you should have no problem modeling the antenna you describe.

73
Danny, K6MHE

On Thu, 08 Apr 2004 17:07:58 GMT, "Marcello" <marcello110980@yahoo.it> wrote:

>
>Excuse to all for my banal question.
>I downloaded the simulator antenna program EzNec Demo....but for a beginner
>is not user friendly.
>Io want simulate a simple antenna 5/8 vertical ground plane with few
>orizontal radials, like antenna Sirio 827, Mantova, or Maco 5/8.
>I hope there is a person, who can be send me a silumazion file *.EZ, about
>this, where I can see how do my personal simulation.
>Then I can understand how modify parameter to adjust, for other similar
>antenna type.
>
>Thank to all and in particular who can reply me.
>
>Marc.
>
>
>
>
>
>

431. Re: BCB station listing by freg.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 20:50:27 UTC
From: Richard Heindel <rheindel@neo.rr.com>
Message-ID: <nWidc.532$ng1.255@fe2.columbus.rr.com>
Source record: 96981

> Anyone know of a listing of Broadcast Band stations by frequency? (i.e. all
> stations on, say, 770 KHz.)
>
> I'd like to know all stations broadcasting on, say, 810 KHz.
>
> Thanks,
>
> Dave Pitzer
> BCB Dxer
> ====================

Here Dave, check out the FCC web page, http://www.fcc.gov/mb/audio/amq.html, you can list by freq or call or
whatever.

73
Richard WB8KRN

432. Re: BCB station listing by freg.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 21:02:44 UTC
From: none@nowhere.com
Message-ID: <Xns94C589DE3hatchdavidticom@157.170.133.60>
Source record: 96983

"Dave Pitzer" <dpitzer@sonic.net> wrote in
<f7hdc.4577$Fo4.50014@typhoon.sonic.net>:

>Anyone know of a listing of Broadcast Band stations by frequency? (i.e.
>all stations on, say, 770 KHz.)
>
>www.radio-locator.com lists by location (city), format, or call-sign,
>but not by frequency.
>
>I'd like to know all stations broadcasting on, say, 810 KHz.
>
>Thanks,
>
>Dave Pitzer
>BCB Dxer
>=====================
>
>

http://www.radiostation.com/fccdata/amcall.html

--
David Hatch
KR7DH
Texas Instruments - Tucson

433. Statement on Spam and VoteNader.org

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 21:06:04 UTC
From: donovan@votenader.org
Message-ID: <ce5e6baf.b5ed5ba5@host-69-48-73-244.roc.choiceone.net>
Source record: 96995
Cross-posted to: rec.radio.amateur.antenna,rec.food.recipes,rec.arts.marching.misc,rec.music.gaffa

Spam from VoteNader.org? (Or naderexplore04.org)

You may have received spam email recently that appears to come from our campaign, or be about our campaign -- perhaps the "From" and or "Reply-to" addresses look like they are coming from VoteNader.org. Or perhaps you have received a message that appears to come from an individual (if the address is real, the real owner probably did not send this email either) with suppressed recipients. Or maybe you received an email that appeared to come from yourself promoting our site.

These messages are NOT from Nader for President 2004, and these email tactics are NOT condoned by our campaign in any way.

UPDATE: Some of the latest forged emails have been made to appear to be coming from naderexplore04.org. Again, we are not responsible for this unfortunate abuse of email, and there is little in the technical sense that we can do to prevent this as it has nothing to do with our actual infrastructure. We are collecting information.

NOTE: The emails with malicious code (viruses, worms, etc.) often have attachments. Our campaign will NEVER send attachments in our announcement emails to you. Please be sure that you have anti-virus software and have the latest updates available for your anti-virus software.

Our hosting service has alerted us to say that Nader for President 2004 appears to be the target of what is called a "Joe Job." Such an event is where a spammer forges email to make it appear to have come from some other domain (such as ours -- or yourself). This is hard to prevent on our end and part of the insecure nature of the email protocol in general.

Members of our actual email list must request to receive email from us (either through Ralph's signup sheets or subscribing during our exploratory phase, or now on our campaign site). When one signs up for email they must reply to a confirmation message before they receive our list announcements.

Our public announcement emails come from "campaign@votenader.org," contain a "Paid for by Nader for President 2004" statement at the bottom, and have "updates@lists.votenader.org" in the "To:" header. Unfortunately, some of these indicators can be forged as well.

Most of the Spam that we have received complaints about appear to be forged from email addresses not associated with votenader.org (often forged to appear to be coming from government email addresses), and have

our website code embedded in the body of the email with hidden tags that contain random words that work to subvert anti-spam software.

If you are on our lists, you can ALWAYS unsubscribe at ANY time by following the instructions included at the end of our announcements. You can also use our unsubscribe page using the email address you signed up with.

If you are receiving this SPAM, we extend our apologies.

We will pursue the spammers to the full extent of the law.

For more information, please review these resources:

How Do I Determine the Source of an Email?
http://www.aota.net/Email_Spam_Prevention_and_Mgmt/emailsource.php4

Why Does This Spam Look Like I Sent It?
http://www.aota.net/Email_Spam_Prevention_and_Mgmt/spamfrom.php4

Coping with a Joe Job
http://www.sitepoint.com/article/sabotage-coping-joe-job/2

Please contact abuse@votenader.org with any questions. We have received many samples of the spam and are working to identify the source, if possible.

Volunteer -------------- http://www.votenader.org/get_involved/index.php
Ballot Access ---------- http://www.votenader.org/ballot_access/index.php
Register to Vote ------- http://www.rockthevote.com/rtv_register.php
Contribute ------------- http://www.votenader.org/contribute/index.php
Contact Us ------------- http://www.votenader.org/contact/index.php

--
part and legs,
my mom took me to the doctor. They told me that I will have to get marry to a Jew or else I will be punished. Though I as only 13 years old at that time, I did not understand what was going on. So they harassed my mom, my supposed-to-be dad was always away. Then they did that pipe thing to me, in which they injected something in my urine pipe, and this thing was done by a man who was General in Pakistan army. Things did not stop there, then all of a sudden I got this flu due to which some black clusters started coming out of my brain and yes at that time I was in level 9 and I was only thirteen years old. My mom?s mom had told me that look it is usual around here, that people get "this kind of flu" so you must understand you will get more intelligent after this. It seems like it is the fate of every intelligent Muslim to have these biological weapons that is why everyone knew about it.

Actually that black cluster flu with water like liquid was another biological agent used on Muslims, and most of the Muslims around me when I was young experienced it, they either did what they were told to do or paid the price like I did. In my case, because I used to pray, and I was very very intelligent (like today). In Muslim countries, Muslims live in

fear, they don?t speak about such things then t

434. Re: Horizintal loop with two feed points?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 21:20:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <107bgh86j9tos40@corp.supernews.com>
Source record: 96984

The operating frequency. It should work adequately over a single band, but not multiple bands. At frequencies near, but not exactly at, the frequency you've cut the feedlines for, the effect will be that a little reactance will appear at the point where the unused feedline connects. This will make the antenna tune a little differently, but have no other significant effect. Far away from that frequency, though, as on another band, you can have some wild impedances at the second feedline connection point, resulting in a very different pattern and impedance at the active feedpoint.

Roy Lewallen, W7EL

T.E.O wrote:
> Roy
>
> Tnx for the reply. Is the 1/4 or 1/2 wl feed line you desribe measured using
> the fundamental (1wl) freq. of the loop or the operating freq.?
>
> Terry
> W8EJO

435. Re: BCB station listing by freg.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 21:25:59 UTC
From: Brendan Minish <bminish@oceanfree.net>
Message-ID: <iogb70pt4fj4p4bmcekqhmpsskg9p8beqa@4ax.com>
Source record: 96986

ILG radio has up to date databases in dbase format, you can sort them
any way you like in Excell
http://www.ilgradio.com/

73
Brendan EI6IZ
--
Brendan Minish

436. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 21:36:45 UTC
From: Joseph Fenn <jfenn@lava.net>
Message-ID: <Pine.BSI.4.58.0404081131080.21248@malasada.lava.net>
Source record: 96985

Has anybody given any thought to what an antenna tuner of any kind
adds to your enjoyment in ham life. I have the MFJ 3kw tuner
with the roller inductor and differential capacitor and what a
charmer it is. I dont worry about my inverted dipoles mostly
Vertical polarized. I just crank up on any freqcy between
1.6 and 30 mhz and dont give a dam about gain or lack of same.
It just makes life so ez to do it that way. Why you ask.
Because it protects the ic751's output stages. Think of the
tuner as a RF SUCKER, it just sucks all the dangerous stuff
out of the rig and puts it in the tuner. How much of that
power gets finally radiated I could care less. I work
mostly on MARS freqcys and none of them are inside the ham bands
so this tuner serves me well.
Joe/KH6JF/ABM6JF

****
* Ham KH6JF AARS/MARS ABM6JF QCWA WW2 VET WD RADIO *
****

On Thu, 8 Apr 2004, Reg Edwards wrote:

> Richard Clark,
>
> I fully support your "All antennas have zero gain" campaign.
>
> Why not join the "There's no such thing as an SWR meter" campaign?
> ----
> Reg, G4FGQ
>
>
>

437. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:28:39 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c54jmn$6a$1@hercules.btinternet.com>
Source record: 96987

> The loss in 100 ft. of open-wire line on 4 MHz is so low
> it isn't even on the chart. :-)
> --
> 73, Cecil, W5DXP
>
==========

The loss at 30 MHz with a very high SWR is on MY chart.

And the loss in properly used coils is very small.

But either way, the difference between the two methods is so small you are unfairly claiming an advantage in the use of transmission lines. Do some accurate calculations to see what actually happens.

Reg.

438. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:35:01 UTC
From: jgboyles@aol.com
Message-ID: <20040408183501.18788.00000023@mb-m23.aol.com>
Source record: 96989

>I apologize to everyone
The reactances are capacitive, not inductive.
>
Cecil, Looks to me like a 108' flattop, 40' up, fed with 44' of 450 ohm line might get less than 2:1 across 80 meters with 250pf variable caps. The magic numbers are 3.8 mhz and 132pf for 1:1. No lossy coils.
I have some silver plated roller inductors that I use in a re-configurable "L" network that I'll bet used with the above antenna will produce efficiencies near what the vari-caps will, and 1:1 across 80M. I really don't think the silver plating has that much to do with it.:-) Anyway that is what I have used on Field Day.

73 Gary N4AST

439. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:35:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ktkb70hq9h9sfkmghns3ruu1jrbuqh9oug@4ax.com>
Source record: 96988

On Thu, 08 Apr 2004 15:08:32 -0500, Cecil Moore
<Cecil.A.Moore@ieee.ONEDOT.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>>>I have not perceived you asking any on-topic questions. Are
>>>you talking about glare with respect to through-glass antennas?
>>
>> You are off topic once again. Consult the archive.
>
>On the contrary, the topic is "Through-Glass Antenna/
>Ford Taurus". What did you think it was?

On Thu, 08 Apr 2004 18:58:12 GMT, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Thu, 08 Apr 2004 18:10:52 GMT, Richard Clark <kb7qhc@comcast.net>
>wrote:
>
>>This, then, returns us to the topic of through-glass attachments,
>>their loss, and the contribution of the layers to reflect (a la glare
>>suppression) which you re-introduced to this thread, above. [I will
>>suspend the absurdity of this logic for the moment.]
>>
>>What is the resonant frequency of this adhesive layer:
>>in wavelengths, frequency, or color? I think we can all agree
>>(barring the slipped decimal place) that it is not 2M nor 440 MHz.
>>
>>I will go one step beyond and ask, if this geometry of attachment is
>>variable through curvatures (windshield are always curved) what are
>>the prospects of Newton's Rings offering a variation in that
>>determination?
>>
>>These are all garden variety questions that plague newbies to the art.
>
>I gather you have no response to the on-topic question then.

440. Re: Horizintal loop with two feed points?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:36:55 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c54k67csl1@titan.btinternet.com>
Source record: 96991

```
> on another
> band, you can have some wild impedances at the second feedline
> connection point, resulting in a very different pattern
>
> Roy Lewallen, W7EL
>
============================

But who cares - the sole objective is to change the radiation pattern away
from nulls. ;o)
----
Reg, G4FGQ
```

441. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:37:05 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hvkb70pv4v21uhtodil2hkiqf13huujugd@4ax.com>
Source record: 96990

On Thu, 8 Apr 2004 20:03:15 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:

>Richard Clark,
>
>I fully support your "All antennas have zero gain" campaign.
>
>Why not join the "There's no such thing as an SWR meter" campaign?
>----
>Reg, G4FGQ
>
Hi Reg,

Because all mine have lines through them.

73's
Richard Clark, KB7QHC

442. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:40:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <q4lb70loku2h3hbqeiqsslb6fb228iim7l@4ax.com>
Source record: 96992

On Thu, 8 Apr 2004 11:36:45 -1000, Joseph Fenn <jfenn@lava.net> wrote:
>I just crank up on any freqcy between
>1.6 and 30 mhz and dont give a dam about gain or lack of same.
>It just makes life so ez to do it that way.

Hi Joe,

That's the best advice we can offer:
Don't worry 'bout the things you can't change.

73's
Richard Clark, KB7QHC

443. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:49:54 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4075d73d$1_5@corp.newsgroups.com>
Source record: 96993

Reg Edwards wrote:
> But either way, the difference between the two methods is so small you are
> unfairly claiming an advantage in the use of transmission lines. Do some
> accurate calculations to see what actually happens.

Exactly how can coils replace the transmission line it takes to get
the signal from the hamshack to the antenna? I would love to eliminate
my transmission line but I don't know how.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

444. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:50:32 UTC
From: tdonaly@aol.com
Message-ID: <20040408185032.17504.00000015@mb-m20.aol.com>
Source record: 96994

Dan wrote,
>> >
>>
>> You mean we get to have the Civil War all over again? Good.
>> 73,
>> Tom Donaly, KA6RUH
>>
>>
>
>Good example of what I meant there Tom. Do you have ANY IDEA what your
>talking about? Don't bother to answer, I already have it.
>
>Dan/W4NTI
>

There's no need to get cryptic, Dan. Practically everyone in America
knows what you guys are up to. You'll get away with it, too, until you begin to

upset the status quo.
73,
Tom Donaly, KA6RUH

445. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:53:56 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4075d830_5@corp.newsgroups.com>
Source record: 96996

JGBOYLES wrote:
> Cecil, Looks to me like a 108' flattop, 40' up, fed with 44' of 450 ohm line
> might get less than 2:1 across 80 meters with 250pf variable caps. The magic
> numbers are 3.8 mhz and 132pf for 1:1. No lossy coils.

Thanks Gary, with a little modeling and experimentation, almost any
reasonable antenna problem can be solved. It's not enough to say,
"A G5RV is a terrible antenna". The question that should be asked is,
"Exactly what is wrong with a G5RV and how can it be fixed?"
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

446. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:57:19 UTC
From: jgboyles@aol.com
Message-ID: <20040408185719.18788.00000024@mb-m23.aol.com>
Source record: 96997

>Has anybody given any thought to what an antenna tuner of any kind
>adds to your enjoyment in ham life.

Joseph, You bet, just search the archives of this group. Tuner or not, resonant or non-resonant you will find many informative and entertaining discussions. You should find that a bunch of folks have thought about tuners and their benefit.

73 Gary N4AST

447. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 22:58:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4075d93a_5@corp.newsgroups.com>
Source record: 96998

Richard Clark wrote:

> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>>Richard Clark wrote:
>>>You are off topic once again. Consult the archive.
>>
>>On the contrary, the topic is "Through-Glass Antenna/
>>Ford Taurus". What did you think it was?
>
> On Thu, 08 Apr 2004 18:58:12 GMT, Richard Clark <kb7qhc@comcast.net>
> wrote:

You can't answer my questions about matching so you are forced into an
off-topic logical diversion. I fully understand.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

448. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 23:02:05 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c54lld$2k0$1@hercules.btinternet.com>
Source record: 96999

Although your method works well you unfairly attribute it to the G5RV. This undeservedly attaches prestige to that over-rated antenna.

Immediately you change the length of the feedline from 1/2-wavelength at 14.15 MHz it is no longer a G5RV.

And in addition to a top length of 102 feet there is an enormous number of other top lengths which will work in the manner you describe. 102 feet is no more magical than 118.5 radials.

Do you hold shares in a G5RV manufacturer? ;o)

Reg, G4FGQ

449. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 23:06:55 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7nmb70l4k4vbdg4mqr5156ash8cqnan04g@4ax.com>
Source record: 97000

On Thu, 08 Apr 2004 17:58:22 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>>>Richard Clark wrote:
>>>>You are off topic once again. Consult the archive.
>>>
>>>On the contrary, the topic is "Through-Glass Antenna/
>>>Ford Taurus". What did you think it was?
>>
>> On Thu, 08 Apr 2004 18:58:12 GMT, Richard Clark <kb7qhc@comcast.net>
>> wrote:
>
>You can't answer my questions about matching so you are forced into an
>off-topic logical diversion. I fully understand.

At least is was logical and you understood.

450. Re: Difference between 5/8 and 3/4 lambda

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 23:15:11 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c54mhi$q6v$1@newshost.mot.com>
Source record: 97003

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:LBIcc.551$So3.32169@twister.southeast.rr.com...
> >
> I have found that a 3/4 wl and longer vertical antenna can be quite useful
> during periods of "skip". Quite often these antennas will allow you to
work
> into areas that are not so crowded. Your signal is going places others are
> not. This can be a good tool to have.
>
>

3/4 wave on a ground plane has a main lobe about 50 degrees above the horizon. I have a paper by Inagaki et. al. from the 70's describing a 3/4 wave on a gnd plane if I recall, 1.6 lambda or was it 0.6 from a 60 degree corner reflector. Built one for 2304 MHZ It gives 18dB gain (probably dBi) and has a very good 50 ohm match. My dad built one in a 2 foot cube for a 440 antenna gain contest {it was a bit short compared to the paper's specifications) and won.
--
Steve N, K,9;d, c. i My email has no u's.

451. Re: Horizintal loop with two feed points?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 23:16:03 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnc7bn9i.23ja.bit-bucket@localhost.config.com>
Source record: 97001

On Thu, 08 Apr 2004 20:04:12 GMT, T.E.O hath writ:
> Many of us use 1 wl horizontal loops configured in a square or rectangular
> shape. When these loops are operated at frequencies greater than the
> fundamental, the horizontal pattern changes from a nearly circular pattern
> to one with lobes & nulls.
>
> For example, if I operate a 60' high, 1 wl, side fed, square, 80 meter
> horizontal loop on 40 meters, the horizontal pattern is that of a
> 4 leaf clover with four fairly broad lobes and four nulls.
>
> Now this is great if you intend to QSO with a station in the
> direction of a lobe but not so great if your target is in the
> direction of a null.
>
> Now if I move the feed point to an adjacent side of the square, the
> lobes become nulls & the nulls become lobes. In essence, I have "rotated"
> the pattern by moving the feed point.

There was a feller in north Denver a couple hundert years ago that
had a rotatable rhombic. He had a circular track in place for ore
carts -- he had four ore carts with telephones poles installed in
them (with concrete, or the somesuch.) This was *LONG* before
(affordable) digital electronics and I am unsure how he co-ordinated
and synchronised travel of all 4 ore carts.
I know for sure that he had a lot of acreage, _and_ a very
understanding wife...

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | config.com | DM68mn SK

452. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 23:16:11 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4075dd67_5@corp.newsgroups.com>
Source record: 97002

Reg Edwards wrote:
> Immediately you change the length of the feedline from 1/2-wavelength at
> 14.15 MHz it is no longer a G5RV.

Yes, Great Pharaoh, so let it be written, so let it be done. :-)
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

453. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 23:18:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4075dde9$1_5@corp.newsgroups.com>
Source record: 97004

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>You can't answer my questions about matching so you are forced into an
>>off-topic logical diversion. I fully understand.
>
> At least is was logical and you understood.

Heh, heh, the "logical" in "logical diversion" doesn't mean the
diversion is not illogical.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

454. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 23:22:29 UTC
From: jgboyles@aol.com
Message-ID: <20040408192229.18788.00000025@mb-m23.aol.com>
Source record: 97005

>It's not enough to say,
>"A G5RV is a terrible antenna".
A G5RV is a terrible antenna if it did not do well the last time you used it. HF antennas and propagation being what they are, it is difficult to label any antenna as terrible.
A G5RV type antenna in its many configurations ought to work as advertised.
And as you have proved Cecil, it can be tweaked.

73 Gary N4AST

455. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 23:32:55 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404081532.226f5722@posting.google.com>
Source record: 97006

Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
news:<40759574$1_2@127.0.0.1>...
> Brian Kelly wrote:
> > A pair of caps
> > mechanically coupled via an insulated shaft coupling but completely
> > isolated electrically from each other should work.
>
> Yes, that's what I had in mind. Mine are side-by-side with a
> non-conducting fiber-chain connecting the shafts. Same with my
> two rotary coils. When I said "dual-ganged", I meant mechanically
> ganged, not electrically ganged.
>
> | |/
> Coax center wire--------|/|--------feedline--------
> /| |
> ganged variable caps to dipole
> | |/
> Coax braid--------------|/|--------feedline--------
> /| |

OK , I got off on the wrong foot, this is more better. Tnx for the
clarification. Now back to Autocad so that I can enshrine it for
posterity . .

There are a lot of nice inexpensive instrument-quality parts out there
which make it quite easy to mechanically couple variable caps, rotary
inductors and I guess even pots but I've never seen that done. I'm
partial to the miniature timing belts and gears. IF they're not
wire-reinforced belts. For this tuner job there are plenty of options
available.

I had a monster remotely controlled tuner in the back yard for years
for my end-fed 135 inverted L. I used a pair of old WW2 Navy gun
director synchros, one in the shack which I cranked with a turns
counter and the other in the tuner cabinet to spin the big rotary
inductor via a small timing belt, never missed a lick.

w3rv

456. Q: MFJ 296 Antenna Analizer Zo function

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-08 23:34:11 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c54nla$qi3$1@newshost.mot.com>
Source record: 97007

I finally got around to scrubbing the manual for my 269 (was sick for a few days) and played with it and made a quick reference sheet showing the menus and what is displayed in each one and which buttons to push... The distance to fault process is confuling to get from their description, but easy from a flow chart.

Anyway... Is the following a known problem?

In the Advanced 3 menu for NON-50 ohm system measurements... With a known good 75 ohm load when set to 75 ohms mine shows a 1.3 : 1 SWR. The load shows as 75 ohms when using either the "normal" 50 ohm main menu function or in the Advanced 3 menu (when set for 75 ohms). It actually reads something like 75 & J10 in the Zo menu - which is still very near 75 ohm magnitude.

The first call to their tech assistance line yielded a guy who clearly didn't understand and tried to tell me it only measures in a 50 ohm system - EVER. He couldn't explain what the Zo setting was for in the Advanced 3 menu--at least not coherently. I called the next day after carefully reading the manual to assure myself that my understanding was correct. After a little uncertanty this guy said to send it in for calibration.

1- Does this make sense? Isn't this simply a computation to do the '50 to whatever ohm' translation? They CAN'T be changing anything on the bridge.

Has anyone used this function and did yours read correctly? I know not to expect lab performance, but this ain't even close.
--
Steve N, K,9;d, c. i My email has no u's.

--
Steve N, K,9;d, c. i My email has no u's.

457. Re: Through-Glass Antenna/Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 00:04:08 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <80qb70pqq2a1s5b6beu511occnpim3ttk3@4ax.com>
Source record: 97008

On Thu, 08 Apr 2004 18:18:22 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>Heh, heh, the "logical" in "logical diversion" doesn't mean the
>diversion is not illogical.
Hmm a logical diversion is a statement with three negatives. You have
a talent for doing it the long way.

458. Re: BCB station listing by freg.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 00:13:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <u9qb709f1su83glgkh6tgm6qf7r6oqu52t@4ax.com>
Source record: 97009

On Thu, 8 Apr 2004 18:02:46 -0500, "Steve Nosko"
<suteuve.nosukowicuz@moutouroula.com> wrote:

>On 810 there are 2 Canada
>1 PR and
>24 in the US:

The World Radio & TV Handbook lists at least 13 more countries
(and twice that within 10Khz) outside of North America and another 10
south of the border. The wind must be against them.

One should note:
> Info Call Sign Frequency City School Format
> KGO 810 AM San Francisco, CA News/Talk
...
> WGY 810 AM Schenectady, NY News/Talk
> WHB 810 AM Kansas City, MO Sports
have three letter calls that denoted in the "old days" that these
stations were "clear channel" broadcasters. This may be apparent by
their being spaced nearly equally across the states.

73's
Richard Clark, KB7QHC

459. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 01:12:09 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404081712.61940185@posting.google.com>
Source record: 97010

N2EY@AOL.COM (N2EY) wrote in message
news:<c2356669.0404081000.55013376@posting.google.com>...
> kelly@dvol.com (Brian Kelly) wrote in message
news:<d22b54c3.0404072148.54c8374d@posting.google.com>...
> > Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4074bae7_2@corp.newsgroups.com>...
> >

> The books give all sorts of figures for "open wire line". But many of
> them are for the classic lines made of #14 copper spaced 4 to 6 inches
> with ceramic spreaders every few feet. Brown poly TV twin lead with
> rectangular holes punched in it is a whole 'nother ball game.
> 'Specially at high SWRs and when it's wet. Which may not be a
> consideration in NTX but is a big consideration in EPA.

(a) It's only Field Day
(b) If ya just gotta have "the real thing" it's out there for cheap:

http://www.w7fg.com/ant.htm

> > > It can be coiled into a big helix as long as the adjacent coils are
> > > a couple of feet apart. You can run an insulated rope to the antenna
> > > feedpoint and coil the ladder-line on the rope with the coils tiewrapped
> > > a couple of feet apart.
> >
> > That's slick.
>
> Until the rain falls or the wind blows

It rains on thousands of G5RVs every day all over the world and . . ?

> or somebody walks into it in
> the dark.

. . welcome to Field Day antenna farms . .

> Biggest headache, though, is switching the various lengths for
> different bands.

No feedline switching involved here.

> > I was thinking more along the lines of sniping one of the orange
> > barrels which are the Pennsylvania State Flower. They're quite readily
> > available at construction sites along the PA Turnpike and
> > slinky-wrapping feedline around one of those should do the job.
>
> Would solve the walking-into-it problem too.

The orange barrels wuz a JOKE!

> The big question for any FD antenna is "how many QSOs"? All the
> simulations and Smith charts don't count for any points - QSOs do.

Exactly. So ya get a bit more loss when it rains on a G5RV, who cares?? Lemmee cite a good recent example of why too many people fuss too much with dB. here dB. there details.

I was watching ops at the N3RS multiop station during the ARRL CW DX contest in March. Late in the contest the guy in the 20M seat was knocking out contacts as a respectable rate. The xcvr was an FT-1000 and the amp was a big remote-controlled ACOM. After some considerable amount of time he finally noticed that the amp had faulted and swithed itself offline when he changed bands to get on 20M. He'd been running barefoot the whole time without realizing it. The problem was sorted out, the amp was reset and off he went again this time with full power. His rate did not change by any discernable amount even though his "losses" went down by what . . 12 dB?

So no, I am not gonna get my knickers in a twist over the collection of incidental losses one runs into with FD antennas and tuners. As you imply there are far more telling factors which determine the effectiveness of any station.

> My
> personal best is 629 QSOs with one 100W rig, one op, one mode, three
> bands and two antennas. Coax fed trapper set up as inverted V for
> 80/40, quarter wave groundplane elevated 5 feet with 8 sloping radials
> for 20.
>
> Anybody here beat that on FD with only dipoles and verticals?

OK, change of topic here, I'm game. Anybody out there have well over a hundred countries confirmed on both 80 and 40 by using just a single length of end-fed wire for the antenna?

> 73 de Jim, N2EY

460. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 01:13:12 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4075f8d3_8@corp.newsgroups.com>
Source record: 97011

JGBOYLES wrote:
> A G5RV type antenna in its many configurations ought to work as advertised.

:-) Hope springs eternal from the human breast. :-)

> And as you have proved Cecil, it can be tweaked.

It can be tweaked to perform well on any and all HF bands.
Mine does.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
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461. Re: Optimized G5RV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 01:14:59 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <9badnd73nPuPZOjdRVn-uA@adelphia.com>
Source record: 97012

Cecil Moore wrote:

> An SWR sensing circuit could be added to turn this thing into an autotuner
> for a G5RV. Hope I didn't get carried away. These are just some random
> thoughts toward perfection of the G5RV.

Not at all, Cecil! I've printed this out and am looking at it now.
Thanks, much!

- Mike KB3EIA -

462. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 01:15:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4075f943$1_8@corp.newsgroups.com>
Source record: 97013

Brian Kelly wrote:
> OK , I got off on the wrong foot, this is more better. Tnx for the
> clarification. Now back to Autocad so that I can enshrine it for
> posterity . .

Don't bother with the caps. I was 180 degrees out of phase. Try
dual 3-30 microhenry rotary coils instead ... sorry about that.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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463. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 01:16:52 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404081716.34a61375@posting.google.com>
Source record: 97014

Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
news:<4075a3dd$1_2@127.0.0.1>...
> Cecil Moore wrote:
>
> > N2EY wrote:
> >
> >> Biggest headache, though, is switching the various lengths for
> >> different bands.
> >
> > No switching the various lengths on this one, Jim. Just a 110 ft
> > dipole fed with about 110 ft of fixed length ladder-line with two
> > series variable caps as the one knob tuner. Covers from 3.5 MHz to
> > 4.0 MHz with an SWR less than 1.7:1 and no lossy coils needed.
>
> I apologize to everyone for a mental blunder I made with this
> proposed antenna. The reactances are capacitive, not inductive.
> It would have to be tuned with series inductors which defeats
> the propose of a low loss design.

Nothing ventured, nothing gained. Back to the G5RV . .

w3rv

464. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 01:22:06 UTC
From: Dan/W4NTI <w4nti@get>
Message-ID: <2Vmdc.1323$l75.1145@newsread2.news.atl.earthlink.net>
Source record: 97015

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20040408185032.17504.00000015@mb-m20.aol.com...
> Dan wrote,
> >> >
> >>
> >> You mean we get to have the Civil War all over again? Good.
> >> 73,
> >> Tom Donaly, KA6RUH
> >>
> >>
> >
> >Good example of what I meant there Tom. Do you have ANY IDEA what your
> >talking about? Don't bother to answer, I already have it.
> >
> >Dan/W4NTI
> >
>
> There's no need to get cryptic, Dan. Practically everyone in America
> knows what you guys are up to. You'll get away with it, too, until you
begin to
>
> upset the status quo.
> 73,
> Tom Donaly, KA6RUH
>
>
My comment about 'Air America' is refering to the unofficial CIA air force
in Vietnam, Laos, Cambodia and other points. This was during the 60 and
70s. What the American Civil War has to do with this is totally unknown to
me.

Dan/W4NTI

465. Re: NEC2 modeling question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 02:11:00 UTC
From: K7JEB <k7jeb.remove_this@qsl.net>
Message-ID: <MCndc.2120$HN3.845@fed1read07>
Source record: 97016

Jack originally wrote:

>> In the real antenna, the feedpoint is connected to a
>> length of coax such that the center of the coax is electrically
>> connected to the western half of the antenna and the shield of the
>> coax is electrically connected to the eastern half.

Cecil wrote to you:

> Connect the two sides of the antenna together with a wire and install
> a source in the middle of that wire. Forget the coax for now. You can
> expand on the model later. Something like this:

```
> ---------------------+--S--+-----------------------
> | |
> -----------+ +------------
```

I would just add that the coax can be modeled as shown
below:

```
---------------------+--S--+-----------------------
| |
-----------+ +------------
| (shield)
|
|
|
|
|
|
|
|
|
|
|
--------
-----
---
```

Jim, K7JEB

466. Re: quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 03:09:39 UTC
From: Paul <k4cvr@amsat.orgNOSPAM>
Message-ID: <Ttodc.19965$Po2.7759111@news4.srv.hcvlny.cv.net>
Source record: 97017

Bill Turner <noway@nohow.com> wrote in message
news:68sa70pqf3g9thldcc5q9gr0bgudaj3mrn@4ax.com...

> Is the wire made of aluminum or just used for welding aluminum?
> Aluminum has a poor reputation for cracking from metal fatigue. Have
> you tested your wire for fatigue resistance? This will be important
> when used for quad wires.
>
> --
> Bill, W6WRT
> QSLs via LoTW
>

Hi Bill. This stuff is Almigweld alloy welding wire made by Alcotec
http://www.alcotec.com/prodline.htm#SPEC I guess I made it sound like it was
pure aluminum wire, sorry bout that. A friend tossed me a roll of this stuff
leftover from a quad he bought awhile back. Being that this is what I had on
hand and that it worked well for him I figured I'd use it too. 73

Paul, K4CVR

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.648 / Virus Database: 415 - Release Date: 3/31/04

467. Re: quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 03:16:47 UTC
From: Paul <k4cvr@amsat.orgNOSPAM>
Message-ID: <zAodc.19985$Po2.7780620@news4.srv.hcvlny.cv.net>
Source record: 97018

Larry Gauthier (K8UT) <MyCallsign@ARRL.NET> wrote in message
news:107aa9v2kp3vl2a@corp.supernews.com...

> Yes - the 10-10 Spring CW contest is the first weekend in May
> (www.ten-ten.org). Hope to work you then!
>
> --
> -larry
> K8UT
> 10X #2582
>

Hopefully we'll have some decent band conditions to work with. I'll keep an
ear out for you! 73

Paul, K4CVR
10x 73888

Ten-Tec Jupiter
ElectroInstrument "Key-8" key
big pot of coffee
and the quad...

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.648 / Virus Database: 415 - Release Date: 3/31/04

468. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 03:37:29 UTC
From: Paul <k4cvr@amsat.orgNOSPAM>
Message-ID: <ZTodc.20043$Po2.7836776@news4.srv.hcvlny.cv.net>
Source record: 96919

In case you missed it, this thread is
> about improvements that can be made to the standard G5RV,
> something in which tens of thousands of hams might be
> interested.
> --
> 73, Cecil, W5DXP

That's odd, by the header I thought it was supposed to be about locating cheap coax. I think dev/null had it right, it is a pissing contest...

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.648 / Virus Database: 415 - Release Date: 3/31/04

469. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 04:18:29 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404082018.20267cea@posting.google.com>
Source record: 96920

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4075698a_8@corp.newsgroups.com>...
> Mark Keith wrote:
> > I was so disgusted with the things after
> > the 2nd FD, I refused to ever use one again. And I haven't. I bring my
> > own wire and coax just to make sure I don't get stuck on one. And I
> > wasn't the only one complaining either...
> > I won't be suffering with a system efficiency in the mid 90's...
>
> It would be easy to try my G5RV modification. For 3.8 MHz, it is
> 25 ft of "450" ladder-line with a 1000 pf cap in parallel at the
> ladder-line/coax junction. I wish you would open your closed mind
> and try it sometime.

I don't have much use for one, even if I wanted to. I'll never dump my
dipoles to change to a G5RV. I'll never use an antenna system with a
coax/choke/ladder line feed either. Sorry...But feel free, if you want
to...
>
> > I guess this is what led me to question your choice of the perfect FD
> > antenna. 80m, being the band of real issue.
>
> A perfect FD antenna would allow one to change bands relatively
> quickly without sacrificing performance. My G5RV does that.

The only bands I work at FD are 80 and 40 CW. I use parallel dipoles
at right angles. My band change is instant. If for some reason I get a
wild hair, and decide to try 20, I get on the beam. I never go any
higher than that, because it's always night when I operate. I don't do
anything in the daytime except set up my junk, and then lounge around
and look useless for a while....:/ I then go home, and come back later
in the night and operate when it's cooler.
>
> The 110 ft dipole that I came up with has an SWR of less than 1.7:1
> over the entire 75-80m band. That sure beats the bandwidth of a
> resonant coax-fed dipole.

Who cares if I don't move more than 100kc all night? I zig zag back
and forth from 3500 to about 3600...7000 to about 7075 on 40..
>

>
> That's not the old wives' tale. The old wives' tale is, "A G5RV
> is a terrible antenna that cannot be improved to near perfection."
> With minor modifications, a G5RV will compete favorably with any

> other HF dipole on any HF band.

I guess your idea of "near perfection" is different than mine...I agree it can be improved quite a bit, but I'll reserve comment on the "near perfection" part...
If I wanted a multi band dipole using only one element, I would use a 80m dipole, with insulators at each point, for each band. I then use jumpers to bypass whichever insulators I want for a certain band. I prefer that method to yours because the feed stays at 50 ohms appx, and the pattern is a normal dipole pattern on any band I use. To me, this is more "perfect" than your method, as it retains my preferred "50=50=50" policy. :)
But it's all personal preference...Below would be a 80/40/20 version, which also works 15m on the 40 leg. I've used this method many times.

o----------------o----------o----------00----------o----------o---------------o

But for what he originally wanted as far as covering two parts of 80m, with one antenna, I still would prefer paralleled dipoles, cut for each section of the band. I would run them at right angles like a turnstile. The SWR curve will look like a "W". Solves his problem, and is still ultra efficient with no caps to diddle, weird feedline combos' etc..Add 40m legs, also in parallel, and it's instant bandchange between both parts of 80, and also 40. Won't have to do a thing except dial the radio around...I think he said he's already got the high bands covered...To me, thats the "perfect" antenna for his problem, and what I would run in his case. But to each his own I guess... MK

470. Re: NEC2 modeling question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 10:12:38 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86u0zt31ex.fsf@duchess.twilley.org>
Source record: 96921

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Sure, I could drop a line down to ground, but the antenna itself
doesn't work that way. It goes down a long coaxial line to the
transmitter, at which point the shield is grounded and the center
conductor is connected to the signal. Does that matter?

This stuff is black magic, I tell you.

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAdncbGPFSfAB/ezgRAsvRAJ47d+IGSWD3O8uENBy+pmYyJh9uwwCeNnCG
uAXzpVjz6lu8q79wpA84QuU=
=80qL
-----END PGP SIGNATURE-----
```

471. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 11:52:20 UTC
From: n2ey@aol.comSPAMNO
Message-ID: <20040409075220.05715.00000212@mb-m25.aol.com>
Source record: 96922

In article <ZXUbc.19943$vo5.609369@bgtnsc05-news.ops.worldnet.att.net>,
"Annette & LJ Dumas" <nettski@worldnet.att.net> writes:

>The Portsmouth, VA ARC (W4POX) uses them during Field Day on 40 & 80 M,
>we've had outstanding results.
>
How many QSOs on how many band/modes?

73 de Jim, N2EY

472. Re: NEC2 modeling question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 13:09:58 UTC
From: K7JEB <k7jeb.remove_this@qsl.net>
Message-ID: <xgxdc.3180$HN3.1551@fed1read07>
Source record: 96923

Jack Twilley:
> Sure, I could drop a line down to ground, but the antenna itself
> doesn't work that way. It goes down a long coaxial line to the
> transmitter, at which point the shield is grounded and the center
> conductor is connected to the signal. Does that matter?

ASCII art fails me, Jack. You can model the coax
as a wire to ground, but that wire has to have all
the geometric twists and turns that your actual
coax takes getting to the transmitter. The coax
shield is part of your antenna system; it radiates
along with both sides of the dipole. And even at
your transmitter, "ground" isn't really ground.
There is a connecting wire between the transmitter
case and "earth" ground.

In reality, there is no such thing as "ground" with
RF.

The reason your post caught my eye is that I have
the same antenna system you do - coax-fed dipole
with no balun - and had to model my coax line
shield to get "real" EZNEC results.

Jim, K7JEB

473. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 14:05:58 UTC
From: jder8745@aol.com
Message-ID: <20040409100558.27331.00000023@mb-m27.aol.com>
Source record: 96924

Someone said:

"There is no gain in any antenna. "
==========

This is absolute BS. All u hv to do is read the catalogs fm Cushcraft, MFJ, HyGain, etc. ALL of their antennas have gain! (Except the ones which don't.)

73 e Jack, K9CUN

474. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 14:14:42 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4076b000_5@corp.newsgroups.com>
Source record: 96925

Paul wrote:
> That's odd, by the header I thought it was supposed to be about locating
> cheap coax. I think dev/null had it right, it is a pissing contest...

Subjects drift and split into different threads. If you don't like this
thread, don't read it. Simple as that.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

475. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 14:18:01 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4076b0c7$1_5@corp.newsgroups.com>
Source record: 96926

Mark Keith wrote:
> But to each his own I guess... MK

I prefer experimenting to operating.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

476. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 14:50:24 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404090650.1afa79d3@posting.google.com>
Source record: 96927

> Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4075f943$1_8@corp.newsgroups.com>...
> > Brian Kelly wrote:
> > OK , I got off on the wrong foot, this is more better. Tnx for the
> > clarification. Now back to Autocad so that I can enshrine it for
> > posterity . .
>
> Don't bother with the caps. I was 180 degrees out of phase. Try
> dual 3-30 microhenry rotary coils instead ... sorry about that.

Lets not throw the baby out with the washwater, this ain't over Cecil. In fact it opens up possibilities. Fact is that very few ops who get on 80/75 use anywhere near the entire 3.5-4.0 segement, it's a function of one's specific interests and reasons for using the band. In my own case I'm a basically a DXer thus my only real interest is in just the 3.50-3.55 and 3.70-3.85 Mhz slices of the band. And in being able to have a single, simple antenna which presents low feedpoint SWRs in those frequency ranges. Which rules out conventional dipoles and most of the rest of it's relatives.

In the case of your 110 foot flattop with it's 110 foot feedline and for my specific purposes the "tuner" would be a pair of inline lo-loss fixed coils with taps which are selectable with a simple two pole two-position ceramic rotary switch. Or make it a three pole switch and be able to ground the antenna. Three taps yields three slices, etc. A tuner like that would be a whole bunch easier to build and use and would require much less mechanical claptrap than the original pair of variable caps scheme requires.

However if using your 110 foot run of ladderline and coils configuration is a hassle but a 44 foot feedline would work Mr. Boyle's design can be used to get the same basic performance results with the caps. The thread has produdced a couple good approaches for practical solutions for an old problem and they both go into my keepers book.

w3rv

477. Re: Receive antenna question..

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 15:44:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <nugd70dt1ilu1pd76m5a4jee141psdoijo@4ax.com>
Source record: 96928

On 7 Apr 2004 07:16:19 -0700, fred@albert.usd253.org (Fred) wrote:

>I am wondering if this will workï¿½
>
>This is for receive onlyï¿½. I have a mag mount antenna that I have
>trimmed to around 19" for around 155 MHz (1/4 wave), I was wondering
>about adding a 6.5" antenna next to it for UHF.
>
>The antenna is screwed to the mag base on a 1/4 20 stud. My idea is to
>take a 2 inch piece of flat steel and drill a 1/4 inch hole to mount
>under the antenna. Then I will attach my 6.5" antenna..

Even with the drawing, this is a bit obscure. BOTH should be attached
to the same point (just make the smaller one angle off at 10 - 20
degrees so the have "some" separation).
>
>|
>| <-- 19"
>|
>| |
>| | <-- 6.5"
>|_|
>|
>|
>|
>| <-- Coax
>|
>|
>
>
>My other question has to do with grounding. I used my VOM to check and
>see it the outer braid of the coax goes anywhere. I thought it might
>ground to the magnet but this is not the case. The center of the coax
>goes to the 1/4" stud on the mag mount but the outer braid seems to
>not go anywhere.. is this right?
>
>Thanks!
>
Hi Fred,

You should be able to measure continuity from the connector pin
(center conductor) out to the antenna radiator (the whip). Measuring
continuity for the shield is not always guaranteed for a mag-mount.

73's
Richard Clark, KB7QHC

478. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 15:44:12 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <fxzdc.143$cD2.12959@attbi_s51>
Source record: 96929

Reg Edwards wrote:

> Richard Clark,
>
> I fully support your "All antennas have zero gain" campaign.

IMO applying the word 'Gain' to an antenna is misuse of the word 'gain'.

Beam forming antennas do concentrate the RF energy into an angle less than 2*Pi steradians [Hemisphere] but the total energy concentrated is still the power applied to the antenna minus losses. The far field from a beam forming antenna is more intense than from an isotropic antenna.

Maybe the better term is to quote the solid angle at the 1/2 power points in the E and H plane as a figure of merit. Example: antenna A has a 1/2 power beam width of 2500 square degrees while antenna B has a 1/2 power beam width of 1800 square degrees.

>
> Why not join the "There's no such thing as an SWR meter" campaign?
> ----
> Reg, G4FGQ
>
>

Ah! But there are techniques for measuring TRUE VSWR!! [Not my little Daiwa 101C or even the trusty Bird.]

Nope, I used to measure TRUE VSWR [in 1958] using a General Radio Slotted Line with moveable probe!! I've forgotten the plotting details but the answer came from plotting the response over 1/4 wavelength on a SMITH Chart. Ain't cheap but it was accurate.

Seriously, I wonder if any readers recall the details of measuring and plotting based on the GR Slotted Line?

Next question: where do I get a 160 meter 1/2 wavelength 50 ohm slotted line?

479. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 15:55:56 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4076c7bc_6@corp.newsgroups.com>
Source record: 96931

Brian Kelly wrote:
> In the case of your 110 foot flattop with it's 110 foot feedline and
> for my specific purposes the "tuner" would be a pair of inline lo-loss
> fixed coils with taps which are selectable with a simple two pole
> two-position ceramic rotary switch. Or make it a three pole switch and
> be able to ground the antenna. Three taps yields three slices, etc. A
> tuner like that would be a whole bunch easier to build and use and
> would require much less mechanical claptrap than the original pair of
> variable caps scheme requires.

It's essentially moving the loading coils from the antenna to the
hamshack and, according to EZNEC, gives a 1.1:1 SWR from 3.6 to
4.0 MHz. SWR goes up to 1.5:1 on 3.5 MHz.

> However if using your 110 foot run of ladderline and coils
> configuration is a hassle but a 44 foot feedline would work Mr.
> Boyle's design can be used to get the same basic performance results
> with the caps. The thread has produdced a couple good approaches for
> practical solutions for an old problem and they both go into my
> keepers book.

It will be interesting to apply Mr. Boyle's design to your particular
two-segment problem.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

480. Earth loop somewhere- humming sound

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 15:56:02 UTC
From: Gerhard Beulke <palmcove@email.com>
Message-ID: <MPG.1ae1648d323358979897ac@News.individual.DE>
Source record: 96930

Hi,

I couldn't find any better Newsgroup to ask this question.
It's about a TV antenna.
When I try to capture a video from a VCR (the VCR is connected to the antenna), I get a humming audio signal.
When I unplug the aerial cable, it's gone.
The antenna is installed on the roof and is proper earthed. In between is a booster. I don't know if the booster causes the trouble but it shouldn't.

The humming sound is only there when the VCR is connected to the PC (via firewire) and the aerial cable is plugged into the VCR.

Any tips how to solve the problem would be greatly appreciated.

73
Gerhard Beulke
VK-DG1EHK

--

Looking for a dream holiday?
http://www.palmcove.net/
Palm Cove- Winner of the Award "Australia's Cleanest Beach"

481. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 16:00:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4076c8c3$1_6@corp.newsgroups.com>
Source record: 96932

Dave Shrader wrote:
> IMO applying the word 'Gain' to an antenna is misuse of the word 'gain'.

Maybe, but I'll bet it's a losing cause. :-)

> Next question: where do I get a 160 meter 1/2 wavelength 50 ohm slotted
> line?

I've made slots in RG-213 with an Exacto knife. How much spare time
do you have?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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482. Re: Earth loop somewhere- humming sound

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 16:10:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r9id70lqq7adp9g47patasqsjes2lk8gvr@4ax.com>
Source record: 96933

On Sat, 10 Apr 2004 01:56:02 +1000, Gerhard Beulke
<palmcove@email.com> wrote:

>Hi,
>
>I couldn't find any better Newsgroup to ask this question.
>It's about a TV antenna.
>When I try to capture a video from a VCR (the VCR is connected to the
>antenna), I get a humming audio signal.
>When I unplug the aerial cable, it's gone.
>The antenna is installed on the roof and is proper earthed. In between
>is a booster. I don't know if the booster causes the trouble but it
>shouldn't.
>
>The humming sound is only there when the VCR is connected to the PC (via
>firewire) and the aerial cable is plugged into the VCR.
>
>Any tips how to solve the problem would be greatly appreciated.
>
>73
>Gerhard Beulke
>VK-DG1EHK

Hi Gerhard,

One way that is quick, but not always effective, is to put a "ground
breaker" between your equipment's power supply and the mains. I'm not
sure if this is available for European AC connectors.

Another way is to use extension cords so all equipment that is powered
connects to the same mains outlet.

You say the antenna is "properly grounded." This is suspicious. Does
it have a wire going to the SAME ground (earth) connection as the
mains? If not, then connect the two together. If the first two don't
work (and even if they do), your problem is probably from this "proper
ground." The reason for the name "ground loop" is that you have two
different paths to ground (two different ground connections separated
by earth).

73's
Richard Clark, KB7QHC

483. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 16:17:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <suid70pjfhsnc7ugpdgfpk6nt82ha53310@4ax.com>
Source record: 96934

On Fri, 09 Apr 2004 09:02:21 -0700, Bill Turner <noway@nohow.com>
wrote:

>On Thu, 08 Apr 2004 18:35:22 GMT, Richard Clark <kb7qhc@comcast.net>
>wrote:
>
>>All simply an argument for engineering through democratic vote.
>
>_____
>
>Not at all. They are arguments for using common language. Your attempt
>to redefine antenna gain - a term in use for decades - clouds an issue
>which is actually straightforward. Naughty boy!

C'mon Bill,

Redefine antenna gain? Where? I simply removed the option of calling
it absolute gain that is more in the province of active amplifiers not
passive lenses. The thread is already 28 posts too long - it isn't
rocket surgery.

73's
Richard Clark, KB7QHC

484. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 16:31:44 UTC
From: Paul <k4cvr@amsat.orgNOSPAM>
Message-ID: <QdAdc.21757$Po2.9753898@news4.srv.hcvlny.cv.net>
Source record: 96935

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:4076b000_5@corp.newsgroups.com...
> Subjects drift and split into different threads. If you don't like this
> thread, don't read it. Simple as that.
> --
> 73, Cecil, W5DXP

Geeez, Cecil, no need to get emotional about it...

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.648 / Virus Database: 415 - Release Date: 3/31/04

485. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 16:48:58 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404090848.c9f4e73@posting.google.com>
Source record: 96936

nm5k@wt.net (Mark Keith) wrote in message
news:<25eb70d7.0404082018.20267cea@posting.google.com>...
> Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4075698a_8@corp.newsgroups.com>...
> > Mark Keith wrote:

snip

> But for what he originally wanted as far as covering two parts of 80m,
> with one antenna, I still would prefer paralleled dipoles, cut for
> each section of the band. I would run them at right angles like a
> turnstile. The SWR curve will look like a "W". Solves his problem, and
> is still ultra efficient with no caps to diddle, weird feedline
> combos' etc..Add 40m legs, also in parallel, and it's instant
> bandchange between both parts of 80, and also 40. Won't have to do a
> thing except dial the radio around...I think he said he's already got
> the high bands covered...To me, thats the "perfect" antenna for his
> problem, and what I would run in his case. But to each his own I
> guess...

Mark as usual one size does not fit all. Particularly when antennas in
small back yards with limited antenna support options come into play.
Which is what I'm dealing with. If I had enough real estate available
to put up crossed coax-fed dipoles/vees I'd probably do that. But as I
pointed out earlier I don't have enough real estate, not even close.
So your solution is irrelevant here.

The jumper-to-bandswitch antenna would work IF one was (a) able to
drop and hoist the antenna quickly and conveniently (b) was inclined
to futz around in the dark to change bands. Which I'm not. I've
installed dipoles at this site before, the trees I use for supports
are gnarly beasts, simply dragging one insulator per end per weekend
thru the things is a major hassle. There are still a couple end
inulators dangling in 'em from previous (broken) antennas so that
elimimintes the quick up/down idea and hauling multiple insulators
and/or traps thru 'em.

I *might* have 20 & 15 covered *if* that antenna works. But I don't
know yet one way or the other so I'm still planning on an
off-the-shelf G5RV to cover my butt this time around unless a better
idea come up. I've used G5RVs before, they're far from my favorite
type antenna mostly because of the need for a wide-range ATU but they
do work and are applicable to a much wider range of installation
conditions and restrictions than any other type of coax-fed multiband
HF antenna that I know about.

> MK

w3rv

486. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 18:25:12 UTC
From: dplatt@radagast.org
Message-ID: <107dqk8aut57e69@corp.supernews.com>
Source record: 96937

In article <fxzdc.143$cD2.12959@attbi_s51>,
Dave Shrader <david.shrader@comcast.net> wrote:

>IMO applying the word 'Gain' to an antenna is misuse of the word 'gain'.

Since this particular terminology has been used in this way in both amateur and professional antenna literature for more decades than I've been alive (I'm pushing 50) I think you're tilting at windmills to try to eliminate it, or to declare it "misuse".

I personally prefer to refer to what an antenna delivers as "directional gain", to distinguish it from the sort of "more RF out than RF in" power gain that an amplifier delivers. From the point of view of someone trying to deliver a specified amount of power to a receiver in a specified direction, the two types of "gain" can be interchanged to a large degree.

Yes, they're distinct, and we need to remember the distinctions, but they can be traded-off against one another in many common sorts of calculations.

[At the risk of re-opening a topic of contention, I'll posit that the use of the term "gain" to refer to both amplifier power gain and to antenna directional gain is somewhat similar in spirit to the use of the term "resistance" to refer to both dissipative and nondissipative impedances. Each is a single term, referring to two different phenomena which can under many circumstances behave in ways which can look equivalent from a particular point of view.]

>Next question: where do I get a 160 meter 1/2 wavelength 50 ohm slotted
>line?

Go down to your nearest abandoned rust-belt factory that has a large brick or concrete chimney, wrap the chimney with sheet tin (leaving a slot), and drop a suitable-sized silver-plated cast-iron sewer pipe down the center. Run your probe up and down the chimney on a huge pulley.

It'll probably be tricky to couple this to the antenna and feedline, though. I don't think even Andrews makes a heliax connector quite this large.

>>grin<<

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior

I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

487. Re: NEC2 modeling question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 18:31:16 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86ptah2ebv.fsf@duchess.twilley.org>
Source record: 96938

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Jim" == k7jeb remove this <K7JEB> writes:

Jim> ASCII art fails me, Jack. You can model the coax as a wire to
Jim> ground, but that wire has to have all the geometric twists and
Jim> turns that your actual coax takes getting to the transmitter.

That'll be a royal pain in the butt, to put it kindly.

Jim> The coax shield is part of your antenna system; it radiates along
Jim> with both sides of the dipole. And even at your transmitter,
Jim> "ground" isn't really ground. There is a connecting wire between
Jim> the transmitter case and "earth" ground.

Actually, at my station. the water-pipe ground is connected to the
antenna tuner's ground which is connected to the transceiver's ground,
but I get your point.

Jim> In reality, there is no such thing as "ground" with RF.

This appears to be one of those subtleties that has slipped past me.

Jim> The reason your post caught my eye is that I have the same
Jim> antenna system you do - coax-fed dipole with no balun - and had
Jim> to model my coax line shield to get "real" EZNEC results.

Interesting. I do actually have two current-mode baluns -- the
feedpoint has eight or nine turns of coax that were wrapped around a
coffee can before being tied down and the coffee can removed, and the
transceiver has three turns of coax through three large rare earth
magnets. How does one model those with NEC2?

Jim> Jim, K7JEB

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAduv5GPFSfAB/ezgRApx/AKDw+/x5Ku3RSZxFHKWvh7N6md64MQCgvZZu
S5/ViSXlynci7QGrWcjIcMA=
=rFjA
-----END PGP SIGNATURE-----
```

488. 6m vert dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 19:13:07 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <4076f5cd$1@news.vallnet.com>
Source record: 96939

I'm planning on making a 6m vertical dipole, using a tube lower element (shield side) to run the coax to the center point.
I have an almost perfectly sized stainless steel whip (old CB antenna), and already have a slightly longer section of copper pipe to use for the bottom that I can easily cut down. A friend that makes custom plastic stuff says if he has the proper sized scrap he'll bore and cut a plastic insulator/whip support for me... if not he'll get the stuff at cost.

Mounted sideways it would look something like this:
- Steel Whip
+ Feedpoint/section insulator/whip support
= Copper pipe with feedline (coax) running through it to feed point
------------------------+===============
Left side connected to center conductor at feedpoint
Right side connected to shield at feedpoint

What I'd like to know is if it is going to have a major effect on my dimensions/bandwidth/anything else if I use different materials for the two sections of the dipole (steel for the whip, copper for the pipe)? And what kind of effect is having the two different element sizes going to have as well? (I know increasing element sizes tends to raise overall bandwidth, but not sure how only one element will effect the antenna as a whole.)

Also is there going to be any effect from the capacitance between the shield braid of my coax and the antenna segment surrounding it? The website I read this from didn't mention that, though they did say you may want to coil the feedline about 4-6 turns about another quarter wavelength from the end of the antenna.

Thanks in advance
73
KD4COX, Eric
--

489. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 19:15:05 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <ZCCdc.681$nK1.7208@attbi_s54>
Source record: 96940

Bill Turner wrote:

SNIP

> Not at all. They are arguments for using common language. Your attempt
> to redefine antenna gain - a term in use for decades - clouds an issue
> which is actually straightforward. Naughty boy!
>
> --
> Bill, W6WRT
> QSLs via LoTW
>

Hold on Bill!! I posit a 6 element long john yagi in free space with 1500 watts at the feedpoint.

If I assume 100% efficiency, no losses in the antenna and antenna materials, and then calculate the power in the surface of the resulting pattern do I not get 1500 watts?? That's 0 dB gain!!!

This is common language and correct Physics.

THE ANTENNA HAS NO GAIN !!!!!!!

Now, for the sake of accuracy the antenna PATTERN will have a different pattern from a dipole or an isotropic antenna. The antenna pattern yields a field intensity that is greater than the reference antenna's pattern.

So, the correct gain terminology must speak in terms of resulting PATTERN not the antenna.

'Antenna gain' is both loose and incorrect language notwithstanding advertising and marketing claims. 'Antenna Pattern Gain' or 'Directional Gain' is correct language.

490. Re: Open Letter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 19:49:24 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c56uroita1@newshost.mot.com>
Source record: 96941

"David J Windisch" <davidw@copper.net> wrote in message
news:40730ee8_1@newsfeed.slurp.net...
> Hi, all concerned:
>
> Is this the balun problem?
>
> For openers, a 40-meter half-wave dipole with trees and 3 dogbone
> insulators, center-fed directly across the center insulator with 33 feet
of
> RG-59/U coax, nothing special,
>
> TREE--o///o--------------o///o--------------o///o--TREE
> | |
> coax
> feeder
> drooping
> down
> 33
> feet
> here
> to
> the
> shack
>
> you know, like that ASCII sortagraphic. Like the one I put up in 1957 or
> 1958.
>
> The thing has voltage loops at all ends, including the shack-end of the
> coax-braid, correct?
>
> 73, Dave, N3HE

On my 40M inverted Vee, I put 4-5 turns in teh coax and a couple of
clamp on "beads" several years ago and haven't had any problems. I had just
gotten got back on the air and remember seeing both the "coil-up-your-coax"
and "bead-type" baluns, but didn't remember the specifics, so I took a shot
at it with what I call the K9DCI choke-choke balun. hi hi

--
Steve N, K,9;d, c. i My email has no u's.

491. What is the *impedance* of the 5/8 wavelength ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 20:09:24 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c57018$j9n$1@newshost.mot.com>
Source record: 96943

Sorry if this is a double post. It looks like the first got eaten by
goblins.

Does everybody agree with Joe Street's 50-j425?

http://www.arsqrp.com/ars/pages/back_issues/2000_text/1000_text/5_8.html

--
Steve N, K,9;d, c. i My email has no u's.

492. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 20:13:20 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c57050$7r7$1@titan.btinternet.com>
Source record: 96942

"Dave Shrader" wrote -
> Seriously, I wonder if any readers recall the details of measuring and
> plotting based on the GR Slotted Line?
>

What's 'GR' ? Never heard of it.

Never-to-be-forgotten, I first measured SWR on a laboratory bench slotted line in the town of Stockport near Manchester around February 1944. V1's and V2's, Hitler's secret weapons, were falling on London and S.E. England. The 1000-bomber raids by the RAF on German towns and cities, the fire storms directed by Air Marshal Bomber Harris, were building up with an ever increasing ferocious intensity. One night 110 heavy bombers failed to return to base. The death toll in Europe and Russia had already passed the 15 million mark.

I remember it was raining at the time. It always rains in Manchester.

There were two simple relative voltage measurements spaced 1/4-wavelengths apart. Values of Zo, Zg, Zt and Gamma were quite irrelevant. The only mathematical equation was SWR = V1/V2. And that's all there was to it!

So began my radio education.

Reg, G4FGQ

493. 35 ohm coax question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 20:41:48 UTC
From: joeb@mail.subrec.org
Message-ID: <190e433f.0404091241.68d9c458@posting.google.com>
Source record: 96944

Does anyone know of a source of 35-ohm coax? I googled for it but all I found was some instrumentation cable which had way too much loss at the frequencies that I want to use it for. I know this sounds strange but I want to make a 1/4 wave impedance matching line for an 80 meter camping antenna.
joeb@mail.subrec.org

494. Re: What is the *impedance* of the 5/8 wavelength ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 20:43:48 UTC
From: jgboyles@aol.com
Message-ID: <20040409164348.29919.00000099@mb-m13.aol.com>
Source record: 96945

>Does everybody agree with Joe Street's 50-j425?

Eznec says a 5/8 wavelength 147 MHZ GP with 1/4 wavelength sloping radials (4)
in free space is 114-j322.
73 Gary N4AST

495. Re: Lattin antenna.....more info sources

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 20:44:16 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0404091244.69725b9b@posting.google.com>
Source record: 96946

carkenord@juno.com (Lee Carkenord) wrote in message
news:<4346b55e.0404040907.73bc4ac5@posting.google.com>...
> The following is some of the info I gathered in my attempts to
> understand and build a Lattin. As I said in my previous post, I was
> never able to get it to work as Mr. Lattin described. I wish that
> when I tried to build it, I would of had access to todays "Antenna
> Analyzer" test instruments.
>
> It has been patented, filed Feb 13, 1948. Patent # 2,535,298 My
> local library had the patent on microfiche, and I was able to get it
> copied. I have a copy of his patent, with illustrations/drawings, on
> file here.
>
> Lattin described this antenna in QST in December of 1960.
>
> July 1960 issue of "CQ" mag has a related antenna project, by
> Richmond, W1CEJ, called "A Portable Dipole"
>
> Vincent Lear, G3TKN has also worked with the Lattin design, and was
> published in RSGB.
>
> July 1992 issue of "73" mag has another article "Six-band linear trap
> antenna" by Brumbaugh KB4ZGC.....using approx the same idea.
>
> September 1986 issue of "73" mag has Lattin type antenna project
> described...."The Texas Tango Antenna" by Garrett K5BTV.

See also:

http://www.dxzone.com/cgi-bin/search/frame/FrameIt.cgi?Url=http://www.dxzone.com/cgi-bin/search/jump.cgi?ID=7496&ID=7496
>
> Maybe the above info will stimulate some more experimentation and/or
> modelling of the
> Lattin. I sure hope so.
>
It seems to me that there are two major issues with the Lattin/W4JRW
antenna:

1) Mechanically, it can be challenging. Regular Twin Lead with one of
the wires cut is just too flimsy. If you use spreaders and such it's
not simple any more. What's really needed is for somebody to make
"tubular" Twin Lead with, say #16 or even #14 copperweld conductors.

2) The velocity factor of the Twin Lead is a challenge to model
because the stub sections radiate on some frequencies but not others.

The thing is really just another form of trap antenna.

I get the feeling that Lattin either went through serious math pushups
to get his design, or cut up a lot of Twin Lead, or both.

73 de Jim, N2EY

496. Re: 35 ohm coax question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 20:54:17 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <co-dnaEDzbfskOrd4p2dnA@comcast.com>
Source record: 96947

"Joe B" <joeb@mail.subrec.org> wrote in message
news:190e433f.0404091241.68d9c458@posting.google.com...
> Does anyone know of a source of 35-ohm coax? I googled for it but all
> I found was some instrumentation cable which had way too much loss at
> the frequencies that I want to use it for. I know this sounds strange
> but I want to make a 1/4 wave impedance matching line for an 80 meter
> camping antenna.
> joeb@mail.subrec.org

Put two pieces of 75 Ohm coax in parallel. Cut the two pieces from the same
reel.

Tam/WB2TT

497. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 20:55:44 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40770dff$1_1@corp.newsgroups.com>
Source record: 96948

Paul wrote:
> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>>Subjects drift and split into different threads. If you don't like this
>>thread, don't read it. Simple as that.
>
> Geeez, Cecil, no need to get emotional about it...

No emotion there, Paul, just objective logic. It's like saying,
"If you don't like broccoli, don't eat it. Simple as that."
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

498. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 21:03:05 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40770fb9_1@corp.newsgroups.com>
Source record: 96949

Brian Kelly wrote:
> The jumper-to-bandswitch antenna would work IF one was (a) able to
> drop and hoist the antenna quickly and conveniently (b) was inclined
> to futz around in the dark to change bands.

I can (a) release the pulley on either end of my antenna or just pull
on the feedline to get at the jumper point. I have (b) a mercury
vapor arc-type nightlight in the backyard 10 feet distance from the
feedline.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

499. Re: 35 ohm coax question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 21:11:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407711ac_1@corp.newsgroups.com>
Source record: 96950

Joe B wrote:
> Does anyone know of a source of 35-ohm coax?

The Wireman has RG-83A for $3 a foot - Stock # 165.
Do you want it that bad?

How about simply paralleling two pieces of 75 ohm
coax for a Z0 of 37.5 ohms?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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500. Re: What is the *impedance* of the 5/8 wavelength ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 21:16:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407712e0$1_1@corp.newsgroups.com>
Source record: 96951

JGBOYLES wrote:
> Eznec says a 5/8 wavelength 147 MHZ GP with 1/4 wavelength sloping radials (4)
> in free space is 114-j322.

That's why a lot of 5/8WL loading coils are tapped. In the ARRL
Antenna Book, 15th edition, a 10.5 turn coil is tapped 4 turns
from the top for a 50 ohm match to a 5/8WL on 2m.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

501. Re: 35 ohm coax question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 22:15:19 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnc7e83m.2atf.bit-bucket@localhost.config.com>
Source record: 96952

```
On Fri, 09 Apr 2004 16:11:24 -0500, Cecil Moore hath writ:
> Joe B wrote:
>> Does anyone know of a source of 35-ohm coax?
>
> The Wireman has RG-83A for $3 a foot - Stock # 165.
> Do you want it that bad?
>
> How about simply paralleling two pieces of 75 ohm
> coax for a Z0 of 37.5 ohms?

Thanks the 'trick' I use for my Field Day, 40M Vert. array.
I use two 1/4 wave, 75 ohm pieces of coax in parallel to
match the antenna to a run of 52 ohm feedline. WLAC.

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | config.com | DM68mn SK
```

502. Re: 35 ohm coax question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 22:32:42 UTC
From: jgboyles@aol.com
Message-ID: <20040409183242.29885.00000064@mb-m13.aol.com>
Source record: 96953

>Does anyone know of a source of 35-ohm coax?

Parallel 2 pieces of 75 ohm coax.

>I want to make a 1/4 wave impedance matching line for an 80 meter
>camping antenna.

I use a 100' roll of #18 stranded wire for my 80M camping/portable dipole. I feed it various ways.
One way I have been looking at that doesn't require a tuner: Get the 100' dipole about 30'-40' up. (This is for 3.8 MHZ.) Feed it in the center with 39' of your favorite 300 ohm TV twinlead. At the far end of the twinlead, short the conductors. 3' from the shorted end, attach your 50 ohm coax (thru a balun of course).
I haven't tried this, but I will, and I am sure I am not the first to dream this up. Modelling says this should provide a 1:1 match at the design frequency. If you use 450 ohm line, it takes about 30', but 450 ohm line is bulkier.

73 Gary N4AST

503. Re: NEC2 modeling question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 22:35:04 UTC
From: K7JEB <k7jeb.remove_this@qsl.net>
Message-ID: <iyFdc.3717$HN3.3193@fed1read07>
Source record: 96954

I wrote:
>> ASCII art fails me, Jack. You can model the coax as a wire to
>> ground, but that wire has to have all the geometric twists and
>> turns that your actual coax takes getting to the transmitter.

Jack Twilley:
> That'll be a royal pain in the butt, to put it kindly.

That's *real* antenna analysis. Think about doing that
for all the wires in a missile silo to assess EMP
vulnerability and you get an idea about how the big
boys use NEC.

Actually, you can fudge it a bit. Any bump or kink
less that 1/10 wavelength in extent can be approximated
with a chord between its endpoints.

>> In reality, there is no such thing as "ground" with RF.

> This appears to be one of those subtleties that
> has slipped past me.

Yeah, the best one can do is equipotential surfaces,
with the hope that one of those surfaces is parallel
to that big hunk of lossy dielectric beneath your
feet.

> Interesting. I do actually have two current-mode baluns -- the
> feedpoint has eight or nine turns of coax that were wrapped around a
> coffee can before being tied down and the coffee can removed, and the
> transceiver has three turns of coax through three large rare earth
> magnets. How does one model those with NEC2?

As fixed inductances in series with the "coax shield" wire.
I make your first balun to be about 10 uH, which is roughly
200 ohms at 3 MHz. Your guess is as good as mine on the
one with the rare-earth magnets. What you want to look for
is reducing the current in the "coax shield" wire to zero.

73,
Jim, K7JEB

504. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 22:59:05 UTC
From: n2ey@aol.comSPAMNO
Message-ID: <20040409185905.12769.00000219@mb-m16.aol.com>
Source record: 96955

In article <d22b54c3.0404090650.1afa79d3@posting.google.com>, kelly@dvol.com (Brian Kelly) writes:

>In the case of your 110 foot flattop with it's 110 foot feedline and
>for my specific purposes the "tuner" would be a pair of inline lo-loss
>fixed coils with taps which are selectable with a simple two pole
>two-position ceramic rotary switch. Or make it a three pole switch and
>be able to ground the antenna. Three taps yields three slices, etc.

Or use relays. Switch the 50 ohm end of the coil to avoid high voltages. Two relays yields four possible choices....

>A
>tuner like that would be a whole bunch easier to build and use and
>would require much less mechanical claptrap than the original pair of
>variable caps scheme requires.

Perhaps. An old electric screwdriver could be used to drive a pair of caps or rollers, too. They're all over the place, discarded when the batteries go bad.

73 de Jim, N2EY

505. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-09 23:48:39 UTC
From: kashe@sonic.net
Message-ID: <nhde70d5qob0mms9ohpu6g94ukdugb37a5@4ax.com>
Source record: 96956

On Fri, 09 Apr 2004 01:22:06 GMT, "Dan/W4NTI" <w4nti@get rid of this
mindspring.com> wrote:

>
>"Tdonaly" <tdonaly@aol.com> wrote in message
>news:20040408185032.17504.00000015@mb-m20.aol.com...
>> Dan wrote,
>> >> >
>> >>
>> >> You mean we get to have the Civil War all over again? Good.
>> >> 73,
>> >> Tom Donaly, KA6RUH
>> >>
>> >>
>> >
>> >Good example of what I meant there Tom. Do you have ANY IDEA what your
>> >talking about? Don't bother to answer, I already have it.
>> >
>> >Dan/W4NTI
>> >
>>
>> There's no need to get cryptic, Dan. Practically everyone in America
>> knows what you guys are up to. You'll get away with it, too, until you
>begin to
>>
>> upset the status quo.
>> 73,
>> Tom Donaly, KA6RUH
>>
>>
>My comment about 'Air America' is refering to the unofficial CIA air force
>in Vietnam, Laos, Cambodia and other points. This was during the 60 and
>70s. What the American Civil War has to do with this is totally unknown to
>me.
>
>Dan/W4NTI

Reading the preceding posts in order will make it all clear.

506. 80M camping/portable dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 00:19:43 UTC
From: jgboyles@aol.com
Message-ID: <20040409201943.29919.00000112@mb-m13.aol.com>
Source record: 96957

I described a 100' tunerless 80m dipole on the thread "35 ohm coax question".
I was just rechecking my calculations, and it appears I made a small error in
the dimensions. If anyone is interested in updated dimensions, let me know.
As I mentioned I haven't tried this, but it should work. (famous last words
:-)).
73 Gary N4AST

507. Re: Lattin antenna.....more info sources

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 00:31:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jtfe70hkk6crnflt2p1u7bdoib1jnj6e6n@4ax.com>
Source record: 96958

On 9 Apr 2004 13:44:16 -0700, N2EY@AOL.COM (N2EY) wrote:
>I get the feeling that Lattin either went through serious math pushups
>to get his design, or cut up a lot of Twin Lead, or both.

Hi Jim,

I am working on the design, however the premise appears to be
"academic." In other words, there are some who can tell you how it
should work, but not why it doesn't.

Your description above suits the modeling to a T - serious math
pushups. I don't think anyone could stumble onto a 5 band antenna by
simple cut and try.

73's
Richard Clark, KB7QHC

508. Re: NEC2 modeling question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 00:46:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6dge7055uqmbun3jm1nibd89h4r7jnuvhg@4ax.com>
Source record: 96959

On Fri, 09 Apr 2004 11:31:16 -0700, Jack Twilley
<jmt+usenet@twilley.org> wrote:

>the
>transceiver has three turns of coax through three large rare earth
>magnets. How does one model those with NEC2?

Hi Jack,

Magnets do not play any particular role in chokes. Magnetic cores
perhaps, but being magnetic is not in and of itself a remarkable
indicator of efficient choking potential.

Research the archives for ferrites, amidon, type 43 or 75 or 77 (there
are others), beads, and so on as terms.

As for modeling them, they are resistors. You can rate them at about
a Watt to 5 Watts (I've never tested one to destruction). Again, you
need the characteristics to know how much. The typical bead exhibits
about 20 Ohms in the mid to high HF region. The shape of its curve
(the resistance vs. frequency) is variable for any particular type.
Some increase through HF, others decrease, some don't even begin until
VHF.

Beads are additive. Two beads, 40 Ohms, three beads, 60 Ohms and so
on. Passes through a larger core (same material) sees a square law
effect X1, X4, X9 and so on.

73's
Richard Clark, KB7QHC

509. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 01:09:49 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <xPHdc.18746$hd3.11529@nwrddc03.gnilink.net>
Source record: 96960

Reg

Did General radio ever make a slotted line?

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c57050$7r7$1@titan.btinternet.com...
>
> "Dave Shrader" wrote -
> > Seriously, I wonder if any readers recall the details of measuring and
> > plotting based on the GR Slotted Line?
> >
> ----------
>
> What's 'GR' ? Never heard of it.
>
> Never-to-be-forgotten, I first measured SWR on a laboratory bench slotted
> line in the town of Stockport near Manchester around February 1944. V1's
and
> V2's, Hitler's secret weapons, were falling on London and S.E. England.
The
> 1000-bomber raids by the RAF on German towns and cities, the fire storms
> directed by Air Marshal Bomber Harris, were building up with an ever
> increasing ferocious intensity. One night 110 heavy bombers failed to
return
> to base. The death toll in Europe and Russia had already passed the 15
> million mark.
>
> I remember it was raining at the time. It always rains in Manchester.
>
> There were two simple relative voltage measurements spaced 1/4-wavelengths
> apart. Values of Zo, Zg, Zt and Gamma were quite irrelevant. The only
> mathematical equation was SWR = V1/V2. And that's all there was to it!
>
> So began my radio education.
> ----
> Reg, G4FGQ
>
>

510. Re: What is the *impedance* of the 5/8 wavelength ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 01:19:56 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <CKWdnVbR2uQp1urdRVn-jw@comcast.com>
Source record: 96961

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:c57018$j9n$1@newshost.mot.com...
> Sorry if this is a double post. It looks like the first got eaten by
> goblins.
>
> Does everybody agree with Joe Street's 50-j425?
>

No. But I believe the N4AST number.

Tam/WB2TT
> http://www.arsqrp.com/ars/pages/back_issues/2000_text/1000_text/5_8.html
>
> --
> Steve N, K,9;d, c. i My email has no u's.
>
>

511. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 01:38:34 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <ueldc.2380$rg5.15856@attbi_s52>
Source record: 96962

Reg Edwards wrote:
> "Dave Shrader" wrote -
>
>>Seriously, I wonder if any readers recall the details of measuring and
>>plotting based on the GR Slotted Line?
>>
>
> ----------
>
> What's 'GR' ? Never heard of it.

I mentioned General Radio earlier in the post. General Radio AKA GR.

Sorry for the confusion.

512. Re: 6m vert dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 01:44:32 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <a3ke70h2rn6cm15i2d6n3hkm2sl6ucmi3p@4ax.com>
Source record: 96963

On Fri, 9 Apr 2004 14:13:07 -0500, "Tyas_MT"
<tyas_mt@hotplonkmail.com> wrote:

>I'm planning on making a 6m vertical dipole, using a tube lower element
>(shield side) to run the coax to the center point.
> I have an almost perfectly sized stainless steel whip (old CB antenna), and
>already have a slightly longer section of copper pipe to use for the bottom
>that I can easily cut down. A friend that makes custom plastic stuff says if
>he has the proper sized scrap he'll bore and cut a plastic insulator/whip
>support for me... if not he'll get the stuff at cost.
>
>Mounted sideways it would look something like this:
>- Steel Whip
>+ Feedpoint/section insulator/whip support
>= Copper pipe with feedline (coax) running through it to feed point
>------------------------+===============
>Left side connected to center conductor at feedpoint
>Right side connected to shield at feedpoint
>
>What I'd like to know is if it is going to have a major effect on my
>dimensions/bandwidth/anything else if I use different materials for the two
>sections of the dipole (steel for the whip, copper for the pipe)? And what
>kind of effect is having the two different element sizes going to have as
>well? (I know increasing element sizes tends to raise overall bandwidth, but
>not sure how only one element will effect the antenna as a whole.)
>
>Also is there going to be any effect from the capacitance between the shield
>braid of my coax and the antenna segment surrounding it? The website I read
>this from didn't mention that, though they did say you may want to coil the
>feedline about 4-6 turns about another quarter wavelength from the end of
>the antenna.
>
>Thanks in advance
>73
>KD4COX, Eric

Eric,
You've essentially described a 'sleeve dipole', dont sweat it about
interaction between the copper pipe and the coax inside - though you
may wish to secure the lower end as well so it doesn't rattle around
inside the pipe. As to the use of different materials affecting
performance, shouldn't be an issue. Make sure though that you cut the
elements on the long side so you can trim to optimum length. You may
wish to do a Google search on 'sleeve dipole' and see if you find any
info that will help.

Good luck,
Howard
KE6something or other

513. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 02:32:54 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <q1Jdc.5933$F9.5078@nwrddc01.gnilink.net>
Source record: 96964

Dave

You made a comment about the details of calculating load impedance using a slotted line. I'm curious to know if anyone has built a slotted line at home. It would be interesting to me to have a slotted line for about 125MHz.

It seems that if you could measure the voltage mins along a line terminated by the load to be evaluated and the location of the min with a short ckt to replace that load. That reading, together with the Vmax/Vmin could get you close to the load impedance with a Smith Chart (I think)

Jerry

"Dave Shrader" <david.shrader@comcast.net> wrote in message news:fxzdc.143$cD2.12959@attbi_s51...
> Reg Edwards wrote:
>
> > Richard Clark,
> >
> > I fully support your "All antennas have zero gain" campaign.
>
> IMO applying the word 'Gain' to an antenna is misuse of the word 'gain'.
>
> Beam forming antennas do concentrate the RF energy into an angle less
> than 2*Pi steradians [Hemisphere] but the total energy concentrated is
> still the power applied to the antenna minus losses. The far field from
> a beam forming antenna is more intense than from an isotropic antenna.
>
> Maybe the better term is to quote the solid angle at the 1/2 power
> points in the E and H plane as a figure of merit. Example: antenna A has
> a 1/2 power beam width of 2500 square degrees while antenna B has a 1/2
> power beam width of 1800 square degrees.
>
> >
> > Why not join the "There's no such thing as an SWR meter" campaign?
> > ----
> > Reg, G4FGQ
> >
> >
>
> Ah! But there are techniques for measuring TRUE VSWR!! [Not my little
> Daiwa 101C or even the trusty Bird.]
>
> Nope, I used to measure TRUE VSWR [in 1958] using a General Radio

> Slotted Line with moveable probe!! I've forgotten the plotting details
> but the answer came from plotting the response over 1/4 wavelength on a
> SMITH Chart. Ain't cheap but it was accurate.
>
> Seriously, I wonder if any readers recall the details of measuring and
> plotting based on the GR Slotted Line?
>
> Next question: where do I get a 160 meter 1/2 wavelength 50 ohm slotted
> line?
>

514. Re: 6m vert dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 02:56:39 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <HnJdc.5949$F9.4752@nwrddc01.gnilink.net>
Source record: 96965

"Tyas_MT" <tyas_mt@hotplonkmail.com> wrote in message
news:4076f5cd$1@news.vallnet.com...
> I'm planning on making a 6m vertical dipole, using a tube lower element
> (shield side) to run the coax to the center point.
> I have an almost perfectly sized stainless steel whip (old CB antenna),
and
> already have a slightly longer section of copper pipe to use for the
bottom
> that I can easily cut down. A friend that makes custom plastic stuff says
if
> he has the proper sized scrap he'll bore and cut a plastic insulator/whip
> support for me... if not he'll get the stuff at cost.
>
> Mounted sideways it would look something like this:
> - Steel Whip
> + Feedpoint/section insulator/whip support
> = Copper pipe with feedline (coax) running through it to feed point
> ------------------------+===============
> Left side connected to center conductor at feedpoint
> Right side connected to shield at feedpoint
>
> What I'd like to know is if it is going to have a major effect on my
> dimensions/bandwidth/anything else if I use different materials for the
two
> sections of the dipole (steel for the whip, copper for the pipe)? And what
> kind of effect is having the two different element sizes going to have as
> well? (I know increasing element sizes tends to raise overall bandwidth,
but
> not sure how only one element will effect the antenna as a whole.)
>
> Also is there going to be any effect from the capacitance between the
shield
> braid of my coax and the antenna segment surrounding it? The website I
read
> this from didn't mention that, though they did say you may want to coil
the
> feedline about 4-6 turns about another quarter wavelength from the end of
> the antenna.
>
> Thanks in advance
> 73
> KD4COX, Eric

Eric

I've heard that stainless steel whips disipate a significant amount of energy ay 50 MHz. If you have several hundred watts, you might want to try transmitting with the ss whip before finalizing your design. You might be surprized to find that the whip gets warm quickly.

Jerry

515. Re: What is the *impedance* of the 5/8 wavelength ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 02:59:59 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c57nvg0m8s@enews3.newsguy.com>
Source record: 96967

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:c57018$j9n$1@newshost.mot.com...
> Sorry if this is a double post. It looks like the first got eaten by
> goblins.
>
> Does everybody agree with Joe Street's 50-j425?
>
> http://www.arsqrp.com/ars/pages/back_issues/2000_text/1000_text/5_8.html
>
> --
> Steve N, K,9;d, c. i My email has no u's.
>

My EZNEC showed about 62-j114 when the radials are horizontal. BTW, Mr. Street says in his article that he got the values from a table compiled by Hallen which gives an impedance of 75-j425. Not that it matters much; it's about the same work to match either impedance.

Here is a really interesting thing I discovered while trying to verify the numbers. Make a 5/8 wave vertical with 4 horizontal 1/4 wave radials. Look at the impedance and pattern. Nice pattern, especially with an elevation at about 2 wavelengths. Now take the radials away one at a time. The resistance gets a little greater and the reactance gets a little less. With only one radial the impedance is not that bad and the azimuth pattern has become sort of elliptical. The elevation angle of maximum radiation doesn't change much, either. If the last radial is pointing to the North, the azimuth pattern is squashed slightly so that East/West is best. So the E-W gain is a bit better.

Moving down to an elevation of about 1/2 wave elevates the maximum radiation and the elevation pattern is broadened. I think, though, that it almost doesn't matter much using any of 1 to 4 radials. But the 2,3, or 4 radial patterns and impedances look very similar.

Ain't that a lick?

John

516. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 03:20:14 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404091920.d531500@posting.google.com>
Source record: 96966

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4076b0c7$1_5@corp.newsgroups.com>...
> Mark Keith wrote:
> > But to each his own I guess... MK
>
> I prefer experimenting to operating.
> --
> 73, Cecil, W5DXP

Oh, so do I. I like the antenna and rig setups, but I actually don't like the operating part of it. I pretty much just sat around last year, and let the rest of them have at it. I didn't do much as I felt unusually lazy for some reason. :/ One reason was they switched to a puter logging, keying, rig control, and all that mess, and I'd never used it before. Was clumsy as heck to me...I think I almost prefer doing it all manual...I've never liked contest type operating. To me , it's work. My idea of a better field day is sitting in a lounge chair on one of the hill country rivers, in front of a smoker, maybe sipping a cool one, "I only drink under the clinical supervision of a doctor", doing pretty much nothing at all....Maybe a casual redneck yik-yak qso every hour or so...:/ That fast contest type stuff gives me brain damage after a while. But it's hard for me to avoid being drafted, as I work CW fairly swiftly, and can rack up the points if I feel so inclined...Thats why I never work fone. It's not viable pointwise when I get half the points for fone, but work either about the same overall speed...But, I usually feel inclined to relax...A friend of mine who is also a CW op, N5XZ, he tears it up. Usually makes the most points every year I think. But he likes that type of operating more than I do. He'll stick in there a long time, where I'll usually flake out after 2-3 hours on a good year.. MK

517. Re: 80M camping/portable dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 03:32:37 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <pVJdc.6027$F9.3113@nwrddc01.gnilink.net>
Source record: 96968

Gary

Just for practice, I'd like to know your numbers. I'm not qualified to coment on your info about matching the 80 meter antenna. But that three foot stub of 300 ohm line seems like it would impose alot of low impedance inductance in shunt with the feed point (50 ohm line with a 0.012 lambda, 300 ohm shorted stub across it). But, maybe thats what it takes to get the dipole from its feed point impedance to match a 50 ohm line.

Jerry

"JGBOYLES" <jgboyles@aol.com> wrote in message news:20040409201943.29919.00000112@mb-m13.aol.com...
> I described a 100' tunerless 80m dipole on the thread "35 ohm coax question".
> I was just rechecking my calculations, and it appears I made a small error in
> the dimensions. If anyone is interested in updated dimensions, let me know.
> As I mentioned I haven't tried this, but it should work. (famous last words
> :-)).
> 73 Gary N4AST

518. Re: What is the *impedance* of the 5/8 wavelength ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 03:33:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <107eqogkf6sqk57@corp.supernews.com>
Source record: 96869

That's interesting, but in real life you're going to have a jolly time trying to make the antenna behave like the model, due to feedline radiation -- unless, of course, you've included an accurate representation of the feedline in your model. It's unfortunate, but calling one piece of wire an "antenna" and another a "feedline" doesn't make one radiate and the other not, especially when they're connected to each other and positioned so they're in the same field.

You can reduce the current conducted to the outside of the coax with a "current" or "choke" balun at the feedpoint. Induced current is another matter, and is likely to take one, two, or more additional baluns to bring to a low enough level to make the antenna behave like the nice, no-feedline model.

The radiating feedline will also have an effect on the feedpoint impedance.

Roy Lewallen, W7EL

John wrote:

>
> My EZNEC showed about 62-j114 when the radials are horizontal. BTW, Mr.
> Street says in his article that he got the values from a table compiled by
> Hallen which gives an impedance of 75-j425. Not that it matters much; it's
> about the same work to match either impedance.
>
> Here is a really interesting thing I discovered while trying to verify the
> numbers. Make a 5/8 wave vertical with 4 horizontal 1/4 wave radials. Look
> at the impedance and pattern. Nice pattern, especially with an elevation at
> about 2 wavelengths. Now take the radials away one at a time. The resistance
> gets a little greater and the reactance gets a little less. With only one
> radial the impedance is not that bad and the azimuth pattern has become sort
> of elliptical. The elevation angle of maximum radiation doesn't change much,
> either. If the last radial is pointing to the North, the azimuth pattern is
> squashed slightly so that East/West is best. So the E-W gain is a bit
> better.
>
> Moving down to an elevation of about 1/2 wave elevates the maximum radiation
> and the elevation pattern is broadened. I think, though, that it almost
> doesn't matter much using any of 1 to 4 radials. But the 2,3, or 4 radial
> patterns and impedances look very similar.
>
> Ain't that a lick?
>
> John
>

>

519. Re: 6m vert dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 03:35:17 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404091935.a825fa7@posting.google.com>
Source record: 96870

"Tyas_MT" <tyas_mt@hotplonkmail.com> wrote in message
news:<4076f5cd$1@news.vallnet.com>...
> I'm planning on making a 6m vertical dipole, using a tube lower element
> (shield side) to run the coax to the center point.
> I have an almost perfectly sized stainless steel whip (old CB antenna), and
> already have a slightly longer section of copper pipe to use for the bottom
> that I can easily cut down. A friend that makes custom plastic stuff says if
> he has the proper sized scrap he'll bore and cut a plastic insulator/whip
> support for me... if not he'll get the stuff at cost.
>
> Mounted sideways it would look something like this:
> - Steel Whip
> + Feedpoint/section insulator/whip support
> = Copper pipe with feedline (coax) running through it to feed point
> ----------------------+===============
> Left side connected to center conductor at feedpoint
> Right side connected to shield at feedpoint
>
> What I'd like to know is if it is going to have a major effect on my
> dimensions/bandwidth/anything else if I use different materials for the two
> sections of the dipole (steel for the whip, copper for the pipe)?

No. Not enough to notice.

And what
> kind of effect is having the two different element sizes going to have as
> well? (I know increasing element sizes tends to raise overall bandwidth, but
> not sure how only one element will effect the antenna as a whole.)

Not much...You may have to trim the antenna, but you won't know for
sure until you actually try it.
>
> Also is there going to be any effect from the capacitance between the shield
> braid of my coax and the antenna segment surrounding it?

Dunno.. I doubt it...
The website I read
> this from didn't mention that, though they did say you may want to coil the
> feedline about 4-6 turns about another quarter wavelength from the end of
> the antenna.

Yep, that antenna will need feedline decoupling. A 2nd lower 1/4 wave
copper tube, closed at the top and grounded to the shield, and open at
the bottom like a bell, would be even better. I'd at least use a coax
choke. MK

520. Re: Question about Full Wave loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 03:43:27 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40776D5E.C0ABE5AF@sonic.net>
Source record: 96872

I was contemplating putting up a full wave 160m sky wire horizontal loop. It will be kind of a square (more trapazoid actually). I was hoping to use it multi-band. I am hoping to get the corners up on metal masts up at least 50 feet.

1. Is it worth the extra trouble to get ladder line and feed into the shack (house) (as opposed to coax)? I will have pulleys so I could try one and then the other.

2. What length should I cut it for? I am new, don't particular know what frequency I might be on. I had heard that the 160m loop (approx. 540' or so) could be good as a multi-band. What exact length should I aim for, or is it even critical? 1005/?

3. If I use ladder line, I would have to use a balun in the shack to convert to coax a short run to go to my Kenwood Tuner (which has 160m), on other bands I would use a small Johnson Matchbox which lacks 160m and eliminate this balun. I am envisioning some kind of old- fashioned DPDT knife switch, I guess.

4. Actually, as a newbie, I have a nothing but more questions, like how best to override the built in relay in the Johnson Matchbox etc. I am gradually figuring this stuff out and hope to find some locals also.

5. If the ladder line proves to be problematic (there are some nearby tv cables, phone lines maybe 5-6' away at one closest point) would a coax feed to this 160m loop still be multi-band? I am not finding a consistent answer to this question anywhere online.

6. Glad to have found this board, since I am lately obsessed with putting in an antenna farm on the real estate (very big rural back yard).

7. I welcome any additions and/or corrections to my thinking so far on this loop project. At this point, I am just scrounging together the masts and pulleys etc. deciding whether to use rope or wire guys...

-Bill

'Doc wrote:

> 'CYB',
> A major lobe of a horizontal loop is 'straight up', but that
> doesn't
> mean that all the RF is going that way by any means, and a high

> radiation
> angle isn't always 'bad'. 'Tilting' a horizontal loop does
> change the
> direction of the radiation pattern, but because of all the
> things that
> affect the radiation pattern, where it actually 'goes' is very
> hard (if
> not impossible) to predict. Best advice? Try it and see what
> happens.
> I'm using a horizontal 80 meter loop on a city lot. I've had
> no more
> than the 'usual' problems working a WAS (several times), and all
> the DX
> I cared to 'mess' with. A loop has several good and bad
> characteristics,
> just like any other antenna, and what works well 'here' may not
> work well
> 'there' (just like any other antenna). I just wish the thing
> was at 60
> feet instead of 20 (LOL)! A characteristic that I like is that
> when fed
> with ladder line through a tuner, (I know Cecil, but I've got
> the tuner),
> it works almost all bands, sort of a problem loading on 15
> meters, but I
> don't use 15 anyway.
> Good luck...
> 'Doc

521. Re: 6m vert dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 03:44:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <107erclgtfjdoe3@corp.supernews.com>
Source record: 96871

If you put "several hundred" watts -- let's say 300 for an example --, into a stainless steel whip, and that whip has a trifling 0.5 dB loss, the whip will be dissipating nearly 37 watts. At 1 dB loss, it'll dissipate over 77 watts. Either is likely to make the whip too hot to touch if the power is applied for long -- imagine the heat from a light bulb of that power rating coming from the antenna. If it only gets good and warm, you'll know the loss is negligible. If it gets too hot to touch, the loss could still be negligible. Unless it's glowing, you won't know for sure.

Larsen antennas has made a very good living, thank you, with their "Kulrod"(R) plated antennas by capitalizing on the irrational alarm people have when finding a warm whip antenna.

Roy Lewallen, W7EL

Jerry Martes wrote:

>
> Eric
>
> I've heard that stainless steel whips disipate a significant amount of
> energy ay 50 MHz. If you have several hundred watts, you might want to try
> transmitting with the ss whip before finalizing your design. You might be
> surprized to find that the whip gets warm quickly.
>
> Jerry
>
>

522. Re: What is the *impedance* of the 5/8 wavelength ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 04:24:13 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c57std$70r$1@hercules.btinternet.com>
Source record: 96873

The input impedance of any 5/8ths-wave whip or rod antenna is
approximately -

R - jX = 100 - j 350 ohms.

At 29 MHz, the bottom-end loading coil consists of 10 turns wound on a 1"
diameter, 1" long former.

This and information on other antenna heights can be found by downloading in
a few seconds program BOTLOAD2 from website below and running immediately.

.....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
.....

523. Re: What is the *impedance* of the 5/8 wavelength ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 04:42:54 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c57u0i026cn@enews2.newsguy.com>
Source record: 96876

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:107eqogkf6sqk57@corp.supernews.com...
> That's interesting, but in real life you're going to have a jolly time
> trying to make the antenna behave like the model, due to feedline
> radiation -- unless, of course, you've included an accurate
> representation of the feedline in your model. It's unfortunate, but
> calling one piece of wire an "antenna" and another a "feedline" doesn't
> make one radiate and the other not, especially when they're connected to
> each other and positioned so they're in the same field.
>
> You can reduce the current conducted to the outside of the coax with a
> "current" or "choke" balun at the feedpoint. Induced current is another
> matter, and is likely to take one, two, or more additional baluns to
> bring to a low enough level to make the antenna behave like the nice,
> no-feedline model.
>
> The radiating feedline will also have an effect on the feedpoint
impedance.
>
> Roy Lewallen, W7EL

Oh. Well, crap.

> John wrote:
>
> >
> > My EZNEC showed about 62-j114 when the radials are horizontal. BTW, Mr.
> > Street says in his article that he got the values from a table compiled
by
> > Hallen which gives an impedance of 75-j425. Not that it matters much;
it's
> > about the same work to match either impedance.
> >
> > Here is a really interesting thing I discovered while trying to verify
the
> > numbers. Make a 5/8 wave vertical with 4 horizontal 1/4 wave radials.
Look
> > at the impedance and pattern. Nice pattern, especially with an elevation
at
> > about 2 wavelengths. Now take the radials away one at a time. The
resistance
> > gets a little greater and the reactance gets a little less. With only
one
> > radial the impedance is not that bad and the azimuth pattern has become
sort

> > of elliptical. The elevation angle of maximum radiation doesn't change
much,
> > either. If the last radial is pointing to the North, the azimuth pattern
is
> > squashed slightly so that East/West is best. So the E-W gain is a bit
> > better.
> >
> > Moving down to an elevation of about 1/2 wave elevates the maximum
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> > and the elevation pattern is broadened. I think, though, that it almost
> > doesn't matter much using any of 1 to 4 radials. But the 2,3, or 4
radial
> > patterns and impedances look very similar.
> >
> > Ain't that a lick?
> >
> > John
> >
> >

524. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 04:45:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40777c11_4@corp.newsgroups.com>
Source record: 96874

Jerry Martes wrote:
> I'm curious to know if anyone has built a slotted line at home.

Jerry, if you use balanced feedline, you don't need a slotted
line. You can just use an inductive pickup loop with a 1N34A
diode rectifier circuit. Whatever you read on your DC voltmeter
as maximum and minimum values will yield the SWR. That's another
advantage of ladder-line.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

525. Re: 6m vert dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 04:46:46 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <W_Kdc.21053$TS3.2603@nwrddc02.gnilink.net>
Source record: 96875

Roy

I'd not 'take sides' to condem stainless steel for 50 MHz antennas. The
truth is; I dont actually know what the loss would be for a stainless steel
whip. I'd use ss if there was some compelling reason for using it. But, I
do want to alert anyone who hasnt thought fo it, that there is some loss due
to choosing ss rather than copper or aluminum.
And, I am not implying that a db is all that important. But, when someone
is designing something it is common to want to build it so the maximum
efficiency is acheived.

Jerry

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:107erclgtfjdoe3@corp.supernews.com...
> If you put "several hundred" watts -- let's say 300 for an example --,
> into a stainless steel whip, and that whip has a trifling 0.5 dB loss,
> the whip will be dissipating nearly 37 watts. At 1 dB loss, it'll
> dissipate over 77 watts. Either is likely to make the whip too hot to
> touch if the power is applied for long -- imagine the heat from a light
> bulb of that power rating coming from the antenna. If it only gets good
> and warm, you'll know the loss is negligible. If it gets too hot to
> touch, the loss could still be negligible. Unless it's glowing, you
> won't know for sure.
>
> Larsen antennas has made a very good living, thank you, with their
> "Kulrod"(R) plated antennas by capitalizing on the irrational alarm
> people have when finding a warm whip antenna.
>
> Roy Lewallen, W7EL
>
> Jerry Martes wrote:
>
> >
> > Eric
> >
> > I've heard that stainless steel whips disipate a significant amount of
> > energy ay 50 MHz. If you have several hundred watts, you might want to
try
> > transmitting with the ss whip before finalizing your design. You might
be
> > surprized to find that the whip gets warm quickly.
> >
> > Jerry
> >

> >

526. Re: Question about Full Wave loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 05:16:17 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c57vv1ruk1@sparta.btinternet.com>
Source record: 96877

Zeno, In answer to some of your questions -

For multi-band working, ladder-line or preferably open wire line is almost essential.

Overall antenna length is very non-critical. When using a tuner you can be many feet adrift from the theoretical calculation without any degredation in performance. A change in length affects only the radiation pattern which for practical purposes can be considered omni-directional anyway.

For multiband operation be prepared to make relatively small changes in length of feedline as part of tuner operation.

Use a simple choke balun at the transmitter end with a balanced feedline. Make no attempt with a voltage-ratio balun to match feeder input impedance to 50 ohms. Leave that entirely to the tuner.

A choke balun for 160 meters consists of a 1.5" to 2" diameter ferrite ring wound with 8 to 12 turns of 18-gauge flexible speaker cable, or similar.

A coax feedline means lossy operation on other than the fundamental frequency.

A balanced feedline near to phone or power cables will cause no trouble unless nearly touching over a long distance.

Reg, G4FGQ

527. X out takes SURVIVOR (real.gif_ 6385

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 08:24:35 UTC
From: qtyfsh@tv.com
Message-ID: <c58b01$12t$3@news.loxinfo.co.th>
Source record: 96878
Cross-posted to: uk.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc

Ever Wondered What Happens When the Cameras
are not On During Survivor or Temptations Island ?

Curious About What Happens Behind Closeed Doors
On Big Brother or American Idol?

You Know Crazy, Wild and even Obscene things Happen!

The Networks Dont Want you to See This!!!!
BUT WE SHOW IT TO YOU!!!

http://aufqz.url.cjb.net

BECAUSE THE CAMERA WERE ROLLING the Shots just got
BANNED or CENCORED but we Have the SECRETS from REALITY TV

This is for real You Know You Want to See It!

More Erotic Than Temptation Island
Beyong BigBrother
Sexior than Survivor
Better than the Bachelor
Raunchier than The Amazing Race

EXHIBITION VOYEUR

Nasty Obscene, erotic, dirty, insestuous, gross, indecent,
sleezy, impure, wild, erotic, pornographic, smutty,
risque, sensual, sexy.....
YOU NAME IT - THEY DID IT
ADD WE HAVE THE PROOF

http://tinyurl.com/2jysv

The Contestants Did it all and the NetWorks Couldnt
Show it, it was Banned, Cencored there Secret
Now we show you what they were doing!!!!

Fetishes, Lingere, Lesbianism, Bi Sexual Experiments,
Foot Fetishes, FORCED SEX, Cross Dressing, Swinging,
jacuzzi group sex, threesomes, hi heels, rubber,
Whatever turns you on - they did it while they
thought no one was watching.

The Real Private Secrets from, Survivor, Bachelor,
Bachelorette, Temptation Island, Mole, Joe Millionare

Contestants caught naked, stripping, playing, sucking,
fucking

Did you know some contestants were lesbians some were
sluts, On one show a chick gave everyone a blowjob
including the camera MEN!!!!
-
Behind Closed doors, in changing rooms, dressing rooms,
in the bushes, private sets, closets, showers, lakes,
all sorts of places they thought the cameras were not
around, BUT THEY WERE and WE GOT THE SHOTS!!!!!

All the things that got Cut out, the
camera men saved them after the Network
cut them and banned them.

You Wont See this ON Jerry Springer!!!!!!!!

You Think Girls Gone Wild was HOT This is like
The Sexual Olympics, but only for Real

The Cameras Caught them - The Networks CUt them
WE HAVE THEM

Quick Before they get Cencored or Banned Here!!!

OutFuck - OutSuck
Who Will be the Last One Hard

All the things that got Cut out, the
camera men saved them after the Network
cut them and banned them.

You Wont See this ON Jerry Springer!!!!!!!!

All the things that got Cut out, the
camera men saved them after the Network
cut them and banned them.

All the things that got Cut out, the
camera men saved them after the Network
cut them and banned them.

http://tinyurl.com/2gaky

You Wont See this ON Jerry Springer!!!!!!!!

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)+"8`LPLL-S8TI*N!8^DX2KFDVT/NN[O\+>7D`D`.X$C
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528. B&W AP-10A tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 09:12:43 UTC
From: jeffhs@ameritech.net
Message-ID: <98360ebb.0404100112.28fa030a@posting.google.com>
Source record: 96879

Hi.

I have a Barker & Williamson AP-10A apartment portable antenna, which I am currently using with my Icom IC-725 100-watt all-band transceiver. How do I set the counterpoise length for minimum SWR when I cannot use the SWR bridge in my antenna coupler (MFJ-949B)? I ask this because one of MFJ's technicians, in response to an email I sent the company about six months ago regarding this issue, told me in no uncertain terms that antenna couplers may not be used with the AP-10A (any mismatches are to be corrected by setting the length of the counterpoise, with the antenna connected directly to the radio). This is all well and good, but how do I know when the SWR is 1:1 if I cannot use the bridge in my coupler (by setting the antenna switch to COAX 1 DIRECT or COAX 2 DIRECT)? I suppose I could watch the power meter on the rig and experiment with the counterpoise length until I had maximum output, but I don't want to do that as it may cause unnecessary QRM. What should be my next step--to get an external SWR bridge (which has no connection whatsoever to the antenna coupler), or will tuning the counterpoise for maximum output be enough?

Thanks and 73,

Jeff Strieble, WB8NHV (mailto: jeffhs@ameritech.net)
Fairport Harbor, Ohio USA

529. Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 10:17:38 UTC
From: Dave Pitzer <dpitzer@sonic.net>
Message-ID: <6RPdc.4939$Fo4.56495@typhoon.sonic.net>
Source record: 96880

On a table-top Broadcast Band receiver with a built-in ferrite "loop"
antenna, the antenna nulls are off the ends of the rod... correct?

In other words, all other factors being equal, the weakest signal will
result when the either end of the "rod" is pointed toward the station....
right??

Thanks,

Dave Pitzer
==========

530. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 11:32:32 UTC
From: carkenord@juno.com
Message-ID: <4346b55e.0404100332.24307c5d@posting.google.com>
Source record: 96881

> It seems to me that there are two major issues with the Lattin/W4JRW
> antenna:> 1) Mechanically, it can be challenging. Regular Twin Lead with one of
> the wires cut is just too flimsy.

When I tried to build a working version of the Lattin, I had 2
partners. The 3 of us, collectively, have a decent amount of
experience with home-brew antennas.
Our first attempt was done using flat TV twin-lead. It was fragile
and hard to work with, mechanically. Electrically, it was just
confusing. Unpredictable. I never felt that we were close to getting
a good workable multi-band antenna.

Some time passed, and we decided to try again. This time we used the
much sturdier ladder line (for traps/radiator) as a starting point.
Mechanically, this was a fairly robust device. Electrically, it was
the same as our previous attempt. We spent a lot of time with it.
Cut up a lot of wire. We finally reluctantly gave up. We _WANTED_
it to work, but we were just not able to get anything accomplished.
Again, we felt that we were never close to having a workable, 50 ohm
coax-fed, multi-band antenna.

Lee Carkenord KA0FPJ Denver CO

531. Normal Mode Helix Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 11:54:23 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c58nfu$2p7nr0$1@ID-175933.news.uni-berlin.de>
Source record: 96882

RE: Quote below

REALITY CHECK: a form of a normal-mode, helical radiator is commonly used for FM broadcast transmitting antennas. At their design frequencies, these elements produce the same _measured_ field strength in their directions of peak gain as produced by a matched, linear dipole in its directions of peak gain (over the same path). Some of these FM helical designs have _measured_ input SWR less than 1.15:1 over 15% RF bandwidth, which is most of the 88-108MHz FM band. For the purpose, this performance is far from being inefficient and/or narrow band.

NEC2 analysis of an FM normal-mode helix shows this, of course. Examples of it are found in the slide show (item 10) at http://rfry.org .

Reading and heeding Kraus has to take the application into account. Generalizations lead to misunderstanding.

RF

"Richard Harrison" wrote:
> Larger omnidirectional (normal-mode) helices are used by some VHF/UHF
> broadcasters to provide circular polarization, but Kraus says on page
> 173 of his 1950 edition of "Antennas":
>
> "For normal mode the dimensions of the helix must be small compared to
> the wavelength, so that from band width and efficiency considerations
> this mode is not readily applicable in practice."
>
> There are handie-talkie suppliers and broadcasters who don`t heed Kraus.

532. Normal Mode Helix Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 12:06:02 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c58nv2$2pi07n$1@ID-175933.news.uni-berlin.de>
Source record: 96883

RE: Quote below

REALITY CHECK: a form of a normal-mode, helical radiator is commonly used for FM broadcast transmitting antennas. At their design frequencies, these elements produce the same _measured_ field strength in their directions of peak gain as produced by a matched, linear dipole in its directions of peak gain (over the same path). Some of these FM helical designs have _measured_ input SWR less than 1.15:1 over 15% RF bandwidth, which is most of the 88-108MHz FM band. For the purpose, this performance is far from being inefficient and/or narrow band.

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Reading and heeding Kraus has to take the application into account. Generalizations lead to misunderstanding.

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>
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> the wavelength, so that from band width and efficiency considerations
> this mode is not readily applicable in practice."
>
> There are handie-talkie suppliers and broadcasters who don`t heed Kraus.

533. Re: Question about Full Wave loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 12:34:08 UTC
From: "T.E.O" <rfmscpa@earthlink.net>
Message-ID: <4RRdc.3565$k05.2778@newsread2.news.pas.earthlink.net>
Source record: 96884

One man's opinion:
Get it as high as you can, use balanced line & the Matchbox.

Coax has much more loss @ SWR > 1:1 than balanced line. And you will have high SWR (on the feedline) on some bands. The plastic "window" 450 ohm ladder line is OK but acts funny when wet (SWR swings). All that plastic insulation is the culprit. Moisture on the plastic causes oscillations that wreak havoc on SWR. Best to make-up your own balanced line with as few spacers between the wires as possible.

To disable the Matchbox relay, use a small bit of matchbook cover or old credit card between the relay contacts. That's what I did with mine & it's worked great for years. Very easy to revert back to the relay if you ever go to separate transmitter/receiver.

I stay away from baluns when I intend multi-band use. They don't act the same at all frequencies. The Matchbox has no balun, the transmitter output is coupled to the transmission line via a link. Also, you can extend the range of the Matchbox (to cover 160). See a "how to" article in Electic Radio Magazine -March, 2001 issue# 142, page 10. Back issues are available for $3.75 here: http://www.ermag.com/.

>
> 1. Is it worth the extra trouble to get ladder line and feed into
> the shack (house) (as opposed to coax)? I will have pulleys so I
> could try one and then the other.
>
> 2. What length should I cut it for? I am new, don't particular know
> what frequency I might be on. I had heard that the 160m loop
> (approx. 540' or so) could be good as a multi-band. What exact
> length should I aim for, or is it even critical? 1005/?
>
> 3. If I use ladder line, I would have to use a balun in the shack
> to convert to coax a short run to go to my Kenwood Tuner (which has
> 160m), on other bands I would use a small Johnson Matchbox which
> lacks 160m and eliminate this balun. I am envisioning some kind of
> old- fashioned DPDT knife switch, I guess.
>
> 4. Actually, as a newbie, I have a nothing but more questions, like
> how best to override the built in relay in the Johnson Matchbox
> etc. I am gradually figuring this stuff out and hope to find some
> locals also.
>

534. Re: 80M camping/portable dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 12:37:46 UTC
From: jgboyles@aol.com
Message-ID: <20040410083746.29885.00000097@mb-m13.aol.com>
Source record: 96885

>Just for practice, I'd like to know your numbers.
>that three foot stub of 300 ohm line seems like it would impose alot of low impedance inductance in shunt with the feed

Sure Jerry, I was hoping someone would check it.

Eznec says at 3.8 MHZ a 100' dipole about 35' up over average ground is 17-j343. .126 lambda or 32.7' of 300 ohm line transforms to 7.5-j17.6. .011 lambda shorted stub or 2.9' connected at the 7.5-j17.6 point gives 50-j0. The .011 lambda stub is .874 uh at 3.8 MHZ . This is according to Mr. Smith and his chart.

73 Gary N4AST

535. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 13:02:13 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404100502.288735ef@posting.google.com>
Source record: 96886

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40770fb9_1@corp.newsgroups.com>...
> Brian Kelly wrote:
> > The jumper-to-bandswitch antenna would work IF one was (a) able to
> > drop and hoist the antenna quickly and conveniently (b) was inclined
> > to futz around in the dark to change bands.
>
> I can (a) release the pulley on either end of my antenna or just pull
> on the feedline to get at the jumper point.

Ship me your back yard a few days before the last full weeklend in
June freight collect and I'll ship it back immediately the following
Monday.

> I have (b) a mercury
> vapor arc-type nightlight in the backyard 10 feet distance from the
> feedline.

. . . oughta make life on 160 really "interesting" . .

> --
> 73, Cecil, W5DXP

w3rv

536. Re: B&W AP-10A tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 13:11:44 UTC
From: "Dan Richardson"
Message-ID: <vgsf70du1f9fsubh4ct9qb8hcflfd3lgoq@4ax.com>
Source record: 96887

On 10 Apr 2004 02:12:43 -0700, jeffhs@ameritech.net (Jeff Strieble)
wrote:
[snip]
>how do I know when the SWR is 1:1 if I
>cannot use the bridge in my coupler (by setting the antenna switch to
>COAX 1 DIRECT or COAX 2 DIRECT)?
[snip]

Yes, the direct connection just bypasses the tuning components. Your
SWR meter is still functioning.

Danny, K6MHE

537. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 13:40:51 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <DPSdc.21264$TS3.8609@nwrddc02.gnilink.net>
Source record: 96888

Bill

How does a person measure the gain of an antenna?

Jerry

"Bill Turner" <noway@nohow.com> wrote in message
news:9dqe7098ip0bar7he146rju6o10t38j3o4@4ax.com...
> On Fri, 09 Apr 2004 19:15:05 GMT, Dave Shrader
> <david.shrader@comcast.net> wrote:
>
> >
> >So, the correct gain terminology must speak in terms of resulting
> >PATTERN not the antenna.
>
> Ok, but the pattern is created by the antenna. If the pattern has gain,
> most of us would think of the antenna having gain.
>
>
> >'Antenna gain' is both loose and incorrect language notwithstanding
> >advertising and marketing claims.
>
> If enough people use a term incorrectly, it becomes correct, like it or
> not. The word "lite" as in "lite beer" did not exist a couple of
> decades ago. Some advertiser decided to use it in place of "light" and
> despite opposition from linguistic purists, it is now correct. "Antenna
> gain" may not be correct in the eyes of a purist, but if the masses use
> it and know what it means...
>
> --
> Bill, W6WRT
> QSLs via LoTW
>

538. Re: B&W AP-10A tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 13:42:22 UTC
From: "Robert A. Miller" <bxmiller@texas.net>
Message-ID: <fpsf70dmm4budkn0iegn765kt8c2ute9jc@4ax.com>
Source record: 96889

On 10 Apr 2004 02:12:43 -0700, jeffhs@ameritech.net (Jeff Strieble) wrote:

>Hi.
>
> I have a Barker & Williamson AP-10A apartment portable antenna,
>which I am currently using with my Icom IC-725 100-watt all-band
>transceiver. How do I set the counterpoise length for minimum SWR when
>I cannot use the SWR bridge in my antenna coupler (MFJ-949B)? I ask
>this because one of MFJ's technicians, in response to an email I sent
>the company about six months ago regarding this issue, told me in no
>uncertain terms that antenna couplers may not be used with the AP-10A
>(any mismatches are to be corrected by setting the length of the
>counterpoise, with the antenna connected directly to the radio). This
>is all well and good, but how do I know when the SWR is 1:1 if I
>cannot use the bridge in my coupler (by setting the antenna switch to
>COAX 1 DIRECT or COAX 2 DIRECT)?

I used the ap-10 back in the 80s with my Icom 735. I seem to recall using my Bird wattmeter to measure the forward & reverse wattage as I adjusted the counterpoise length. I see no reason why you can't use the Coax 1 or 2 Direct connection on your tuner. When you do, you're bypassing the tuner's capacitors and inductor, and just measuring the feedline swr. Tune for maximum forward watts, minimum reverse watts. I used to get the reverse watts down to nothing, even on 40 meters.

I had the counterpoise wire on an empty wire spool, and simply spooled or unspooled the wire across the floor to adjust swr. I tuned at minimum power, and then increased it to maximum. If you do your tuning at minimum power, it shouldn't hurt your rig. And after awhile, you can mark the wire length for each particular band.

Watch out for a lot of rf on the counterpoise. And don't be surprised if your station is a little hot, rf-wise, as the counterpoise is transmitting indoors. Still, the little whip in the window does a surprisingly good job.

Bob
k5qwg

>I suppose I could watch the power
>meter on the rig and experiment with the counterpoise length until I
>had maximum output, but I don't want to do that as it may cause
>unnecessary QRM. What should be my next step--to get an external SWR
>bridge (which has no connection whatsoever to the antenna coupler), or
>will tuning the counterpoise for maximum output be enough?

>
> Thanks and 73,
>
> Jeff Strieble, WB8NHV (mailto: jeffhs@ameritech.net)
> Fairport Harbor, Ohio USA

539. Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 14:07:39 UTC
From: Bob <nubob5001@yahoo.com>
Message-ID: <SjTdc.12081$R37.5090@read1.cgocable.net>
Source record: 96890

Hi
We have put together a dipole, each leg is 66 feet. We put a 1:1 balun and it is running about 60 feet of 50 ohm coax. Presently it is about half way up the tower it is intended for so we could check the SWR before getting it up to the highest point. Presently each leg has some lags and dips, no major bends but it is just hanging there, over some bushes and the entire thing is over top of the house, and not touching anything but is very close to some steel guy wires (uninsulated).
Now we can only tune this down to a useable SWR on the 80m band. On all other bands we cannot tune it down to a safe operating range. We are using a good antenna tuner but cannot get anything useable except for 80m. Here we are able to tune the SWR right down.

Questions???
Would we be better without that balun?

Is the fact that the dipole is still too low and close to the guy wires (but not touching) our problem?

Any suggestions please??

Thank you.
Bob

540. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 14:24:58 UTC
From: Stephen Cowell <scowell@sbcglobal.net>
Message-ID: <_sTdc.8001$B16.7730@newssvr23.news.prodigy.com>
Source record: 96891

"Bob" <nubob5001@yahoo.com> wrote in message
news:SjTdc.12081$R37.5090@read1.cgocable.net...
> Hi
> We have put together a dipole, each leg is 66 feet. We put a 1:1 balun and
> it is running about 60 feet of 50 ohm coax. Presently it is about half way
> up the tower it is intended for so we could check the SWR before getting
it
> up to the highest point. Presently each leg has some lags and dips, no
major
> bends but it is just hanging there, over some bushes and the entire thing
is
> over top of the house, and not touching anything but is very close to some
> steel guy wires (uninsulated).
> Now we can only tune this down to a useable SWR on the 80m band. On all
> other bands we cannot tune it down to a safe operating range. We are using
a
> good antenna tuner but cannot get anything useable except for 80m. Here we
> are able to tune the SWR right down.
>
> Questions???
> Would we be better without that balun?

If you want multi-band operation, then yes, you have to
forget the balun, or put multiple dipoles on the output lugs.

--
Steve
KI5YG
.

541. Re: Lattin antenna.....more info sources

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 14:59:24 UTC
From: n2ey@aol.comSPAMNO
Message-ID: <20040410105924.01766.00000241@mb-m15.aol.com>
Source record: 96892

In article <jtfe70hkk6crnflt2p1u7bdoib1jnj6e6n@4ax.com>, Richard Clark
<kb7qhc@comcast.net> writes:

>On 9 Apr 2004 13:44:16 -0700, N2EY@AOL.COM (N2EY) wrote:
>>I get the feeling that Lattin either went through serious math pushups
>>to get his design, or cut up a lot of Twin Lead, or both.
>
>Hi Jim,
>
>I am working on the design, however the premise appears to be
>"academic." In other words, there are some who can tell you how it
>should work, but not why it doesn't.

I *like* that turn of phrase!

"There are some who can tell you how it should work, but not why it doesn't."

Perfect companion to:

"If it happens, it must be possible."

>Your description above suits the modeling to a T - serious math
>pushups.

Thanks.

>I don't think anyone could stumble onto a 5 band antenna by
>simple cut and try.

I disagree! I think it not only could happen, but probably has happened
already, through a fortuitous combination of many factors.

But being able to come up with such a design that is well-documented and
reproducible is a whole 'nother thing. The Lattin antenna is a perfect example
of that.

73 de Jim, N2EY

542. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 14:59:24 UTC
From: n2ey@aol.comSPAMNO
Message-ID: <20040410105924.01766.00000242@mb-m15.aol.com>
Source record: 96893

In article <4346b55e.0404100332.24307c5d@posting.google.com>,
carkenord@juno.com (Lee Carkenord) writes:

>> It seems to me that there are two major issues with the Lattin/W4JRW
>> antenna:> 1) Mechanically, it can be challenging. Regular Twin Lead with
>one of
>> the wires cut is just too flimsy.
>
>When I tried to build a working version of the Lattin, I had 2
>partners. The 3 of us, collectively, have a decent amount of
>experience with home-brew antennas.
>Our first attempt was done using flat TV twin-lead. It was fragile
>and hard to work with, mechanically. Electrically, it was just
>confusing. Unpredictable. I never felt that we were close to getting
>a good workable multi-band antenna.
>
>Some time passed, and we decided to try again. This time we used the
>much sturdier ladder line (for traps/radiator) as a starting point.
>Mechanically, this was a fairly robust device. Electrically, it was
>the same as our previous attempt. We spent a lot of time with it.
>Cut up a lot of wire. We finally reluctantly gave up. We _WANTED_
>it to work, but we were just not able to get anything accomplished.
>Again, we felt that we were never close to having a workable, 50 ohm
>coax-fed, multi-band antenna.
>
That's quite understandable, given that the original Lattin designed used
tubular Twin Lead and countd on a velocity factor of 0.8.

What sort of test gear and design methods did you folks use?

73 de Jim, N2EY

543. HELP: Icom IC-RP1220 (1.2GHz) repeater drifted.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 14:59:30 UTC
From: phoneguy99 <phoneguy99unspam@unspamsympatico.ca>
Message-ID: <EYTdc.43110$wq4.2548623@news20.bellglobal.com>
Source record: 96896
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna

I have an Icom IC-RP1220 set for 1285.500 with a -12.0 input.
It's been out service for a few years, but was acting up before it was
pulled out. Now that I have time to play with it, I've noticed its
drifted 'up' 6KHz both on RX and TX, yet no chenges were made to the CPU
settings.

I have the owner's manual, but no service manual.

Is there a common xtal controlled base clock shared between the TX and
RX circuits? If so, where would the trimmer adjustment be located?

Or, if this is a problem experienced by others, and the cause is
something else, some advice would be very much appreciated!

Thanks!

Pat, VE3PMK

544. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:09:53 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <soqdnb8Jj5Tck-XdRVn-hg@adelphia.com>
Source record: 96894

Bob wrote:
> Hi
> We have put together a dipole, each leg is 66 feet. We put a 1:1 balun and
> it is running about 60 feet of 50 ohm coax. Presently it is about half way
> up the tower it is intended for so we could check the SWR before getting it
> up to the highest point. Presently each leg has some lags and dips, no major
> bends but it is just hanging there, over some bushes and the entire thing is
> over top of the house, and not touching anything but is very close to some
> steel guy wires (uninsulated).
> Now we can only tune this down to a useable SWR on the 80m band. On all
> other bands we cannot tune it down to a safe operating range. We are using a
> good antenna tuner but cannot get anything useable except for 80m. Here we
> are able to tune the SWR right down.
>
> Questions???
> Would we be better without that balun?
>
> Is the fact that the dipole is still too low and close to the guy wires (
> but not touching) our problem?

Bob, the antenna as you describe it is pretty much *for* 80 meters. If
you want to tune the thing on multiple bands, and I'm assuming that you
want it for the Ham frequencies, you will want to replace the coax and
balun with ladder line, and use a tuner to match the impedence with your
radio.

- Mike KB3EIA -

545. Re: Normal Mode Helix Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:10:09 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c592ot$2pfacr$1@ID-225206.news.uni-berlin.de>
Source record: 96895

One of Krause main interests was the Helix, and did the most, and best work
on it at the time.
The quote to me seems out of context, more of a comparison of "normal mode"
to what a helix can really do.
Helix is nice, great bandwidth, easy to make, easy matching.
The FM normal mode (shown in reference) is less than 2 turns, so it is being
used primarily to get circular pol.

"Richard Fry" <rfry@adams.net> wrote in message
news:c58nv2$2pi07n$1@ID-175933.news.uni-berlin.de...
> RE: Quote below
>
> REALITY CHECK: a form of a normal-mode, helical radiator is commonly used
> for FM broadcast transmitting antennas. At their design frequencies,
these
> elements produce the same _measured_ field strength in their directions of
> peak gain as produced by a matched, linear dipole in its directions of
peak
> gain (over the same path). Some of these FM helical designs have
measured
> input SWR less than 1.15:1 over 15% RF bandwidth, which is most of the
> 88-108MHz FM band. For the purpose, this performance is far from being
> inefficient and/or narrow band.
>
> NEC2 analysis of an FM normal-mode helix shows this, of course. Examples
of
> it are found in the slide show (item 10) at http://rfry.org .
>
> Reading and heeding Kraus has to take the application into account.
> Generalizations lead to misunderstanding.
>
> RF
> ------------------
>
> "Richard Harrison" wrote:
> > Larger omnidirectional (normal-mode) helices are used by some VHF/UHF
> > broadcasters to provide circular polarization, but Kraus says on page
> > 173 of his 1950 edition of "Antennas":
> >
> > "For normal mode the dimensions of the helix must be small compared to
> > the wavelength, so that from band width and efficiency considerations
> > this mode is not readily applicable in practice."
> >
> > There are handie-talkie suppliers and broadcasters who don`t heed Kraus.

>
>
>

546. Re: Beginner's question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:15:34 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <4076b85d_4@newsfeed.slurp.net>
Source record: 96897

Yep. But if the signal is strong enough, you won't see a complete null -
just a serious dip.

"Dave Pitzer wrote
> On a table-top Broadcast Band receiver with a built-in ferrite "loop"
> antenna, the antenna nulls are off the ends of the rod... correct?
>
> In other words, all other factors being equal, the weakest signal will
> result when the either end of the "rod" is pointed toward the station....
> right??
>
> Thanks,
>
> Dave Pitzer
> ==========
>
>

547. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:15:54 UTC
From: Bob <nubob5001@yahoo.com>
Message-ID: <QjUdc.12090$R37.11556@read1.cgocable.net>
Source record: 96901

Hi Steven

Thank you for your response to my problem.

Any suggestion? What you say is that I would be better off without that 1:1 balun? Yes, now I have it at 66feet each leg for a total of 132 feet but now it is not at the best height but kinda sagging and lopping where it is but off the ground and about 2 feet above the roof and other obstacles. I also have it presently close to steel guy wires and the tower itself. What would be my problem then here now? You believe it is my balun? I was hoping to get this up there and then leave it. All this climbing is difficult. Do you believe that once I get it up there, with the coax, with the dipole, no balun, do you think that would allow me better results with a good antenna tuner? Any advice is greatly appreciated.

Thank you
BOb

" Stephen Cowell" <scowell@sbcglobal.net> wrote in message
news:_sTdc.8001$B16.7730@newssvr23.news.prodigy.com...
>
> "Bob" <nubob5001@yahoo.com> wrote in message
> news:SjTdc.12081$R37.5090@read1.cgocable.net...
> > Hi
> > We have put together a dipole, each leg is 66 feet. We put a 1:1 balun
and
> > it is running about 60 feet of 50 ohm coax. Presently it is about half
way
> > up the tower it is intended for so we could check the SWR before getting
> it
> > up to the highest point. Presently each leg has some lags and dips, no
> major
> > bends but it is just hanging there, over some bushes and the entire
thing
> is
> > over top of the house, and not touching anything but is very close to
some
> > steel guy wires (uninsulated).
> > Now we can only tune this down to a useable SWR on the 80m band. On all
> > other bands we cannot tune it down to a safe operating range. We are
using
> a
> > good antenna tuner but cannot get anything useable except for 80m. Here
we
> > are able to tune the SWR right down.

> >
> > Questions???
> > Would we be better without that balun?
>
> If you want multi-band operation, then yes, you have to
> forget the balun, or put multiple dipoles on the output lugs.
> __
> Steve
> KI5YG
> .
>
>

548. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:20:11 UTC
From: Bob <nubob5001@yahoo.com>
Message-ID: <XnUdc.12093$R37.2632@read1.cgocable.net>
Source record: 96900

Hi, Thank you for your response. I do not have ladder line and only have the coax basically. Is it acceptable for good results to simply use the coax and then split it out to each direction of the copper wire? And not use the 1:1 balun? I was hoping to simply get the dipole in the air and leave it and simply tune it at the transmitter to acceptable SWR and go from there. Now I only get good SWR on the 80meters because of the length it is cut at. I was hoping also to use the dipole with the tuner on 10, 15, 20 and 40. Is this possible? The tuner is good and I know I will lose the power to the tuner but would still get to use the other bands when needed.
Any more advice is greatly appreciated.
thanks
Bob

"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:soqdnb8Jj5Tck-XdRVn-hg@adelphia.com...
>
>
> Bob wrote:
> > Hi
> > We have put together a dipole, each leg is 66 feet. We put a 1:1 balun
and
> > it is running about 60 feet of 50 ohm coax. Presently it is about half
way
> > up the tower it is intended for so we could check the SWR before getting
it
> > up to the highest point. Presently each leg has some lags and dips, no
major
> > bends but it is just hanging there, over some bushes and the entire
thing is
> > over top of the house, and not touching anything but is very close to
some
> > steel guy wires (uninsulated).
> > Now we can only tune this down to a useable SWR on the 80m band. On all
> > other bands we cannot tune it down to a safe operating range. We are
using a
> > good antenna tuner but cannot get anything useable except for 80m. Here
we
> > are able to tune the SWR right down.
> >
> > Questions???
> > Would we be better without that balun?
> >
> > Is the fact that the dipole is still too low and close to the guy wires
(

> > but not touching) our problem?
>
> Bob, the antenna as you describe it is pretty much *for* 80 meters. If
> you want to tune the thing on multiple bands, and I'm assuming that you
> want it for the Ham frequencies, you will want to replace the coax and
> balun with ladder line, and use a tuner to match the impedence with your
> radio.
>
> - Mike KB3EIA -
>

549. Re: 80M camping/portable dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:22:14 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <GiUdc.8157$F9.710@nwrddc01.gnilink.net>
Source record: 96898

Gary

I have very little confidance in any calculations I do without outside help. Maybe you can help me. I understand the 100 foot long center fed dipole antenna is horizontal to the earth and is 35 feet up above it. At the operating frequency of 3.8 MHz, its input impedance is 17 -j343. Although I didnt realize the real part of the dipole fell that rapidly with frequency and nearness to effective ground, I assume these numbers are accurate.
I'll consider the 39 foot long shorted stub made from 300 ohm twin lead to be about 0.166 wavelength long (if the velocity of propagation for that line is 0.9). That makes the length of 300 ohm TV antenna twin lead from the antenna to the place where the 50 ohm line gets connected, to be about 0.153 lambda. And the remaining 3 feet of 300 ohm line to be 0.012 lambda long.

Would the antenna's impedance plot at 0.057 -j1.14 on a 300 ohm Smith Chart? Thats what I calculated.

If I go 0.153 lambda from the antenna along that 300 ohm line toward its shorted end, the impedance looks like 0.02+j0.18, which might be something like 6 ohms in series with 54 ohms of inductive reactance.
The three foot length of shorted twin lead seems to look like 21 ohms of inductive reactance.

I figured the impedance at the location where the 50 ohm line connects to the 300 ohm twin lead is something like 6 ohms resistive in series with 54 ohms of inductive reactance all in shunt with 21 ohms of inductive reactance.

What am I doing wrong?? The way I'm looking at the problem, there will be a serious mismatch to 50 ohms. at 3 feet from the shorted end of the "matching stub".

If I had any confidance in my thinking ability, I'd suggest using a shorter stub, so the impedance at the location where the 50 ohm line conects is still R-jX. Then the shunt L will have a chance of providing a more resistive match.

Jerry

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20040410083746.29885.00000097@mb-m13.aol.com...
> >Just for practice, I'd like to know your numbers.
> >that three foot stub of 300 ohm line seems like it would impose alot of
low
> impedance inductance in shunt with the feed
>

> Sure Jerry, I was hoping someone would check it.
>
> Eznec says at 3.8 MHZ a 100' dipole about 35' up over average ground is
> 17-j343. .126 lambda or 32.7' of 300 ohm line transforms to 7.5-j17.6.
.011
> lambda shorted stub or 2.9' connected at the 7.5-j17.6 point gives 50-j0.
The
> .011 lambda stub is .874 uh at 3.8 MHZ . This is according to Mr. Smith
and
> his chart.
>
> 73 Gary N4AST

550. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:23:14 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <4076ba26_5@newsfeed.slurp.net>
Source record: 96899

Bob, try it without the balun. In most cases, a balun isn't needed except
to reduce TVI-type problems.

Also, if you're looking for multi-band performance, consider trimming about
30 feet off the antenna - 102 to about 120 feet tends to be more tunable.
You might also consider changing over from coax to twin lead, if you can
work the logistics...

73,
Mike KI6PR
El Rancho R.F., CA

"Bob" wrote
> Hi
> We have put together a dipole, each leg is 66 feet. We put a 1:1 balun and
> it is running about 60 feet of 50 ohm coax. Presently it is about half way
> up the tower it is intended for so we could check the SWR before getting
it
> up to the highest point. Presently each leg has some lags and dips, no
major
> bends but it is just hanging there, over some bushes and the entire thing
is
> over top of the house, and not touching anything but is very close to some
> steel guy wires (uninsulated).
> Now we can only tune this down to a useable SWR on the 80m band. On all
> other bands we cannot tune it down to a safe operating range. We are using
a
> good antenna tuner but cannot get anything useable except for 80m. Here we
> are able to tune the SWR right down.
>
> Questions???
> Would we be better without that balun?
>
> Is the fact that the dipole is still too low and close to the guy wires (
> but not touching) our problem?
>
> Any suggestions please??
>
> Thank you.
> Bob
>
>

551. Re: Lattin antenna.....more info sources

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:42:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2n4g70tlhpl7ro54seseq9gl9mbptmjktl@4ax.com>
Source record: 96902

On 10 Apr 2004 14:59:24 GMT, n2ey@aol.comSPAMNO (N2EY) wrote:
>>I don't think anyone could stumble onto a 5 band antenna by
>>simple cut and try.
>I disagree! I think it not only could happen, but probably has happened
>already, through a fortuitous combination of many factors.

Name one that works. And by works, is resonant in each band, and not
simply tuneable (as would be a common doublet).

>But being able to come up with such a design that is well-documented and
>reproducible is a whole 'nother thing. The Lattin antenna is a perfect example
>of that.

Hi Jim,

The notion of a trapped antenna on the basis of resonant stubs
constructions is not shown in the data of my work to date, and
certainly not in the Lattin (insofar as the only interpretation
generally available on the net, setting the patent aside that is).

One of the key points goes to this notion of stub action. However,
the stub is not excited across its mouth, but along its length. This
is very distinctly exhibited in the numbers (the lack of correlation
of stub geometry to resonances). The constructions merely appear to
fatten a thin radiator and add capacitances and inductances that are
basically opportunistic - certainly no one has shown any correlations
that fit the geometries to the bands they are presumed to resonate to.

Hence my statement that caught your fancy. The Stub resonances
"should" explain the bands obtainable, and yet there has been
absolutely no supporting evidence to demonstrate that this occurs.

It does hold my interest, however, and I am hardly one to be put off
by failure's of other's theories - not with my more than 300 pages of
fractal data published in the face of fractal fools who confine
themselves to bragging about their science.

73's
Richard Clark, KB7QHC

552. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:53:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3l5g70t7l8an9p5iorgretjouvbj9v3pg8@4ax.com>
Source record: 96903

On 10 Apr 2004 14:59:24 GMT, n2ey@aol.comSPAMNO (N2EY) wrote:
>That's quite understandable, given that the original Lattin designed used
>tubular Twin Lead and countd on a velocity factor of 0.8.
>
>What sort of test gear and design methods did you folks use?

Hi Jim,

This hard to accept given the timelines offered by those who have
reported the references. For one, the antenna was invented in the
late 40's and patented 26 Dec. 1950, and reported in 1960. ALL such
dates precede the introduction of tubular Twin Lead in the mid 60s.

73's
Richard Clark, KB7QHC

553. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 15:59:56 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <0SUdc.21299$TS3.5545@nwrddc02.gnilink.net>
Source record: 96904

"Bill Turner" <noway@nohow.com> wrote in message
news:525g709c5s4bv553n6viajd3krknhvfivo@4ax.com...
> On Sat, 10 Apr 2004 13:40:51 GMT, "Jerry Martes" <j.jmartes@verizon.net>
> wrote:
>
> > Bill
> >
> > How does a person measure the gain of an antenna?
> >
> > Jerry
>
> ____
>
> Carefully, I would hope.
>
> --
> Bill, W6WRT
> QSLs via LoTW

I'll be carefull if you'll tell me how to do it.

Jerry
>

554. Re: Normal Mode Helix Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 16:01:37 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c595oo$2p4d3k$1@ID-175933.news.uni-berlin.de>
Source record: 96905

I wrote, "At their design frequencies, these elements produce the same _measured_ field strength in their directions of peak gain as produced by a matched, linear dipole in its directions of peak gain (over the same path)."

To clarify this for those who didn't read through the slide show I referred to in the original post, the FM helix would need twice the input power as the linear dipole to produce the same field peak strength over the same path. The FM helix is circularly polarized; therefore its peak, net gain per polarization plane is 1/2 that of a dipole.

Most FM broadcasters in the US are licensed to radiate a certain amount of horizontally polarized "effective radiated power" (ERP) in the horizontal plane. Typically they can radiate any amount of vertically polarized power they choose, not to exceed their h-pol ERP.

The station's ERP is the product of the tx output power, the efficiencies of their transmission line, channel combiners, filters etc, and their antenna gain, per polarization. Using a c-pol antenna means that the broadcast station needs twice the tx output power to produce their licensed h-plane, h-pol ERP.

RF

Visit http://rfry.org for FM broadcast RF system papers.

555. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 16:29:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0j6g70pkstagrb8j04qh00krqaeaqomvsv@4ax.com>
Source record: 96906

On Sat, 10 Apr 2004 08:37:09 -0700, Bill Turner <noway@nohow.com>
wrote:
>> Bill
>>
>> How does a person measure the gain of an antenna?
>>
>> Jerry
>
>Carefully, I would hope.

Hi Bill,

Your response hardly carries the water for an argument supporting gain being commonly distinct from directivity.

To answer Jerry's question (he probably already knows how) requires the total integration of all power emitted by the radiator - not an easy task (as would confirm Bill's sparse reply) and then measuring power emitted within small volumes (solid angles of sub-radian dimension) to compare against the whole.

The most distinctive point to observe about this "gain" is that almost all the power radiated is lost - "almost" being a patronizing term. A simple thought problem will reveal this sad fate.

Let us presume you are transmitting 100W with 100% efficiency. Now, lets further presume that the entire population of the planet is monitoring you with S-9 readability. That is (let's be generous), 10 Billion receivers. What is the net result of this massive communication in system efficiency?
0.5%

The antenna in the most perfect of circumstances exhibits an absolute loss of 99.5W and I could easily bet no one here even pretends to approach 0.000001% of this.

Now, tell me about GAIN. :-)

73's
Richard Clark, KB7QHC

556. Re: B&W AP-10A tuning question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 16:41:31 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407823ee_7@corp.newsgroups.com>
Source record: 96907

Jeff Strieble wrote:

> Hi.
>
> I have a Barker & Williamson AP-10A apartment portable antenna,
> which I am currently using with my Icom IC-725 100-watt all-band
> transceiver. How do I set the counterpoise length for minimum SWR when
> I cannot use the SWR bridge in my antenna coupler (MFJ-949B)? I ask
> this because one of MFJ's technicians, in response to an email I sent
> the company about six months ago regarding this issue, told me in no
> uncertain terms that antenna couplers may not be used with the AP-10A
> (any mismatches are to be corrected by setting the length of the
> counterpoise, with the antenna connected directly to the radio). This
> is all well and good, but how do I know when the SWR is 1:1 if I
> cannot use the bridge in my coupler (by setting the antenna switch to
> COAX 1 DIRECT or COAX 2 DIRECT)? I suppose I could watch the power
> meter on the rig and experiment with the counterpoise length until I
> had maximum output, but I don't want to do that as it may cause
> unnecessary QRM. What should be my next step--to get an external SWR
> bridge (which has no connection whatsoever to the antenna coupler), or
> will tuning the counterpoise for maximum output be enough?

If this is a real problem, it can be solved with an antenna analyzer
like the MFJ-259B, one of the handiest devices I have ever owned.
Got any friends with one?

You can also reduce the power out of your IC-725 to the absolute
minimum value, ID yourself, and experiment until you get it right.
At minimum power output, I doubt that any damage would be done.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

557. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 16:49:06 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407825b5$1_7@corp.newsgroups.com>
Source record: 96908

Jerry Martes wrote:
> How does a person measure the gain of an antenna?

For 75m mobile antenna shootouts, we have measured the field
strength of the ground wave in the far field compared to
a reference antenna.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

558. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 16:56:06 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40782759_7@corp.newsgroups.com>
Source record: 96909

Bob wrote:

> Hi
> We have put together a dipole, each leg is 66 feet. We put a 1:1 balun and
> it is running about 60 feet of 50 ohm coax. Presently it is about half way
> up the tower it is intended for so we could check the SWR before getting it
> up to the highest point. Presently each leg has some lags and dips, no major
> bends but it is just hanging there, over some bushes and the entire thing is
> over top of the house, and not touching anything but is very close to some
> steel guy wires (uninsulated).
> Now we can only tune this down to a useable SWR on the 80m band. On all
> other bands we cannot tune it down to a safe operating range. We are using a
> good antenna tuner but cannot get anything useable except for 80m. Here we
> are able to tune the SWR right down.
>
> Questions???
> Would we be better without that balun?

The antenna is a non-resonant length on most of the other HF bands. You
cannot afford the SWR power loss when feeding it with coax on any band except
80m. Take a look on my web page how I solved the all-HF-band problem using
essentially the same type of dipole. You need to feed such an antenna with
twinlead, window-line, ladder-line, or open-wire line. That moves the balun
to the hamshack. 100 ft. of ladder-line is close to optimum.

> Is the fact that the dipole is still too low and close to the guy wires (
> but not touching) our problem?

That may be part of your problem but not the biggest part.
--
73, Cecil, http://www.qsl.net/w5dxp

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559. Re: Question about Full Wave loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 16:58:34 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407827B9.6109A104@sonic.net>
Source record: 96910

Thanks for response Reg, here are a couple of follow up questions:

Reg Edwards wrote:

> Zeno, In answer to some of your questions -
>
> For multi-band working, ladder-line or preferably open wire line is almost
> essential.
>
> Overall antenna length is very non-critical. When using a tuner you can be
> many feet adrift from the theoretical calculation without any degredation in
> performance. A change in length affects only the radiation pattern which
> for practical purposes can be considered omni-directional anyway.
>
> For multiband operation be prepared to make relatively small changes in
> length of feedline as part of tuner operation.

Are you saying that every time you would switch bands or frequencies, one might have to change length of feedline? I am trying to picture that, is there some convenient solution to this process?

>
>
> Use a simple choke balun at the transmitter end with a balanced feedline.
> Make no attempt with a voltage-ratio balun to match feeder input impedance
> to 50 ohms. Leave that entirely to the tuner.
>
> A choke balun for 160 meters consists of a 1.5" to 2" diameter ferrite ring
> wound with 8 to 12 turns of 18-gauge flexible speaker cable, or similar.
>

Just to make sure we are on the same page here: are you saying to use this choke balun just for operation on 160m if I want to use my Kenwood tuner? I am assuming that when using the Johnson Matchbox for the bands it was designed for I would connect the feed line directly to the Matchbox terminals, and that feedline would connect directly to the antenna (no baluns, no chokes, or anything).

>
> A coax feedline means lossy operation on other than the fundamental
> frequency.
>
> A balanced feedline near to phone or power cables will cause no trouble
> unless nearly touching over a long distance.
> ---
> Reg, G4FGQ

560. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 17:03:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4078290b$1_7@corp.newsgroups.com>
Source record: 96911

Bob wrote:

> Hi Steven
>
> Thank you for your response to my problem.
>
> Any suggestion? What you say is that I would be better off without that 1:1
> balun? Yes, now I have it at 66feet each leg for a total of 132 feet but now
> it is not at the best height but kinda sagging and lopping where it is but
> off the ground and about 2 feet above the roof and other obstacles. I also
> have it presently close to steel guy wires and the tower itself. What would
> be my problem then here now?

The problem is the coax.

> You believe it is my balun? I was hoping to get
> this up there and then leave it. All this climbing is difficult. Do you
> believe that once I get it up there, with the coax, with the dipole, no
> balun, do you think that would allow me better results with a good antenna
> tuner? Any advice is greatly appreciated.

Feeding your dipole with ladder-line moves all the matching problems to the
hamshack where you don't have to climb anything to solve them. Try the following
configuration and get back to us on any remaining problems.

XMTR--tuner--1:1 balun/choke--100 ft. 450 ohm ladder-line---132 ft. dipole

This configuration will allow multi-band operation on most of the HF ham
bands. The problems you will have with a couple of bands are solvable.
--
73, Cecil, W5DXP

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561. Have anyone the simulation of IMAX 2000 for the MMANA program?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 17:04:10 UTC
From: Marcello <marcello110980@yahoo.it>
Message-ID: <eOVdc.119648$Kc3.3925875@twister2.libero.it>
Source record: 96912

Have anyone the simulation of IMAX 2000 for the MMANA program?

Where i can found it? n Google there is not!!

Marcello

562. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 17:07:29 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40782a04$1_7@corp.newsgroups.com>
Source record: 96913

Bob wrote:
> Hi, Thank you for your response. I do not have ladder line and only have the
> coax basically.

The coax *IS* the problem. If you don't like to climb, you are going to
have to replace the coax with something like 450 ohm ladder-line. 100
ft. of such ladder-line costs about $17.

One other possible solution is to install an autotuner at the antenna
feedpoint but that is a pain to do.
--
73, Cecil, W5DXP

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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563. Re: Question about Full Wave loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 17:07:41 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407829DB.3D780B0E@sonic.net>
Source record: 96914

T.E.O. thanks for the response and good info: here are a couple of follow up questions:

"T.E.O" wrote:

> One man's opinion:
> Get it as high as you can, use balanced line & the Matchbox.
>
> Coax has much more loss @ SWR > 1:1 than balanced line. And you will have
> high SWR (on the feedline) on some bands. The plastic "window" 450 ohm
> ladder line is OK but acts funny when wet (SWR swings). All that plastic
> insulation is the culprit. Moisture on the plastic causes oscillations that
> wreak havoc on SWR. Best to make-up your own balanced line with as few
> spacers between the wires as possible.
>

Do you have any pointers or good recipes for making my own balanced line? materials, spacing, wire size, insulated vs. bare, etc. never done this before. Also I will have to go through approx. 1+" of wood at the peak of my house, and then again about 1" of wood to come down through the old farmhouse ceiling directly to the station. This balanced line will be travelling about 12 feet or so through my attic and fortunately there is not metal or wiring in that area to speak of.

>
> To disable the Matchbox relay, use a small bit of matchbook cover or old
> credit card between the relay contacts. That's what I did with mine & it's
> worked great for years. Very easy to revert back to the relay if you ever go
> to separate transmitter/receiver.
>

Great solution....why didn't I think of that?

>
> I stay away from baluns when I intend multi-band use. They don't act the
> same at all frequencies. The Matchbox has no balun, the transmitter output
> is coupled to the transmission line via a link. Also, you can extend the
> range of the Matchbox (to cover 160). See a "how to" article in Electic
> Radio Magazine -March, 2001 issue# 142, page 10. Back issues are available
> for $3.75 here: http://www.ermag.com/.

thanks for the link, I will look that up.

Zeno (aka Bill -- middle name, and better cw rhythm.....)

>
>

> >
> > 1. Is it worth the extra trouble to get ladder line and feed into
> > the shack (house) (as opposed to coax)? I will have pulleys so I
> > could try one and then the other.
> >
> > 2. What length should I cut it for? I am new, don't particular know
> > what frequency I might be on. I had heard that the 160m loop
> > (approx. 540' or so) could be good as a multi-band. What exact
> > length should I aim for, or is it even critical? 1005/?
> >
> > 3. If I use ladder line, I would have to use a balun in the shack
> > to convert to coax a short run to go to my Kenwood Tuner (which has
> > 160m), on other bands I would use a small Johnson Matchbox which
> > lacks 160m and eliminate this balun. I am envisioning some kind of
> > old- fashioned DPDT knife switch, I guess.
> >
> > 4. Actually, as a newbie, I have a nothing but more questions, like
> > how best to override the built in relay in the Johnson Matchbox
> > etc. I am gradually figuring this stuff out and hope to find some
> > locals also.
> >

564. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 17:29:56 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <naWdc.3673$wP1.7923@attbi_s54>
Source record: 96915

Jerry Martes wrote:

> Bill
>
> How does a person measure the gain of an antenna?
>
> Jerry
>

In the olden days, 1985, on an outdoor range, we would calculate the gain from measuring the 1/2 power points on an antenna range at 1000 wavelengths minimum between antennas and find the 1/2 power [-3 dB] angles in the horizontal and vertical planes. [Note C-Band and S-Band]

Knowing the angles the 'Gain' is calculated by dividing 41259 by the product of the horizontal and vertical angles corresponding to the 1/2 power point. [Note: 41259 is the surface of the sphere measured in square steradians.]

On the indoor anechoic chamber we measured the input power at the feed point through a -10 dB splitter and the radiated power density at a target point in the far wall. Then ran the basic calculation. [Classified Military Program]

Aligning those 12 foot diameter dishes inside the anechoic chamber was 'fun'.

Even after managing two antenna ranges and being party to 'antenna gain' measurements for more than 10 years of my professional life, I still have fun touting that antennas have 'No Gain'.

565. Re: Lattin antenna.....more info sources

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 17:51:46 UTC
From: n2ey@aol.comSPAMNO
Message-ID: <20040410135146.08081.00000343@mb-m18.aol.com>
Source record: 96917

In article <2n4g70tlhpl7ro54seseq9gl9mbptmjktl@4ax.com>, Richard Clark
<kb7qhc@comcast.net> writes:

>On 10 Apr 2004 14:59:24 GMT, n2ey@aol.comSPAMNO (N2EY) wrote:
>>>I don't think anyone could stumble onto a 5 band antenna by
>>>simple cut and try.
>>I disagree! I think it not only could happen, but probably has happened
>>already, through a fortuitous combination of many factors.
>
>Name one that works. And by works, is resonant in each band, and not
>simply tuneable (as would be a common doublet).

Some forms of trap dipole and parallel dipole I have encountered were clearly
the result of cut-and-try rather than analysis and mathematical design.
>
>>But being able to come up with such a design that is well-documented and
>>reproducible is a whole 'nother thing. The Lattin antenna is a perfect
>>example of that.
>
>Hi Jim,
>
>The notion of a trapped antenna on the basis of resonant stubs
>constructions is not shown in the data of my work to date, and
>certainly not in the Lattin (insofar as the only interpretation
>generally available on the net, setting the patent aside that is).

The title of the QST article (December, 1960) is "Multiband Antennas Using
Decoupling Stubs".
>
>One of the key points goes to this notion of stub action. However,
>the stub is not excited across its mouth, but along its length. This
>is very distinctly exhibited in the numbers (the lack of correlation
>of stub geometry to resonances). The constructions merely appear to
>fatten a thin radiator and add capacitances and inductances that are
>basically opportunistic - certainly no one has shown any correlations
>that fit the geometries to the bands they are presumed to resonate to.
>
>Hence my statement that caught your fancy. The Stub resonances
>"should" explain the bands obtainable, and yet there has been
>absolutely no supporting evidence to demonstrate that this occurs.
>
The claims of the QST article are that the stubs work as traps. It also
explains that the velocity factor is important in the whole design. The article
refers repeatedly to "tubular Twin Lead" as the optimum material for
construction because of its velocity factor of 0.8.

>It does hold my interest, however, and I am hardly one to be put off
>by failure's of other's theories - not with my more than 300 pages of
>fractal data published in the face of fractal fools who confine
>themselves to bragging about their science.
>
(grin)

73 de Jim, N2EY

566. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 17:51:47 UTC
From: n2ey@aol.comSPAMNO
Message-ID: <20040410135147.08081.00000344@mb-m18.aol.com>
Source record: 96916

In article <SjTdc.12081$R37.5090@read1.cgocable.net>, "Bob"
<nubob5001@yahoo.com> writes:

>We have put together a dipole, each leg is 66 feet. We put a 1:1 balun and
>it is running about 60 feet of 50 ohm coax. Presently it is about half way
>up the tower it is intended for so we could check the SWR before getting it
>up to the highest point. Presently each leg has some lags and dips, no major
>bends but it is just hanging there, over some bushes and the entire thing is
>over top of the house, and not touching anything but is very close to some
>steel guy wires (uninsulated).

What you have is the classic dipole for 80 meters.

>Now we can only tune this down to a useable SWR on the 80m band. On all
>other bands we cannot tune it down to a safe operating range. We are using a
>good antenna tuner but cannot get anything useable except for 80m. Here we
>are able to tune the SWR right down.

That is normal behavior.
>
>Questions???
>Would we be better without that balun?
>
No.

>Is the fact that the dipole is still too low and close to the guy wires (
>but not touching) our problem?

No.

> Any suggestions please??

The problem is this:

The antenna you describe is approximately:

one half-wavelength long on 80 meters

two half-wavelengths long on 40 meters

four half-wavelengths long on 20 meters

six half-wavelengths long on 15 meters

etc.

Such a center-fed dipole antenna has a feed point impedance that is fairly
"low" (that is, under about 100 ohms) on frequencies where it is an *odd*
number of half-wavelengths. On frequencies where it is an *even* number of half

wavelengths, the feed point impedance is very high - greater than 1000 ohms.

The 1:1 balun and 50 ohm coax you are using are low-impedance devices, so they work fine on 80 meters. But on the other bands, they do not work with the high impedance of the antenna. A tuner at the shack end of the coax cannot make up for the enormous mismatch at the antenna end. Even if it could, the loss in the coax from being operated at such a high SWR would make such a system very inefficient.

There are several possible solutions:

1) Use a different transmission line (high impedance balanced line) and eliminate the balun. This requires a balanced antenna tuner and the mechanical difficulties of using non-coax transmission lines

2) Use a different sort of dipole that is an odd number of half-wavelengths on the desired bands. One form of this dipole is the "trap dipole", in which tuned circuits (traps) electrically alter the effective antenna length.

A really good information source is W4RNL's (Cebik) website. Goole on his name or call to find it.

73 de Jim, N2EY

567. Re: 80M camping/portable dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 17:59:05 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4078361d$1_7@corp.newsgroups.com>
Source record: 96918

Jerry Martes wrote:

> Gary
>
> I have very little confidance in any calculations I do without outside
> help. Maybe you can help me. I understand the 100 foot long center fed
> dipole antenna is horizontal to the earth and is 35 feet up above it.
> At the operating frequency of 3.8 MHz, its input impedance is 17 -j343.
> Although I didnt realize the real part of the dipole fell that rapidly with
> frequency and nearness to effective ground, I assume these numbers are
> accurate.
> I'll consider the 39 foot long shorted stub made from 300 ohm twin lead to
> be about 0.166 wavelength long (if the velocity of propagation for that line
> is 0.9). That makes the length of 300 ohm TV antenna twin lead from the
> antenna to the place where the 50 ohm line gets connected, to be about 0.153
> lambda. And the remaining 3 feet of 300 ohm line to be 0.012 lambda long.
>
> Would the antenna's impedance plot at 0.057 -j1.14 on a 300 ohm Smith
> Chart? Thats what I calculated.

Nope, 29.5 feet (0.127 lambda) around the 300 ohm SWR circle from the 17-j343 antenna, the impedance will be 7-j17 without the stub. In parallel terms, that is 48 ohms in parallel with 2000 pf (~21 ohms). Neutralize the 2000 pf with an inductive stub and you have a feedpoint impedance of 48 ohms. You seem to need about one microhenry for that. Matching can be accomplished with a coil instead of a shorted stub.

IMO, a better way would be to extend the feedline to 33.8 feet (0.145 lambda) where the impedance is the conjugate of the above, about 7+j17, and a capacitive stub will cause the match to 48 ohms. Or a parallel cap of about 0.002 uf will accomplish the same thing.

These matching methods make use of the 1/50 conductance circles on the Smith Chart. These easy matching methods will work for any SWR greater than Z0/50, i.e. for Z0=300, for any SWR above 6:1. At the point where the SWR circle crosses the 1/50 conductance circle, simply install an appropriate parallel inductance or parallel capacitance and it twists the impedance at that point to 50 ohms (48 ohms above). Since that is also a voltage minimum point, relatively cheap low voltage capacitors can be used, e.g. 600v micas.
--
73, Cecil, W5DXP

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568. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 18:16:09 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40783a1d$1_7@corp.newsgroups.com>
Source record: 96819

Mikey wrote:
> Also, if you're looking for multi-band performance, consider trimming about
> 30 feet off the antenna - 102 to about 120 feet tends to be more tunable.
> You might also consider changing over from coax to twin lead, if you can
> work the logistics...

Mike, unless Bob does both, trim to 102 ft *AND* use twin-lead, That is
very bad advice. A coax-fed 102 ft. dipole is resonant on 4.59 MHz
which is not inside any ham band. It will be a terrible performer
on all HF ham bands except 20m where it will have an SWR about 3:1.
--
73, Cecil, W5DXP

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569. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 18:24:53 UTC
From: carkenord@juno.com
Message-ID: <4346b55e.0404101024.6184f5d@posting.google.com>
Source record: 96820

> That's quite understandable, given that the original Lattin designed used
> tubular Twin Lead and countd on a velocity factor of 0.8.

Yes...we were aware of the differences in velocity factor. And now I have dug up more notes from those experiments. I had forgotten about a _THIRD_ atempt!! We also tried using heavy 2-conductor speaker wire as trap/radiator material. This was also a sturdy design, mechanically. And again, we took into account the different v. factor.

But it didn't produce the antenna we had hoped for.

>>> What sort of test gear and design methods did you folks use?

Pretty fundamental test equipment. The ordinary items that are in just about all shacks. We did have a good SWR meter.....a Siltronix FS-310. We also had a good grid dipper, the military AN-PRM/10 unit. There was also a Palomar Noise bridge in my possession during that era, but I don't see anything in my notes that indicate that we used it in our Lattin experiments.

We cut it longer, and we cut it shorter. We diddled with the traps _IN_ the circuit, and we diddled with 'em removed from the circuit. We used up a lot of wire, and a lot of notebook paper.

This was back in 1990 and 91. I still wonder what we would have accomplished if we had owned an Antenna Analyzer? And what if 1 or more of our trio was fleunt in antenna computer modelling? Would we have "cracked the nut"......or would we have just wasted more wire, paper, and time? We never once felt that we were close to getting a good multiband antenna. We sure tried, though. It was kinda fun, really........

Lee Carkenord KA0FPJ Denver CO

570. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 18:25:04 UTC
From: n2ey@aol.comSPAMNO
Message-ID: <20040410142504.10530.00000149@mb-m24.aol.com>
Source record: 96821

In article <3l5g70t7l8an9p5iorgretjouvbj9v3pg8@4ax.com>, Richard Clark <kb7qhc@comcast.net> writes:

>On 10 Apr 2004 14:59:24 GMT, n2ey@aol.comSPAMNO (N2EY) wrote:
>>That's quite understandable, given that the original Lattin designed used
>>tubular Twin Lead and countd on a velocity factor of 0.8.
>>
>>What sort of test gear and design methods did you folks use?
>
>Hi Jim,
>
>This hard to accept given the timelines offered by those who have
>reported the references. For one, the antenna was invented in the
>late 40's and patented 26 Dec. 1950, and reported in 1960. ALL such
>dates precede the introduction of tubular Twin Lead in the mid 60s.
>
Hello again!

Direct quotes from the 1960 QST article:

"If open line with a velocity factor near unity is used for the stubs, the over-all lenght for a two-band antenna would be nearly a full free-space wavelength at the higher frequency and and the whole antenna would resonate at something less than half that frequency. Very fortunately, the the velocity factor of 300-ohm tubular Twin-Lead (0.8) gives such lenghts for the stubs that that, in most cases, the adding the stub makes the antenna resonate at just half the original frequency."

"Fig. 3 shows how tubular Twin-Lead can be used for the antenna itself as well as the stubs and includes dimensions for 10- and 20-meter operation. The foam-filled type of Twin-Lead is recommended to keep out moisture."

So it must have existed when W4JRW wrote the article, some time before the December 1960 QST went to press.

In addition, my 1953-54 RESCO (Radio Electronic Service Company, once a great source of all things radio and TV here in the Philly area) catalog lists Amphenol "flat and tubular Twin Lead". The tubular stuff is number 14-271 and was 5 cents a foot - less in quantities of 100, 500 or 1000 feet. And it wasn't a new item.

All of this supports both your experiences and those of others. If the exact characteristics of tubular Twin Lead are important to the design, it's no wonder that the reported results cannot be obtained.

One more point. The SWR graphs shown for the 5 band version show quite narrow SWR bandwidths. If anyone is interested I can report them in a future post.

73 de Jim, N2EY

571. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 18:49:58 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404101049.1f35557b@posting.google.com>
Source record: 96822

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4076c7bc_6@corp.newsgroups.com>...
> Brian Kelly wrote:
> > In the case of your 110 foot flattop with it's 110 foot feedline and
> > for my specific purposes the "tuner" would be a pair of inline lo-loss
> > fixed coils with taps which are selectable with a simple two pole
> > two-position ceramic rotary switch. Or make it a three pole switch and
> > be able to ground the antenna. Three taps yields three slices, etc. A
> > tuner like that would be a whole bunch easier to build and use and
> > would require much less mechanical claptrap than the original pair of
> > variable caps scheme requires.
>
> It's essentially moving the loading coils from the antenna to the
> hamshack

That's OK, High Q loading coils are not necessairily bad things at
all. A couple decent-size airwound coils are *much* easier to come by
in the shack than they are up in the air and out in the weather. Plus
you can vary the L right in the shack.

> and, according to EZNEC, gives a 1.1:1 SWR from 3.6 to
> 4.0 MHz. SWR goes up to 1.5:1 on 3.5 MHz.

I could definitely live with that.

> > However if using your 110 foot run of ladderline and coils
> > configuration is a hassle but a 44 foot feedline would work Mr.
> > Boyle's design can be used to get the same basic performance results
> > with the caps. The thread has produdced a couple good approaches for
> > practical solutions for an old problem and they both go into my
> > keepers book.
>
> It will be interesting to apply Mr. Boyle's design to your particular
> two-segment problem.

I'm not far enough along my modeling learning curve to be able to
model transmission lines yet but you're obviously right.

Assuming some full system modeling of the Boyle Special for basic
guidance, the availability of a 259B, another ceramic rotary switch
and a pile of silver mica caps what are the downsides of using fixed
caps vs. variable caps?

w3rv

572. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 18:50:58 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40784245_5@corp.newsgroups.com>
Source record: 96823

N2EY wrote:
> "Fig. 3 shows how tubular Twin-Lead can be used for the antenna itself as well
> as the stubs and includes dimensions for 10- and 20-meter operation. The
> foam-filled type of Twin-Lead is recommended to keep out moisture."

Jim, I haven't been following very closely. Is it possible to describe
this antenna with an ASCII diagram. Apparently on one band, the stub
is installed at the 1/50 conductance circle to SWR circle intersection.
--
73, Cecil, W5DXP

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573. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 18:54:06 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407842ff$1_5@corp.newsgroups.com>
Source record: 96824

Brian Kelly wrote:
> ... what are the downsides of using fixed caps vs. variable caps?

They're not variable and cannot compensate for rain, etc.
--
73, Cecil, W5DXP

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574. Re: Question about Full Wave loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 19:01:02 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c59g9eifn1@titan.btinternet.com>
Source record: 96825

> Are you saying that every time you would switch bands or frequencies, one
might
> have to change length of feedline? I am trying to picture that, is there
some
> convenient solution to this process?

No, it is not necessary to change length of feedline for each band. Far from
it.

The tuner will allow you to cover most bands with one length of feedline. If
you are very lucky you may be able to cover all bands with one length of
feedline. No two antennas are alike - and it is just a matter of luck.

You will probably find that, initially, 2 or perhaps 3 bands are difficult
to tune using the tuner. By changing feedline length, up or down, you may be
able to reduce the number of awkward bands to 2 or 1 or perhaps none. As
length is changed some bands will get worse and others will get better.

It is always possible to find a length of feeder which will allow the tuner
to cope with ONE particular awkward band. It is a matter of experimenting
to find a length which maximises the number of bands which can be
accommodated by the tuner.

Hardly anybody is interested in ALL bands. Naturally, you will include your
favourite bands amongst the best. Some tuners are better than others.

> Just to make sure we are on the same page here: are you saying to use
this
> choke balun just for operation on 160m if I want to use my Kenwood tuner?
I am
> assuming that when using the Johnson Matchbox for the bands it was
designed >for
> I would connect the feed line directly to the Matchbox terminals, and that
> feedline would connect directly to the antenna (no baluns, no chokes, or
> anything).
>

Leave the 1-to-1 choke balun in circuit all the time, for all bands, and for
whatever tuner you are using.

The sort of problems you will encounter are exactly the same as getting the
G5RV to work on all bands by choosing an optimum length of feedline.

Reg, G4FGQ

575. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 19:03:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4078451d$1_5@corp.newsgroups.com>
Source record: 96826

Cecil Moore wrote:
> Jim, I haven't been following very closely. Is it possible to describe
> this antenna with an ASCII diagram. Apparently on one band, the stub
> is installed at the 1/50 conductance circle to SWR circle intersection.

Never mind, I found the information at:
http://www.g3ycc.karoo.net/lattin.htm
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

576. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 19:13:56 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404101113.35461b99@posting.google.com>
Source record: 96827

n2ey@aol.comSPAMNO (N2EY) wrote in message
news:<20040409185905.12769.00000219@mb-m16.aol.com>...
> In article <d22b54c3.0404090650.1afa79d3@posting.google.com>, kelly@dvol.com
> (Brian Kelly) writes:
>
> >In the case of your 110 foot flattop with it's 110 foot feedline and
> >for my specific purposes the "tuner" would be a pair of inline lo-loss
> >fixed coils with taps which are selectable with a simple two pole
> >two-position ceramic rotary switch. Or make it a three pole switch and
> >be able to ground the antenna. Three taps yields three slices, etc.
>
> Or use relays. Switch the 50 ohm end of the coil to avoid high voltages. Two
> relays yields four possible choices....

That would probably be the way to go. I'm big on keeping
dedicated-purpose tuners like this one would be out in yard right at
the end of the feedline instead of in the shack. Relays would work
fine and are easy to remotely control.

> >A
> >tuner like that would be a whole bunch easier to build and use and
> >would require much less mechanical claptrap than the original pair of
> >variable caps scheme requires.
>
> Perhaps. An old electric screwdriver could be used to drive a pair of caps or
> rollers, too. They're all over the place, discarded when the batteries go bad.

I don't see any particular point to using continuously variable coils
and/or caps when the same job can be done with their much more
reliable and simpler fixed value eqivalents in situations like this.
High parts counts and moving widgets in any combination is trouble
looking for a place to start.

> 73 de Jim, N2EY

w3rv

577. Re: 80M camping/portable dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 19:19:06 UTC
From: jgboyles@aol.com
Message-ID: <20040410151906.29919.00000149@mb-m13.aol.com>
Source record: 96828

>Matching can be accomplished with a coil instead
>of a shorted stub.

Thanks for explaining this matching technique in slightly different terms that people may be more comfy with. I was trying to keep the parts count down since this is a camping antenna. Using one 300 ohm line of correct length, shorting the end, and tapping at the 50 ohm spot seemed pretty simple. Or as you state, use the conjugate method and leave the line open and tap for 50 ohms.
>These matching methods make use of the 1/50 conductance circles on the Smith
>Chart. These easy matching methods will work for any SWR greater than Z0/50,
>i.e. for Z0=300, for any SWR above 6:1. At the point where the SWR circle crosses the 1/50 conductance circle, simply install an appropriate parallel
>inductance or parallel capacitance and it twists the impedance at that point
>to 50 ohms (48 ohms above).

I didn't know I was doing all that! Thanks for the info.

73 Gary N4AST

578. Re: Question about Full Wave loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 19:26:38 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c59hpemec1@sparta.btinternet.com>
Source record: 96829

It should be added, the reason for changing feedline length is to bring its input impedances on the various bands into ballparks which can be accommodated by the tuner. Ideally, input impedances should not be VERY much different from 50 ohms. SWR not much worse than 1.5 or 2-to-1.

The line behaves as a different impedance transformer on every band. It is a random adjusting process.

In principle, with a perfect tuner, ANY line length would be satisfactory.

Reg, G4FGQ

579. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 20:10:00 UTC
From: n2ey@aol.comSPAMNO
Message-ID: <20040410161000.20806.00000202@mb-m19.aol.com>
Source record: 96830

In article <d22b54c3.0404081712.61940185@posting.google.com>, kelly@dvol.com (Brian Kelly) writes:

>N2EY@AOL.COM (N2EY) wrote in message
>news:<c2356669.0404081000.55013376@posting.google.com>...
>> kelly@dvol.com (Brian Kelly) wrote in message
>news:<d22b54c3.0404072148.54c8374d@posting.google.com>...
>> > Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
>news:<4074bae7_2@corp.newsgroups.com>...
>
>> The books give all sorts of figures for "open wire line". But many of
>> them are for the classic lines made of #14 copper spaced 4 to 6 inches
>> with ceramic spreaders every few feet. Brown poly TV twin lead with
>> rectangular holes punched in it is a whole 'nother ball game.
>> 'Specially at high SWRs and when it's wet. Which may not be a
>> consideration in NTX but is a big consideration in EPA.
>
>(a) It's only Field Day

Go down that road a little more and you're in a certain park I know of...

>(b) If ya just gotta have "the real thing" it's out there for cheap:
>
>http://www.w7fg.com/ant.htm

nice stuff!
>
>> > > It can be coiled into a big helix as long as the adjacent coils are
>> > > a couple of feet apart. You can run an insulated rope to the antenna
>> > > feedpoint and coil the ladder-line on the rope with the coils
>tiewrapped
>> > > a couple of feet apart.
>> >
>> > That's slick.
>>
>> Until the rain falls or the wind blows
>
>It rains on thousands of G5RVs every day all over the world and . . ?

And the loss goes up.
>
>> or somebody walks into it in
>> the dark.
>
>. . welcome to Field Day antenna farms . .

One fella I knew useta always have an RCA phono jack arrangement in the coax somewhere near the op table. Seemed odd until he told about the time somebody drove across the site at 2 AM and the coax got caught in the guy's bumper....

>> The big question for any FD antenna is "how many QSOs"? All the
>> simulations and Smith charts don't count for any points - QSOs do.
>
>Exactly. So ya get a bit more loss when it rains on a G5RV, who
>cares??

Depends on whether it takes the rate down.

>Lemmee cite a good recent example of why too many people fuss
>too much with dB. here dB. there details.
>
>I was watching ops at the N3RS multiop station during the ARRL CW DX
>contest in March. Late in the contest the guy in the 20M seat was
>knocking out contacts as a respectable rate. The xcvr was an FT-1000
>and the amp was a big remote-controlled ACOM. After some considerable
>amount of time he finally noticed that the amp had faulted and swithed
>itself offline when he changed bands to get on 20M. He'd been running
>barefoot the whole time without realizing it. The problem was sorted
>out, the amp was reset and off he went again this time with full
>power. His rate did not change by any discernable amount even though
>his "losses" went down by what . . 12 dB?

OK, fine. On that band, in that contest, with that rig and op, the dBs didn't make much difference. You wanna tell that gang to run low power next year? How about QRP?

btw, I saw the 'RS farm from the PA TPK last week, not many dB wasted there!
>
>So no, I am not gonna get my knickers in a twist over the collection
>of incidental losses one runs into with FD antennas and tuners. As you
>imply there are far more telling factors which determine the
>effectiveness of any station.

Of course.
>
>> My
>> personal best is 629 QSOs with one 100W rig, one op, one mode, three
>> bands and two antennas. Coax fed trapper set up as inverted V for
>> 80/40, quarter wave groundplane elevated 5 feet with 8 sloping radials
>> for 20.
>>
>> Anybody here beat that on FD with only dipoles and verticals?
>
>OK, change of topic here, I'm game. Anybody out there have well over a
>hundred countries confirmed on both 80 and 40 by using just a single
>length of end-fed wire for the antenna?

W2QHH, for one...;-)

Here's my main point in all this:

Whenever antennas are discussed, you will often see descriptions such as "we did really well" or "outstanding performance" or some such. Particularly FD antennas.

But what constitutes "outstanding performance" is usually not defined. For some folks, making 10-15 QSOs per hour on FD when the band is wide open is "outstanding performance". For others, making 2-3 times that rate under similar conditions isn't "outstanding performance".

Patterns and simulations and SWR curves on websites are great stuff, but what really matters to me in terms of "outstanding antenna performance" on FD is how many QSOs you have in the log when it's all done.

73 de Jim, N2EY

580. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 20:12:08 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <syYdc.22451$TS3.7055@nwrddc02.gnilink.net>
Source record: 96831

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:0j6g70pkstagrb8j04qh00krqaeaqomvsv@4ax.com...
> On Sat, 10 Apr 2004 08:37:09 -0700, Bill Turner <noway@nohow.com>
> wrote:
> >> Bill
> >>
> >> How does a person measure the gain of an antenna?
> >>
> >> Jerry
> >
> >Carefully, I would hope.
>
> Hi Bill,
>
> Your response hardly carries the water for an argument supporting gain
> being commonly distinct from directivity.
>
> To answer Jerry's question (he probably already knows how) requires
> the total integration of all power emitted by the radiator - not an
> easy task (as would confirm Bill's sparse reply) and then measuring
> power emitted within small volumes (solid angles of sub-radian
> dimension) to compare against the whole.
>
> The most distinctive point to observe about this "gain" is that almost
> all the power radiated is lost - "almost" being a patronizing term. A
> simple thought problem will reveal this sad fate.
>
> Let us presume you are transmitting 100W with 100% efficiency. Now,
> lets further presume that the entire population of the planet is
> monitoring you with S-9 readability. That is (let's be generous), 10
> Billion receivers. What is the net result of this massive
> communication in system efficiency?
> 0.5%
>
> The antenna in the most perfect of circumstances exhibits an absolute
> loss of 99.5W and I could easily bet no one here even pretends to
> approach 0.000001% of this.
>
> Now, tell me about GAIN. :-)
>
> 73's
> Richard Clark, KB7QHC

Wow Richard, measuring antenna gain sounds complicated. I never was good at calculus.

Jerry

581. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 21:08:59 UTC
From: Stephen Cowell <scowell@sbcglobal.net>
Message-ID: <LnZdc.8045$d%.3291@newssvr23.news.prodigy.com>
Source record: 96832

"Bob" <nubob5001@yahoo.com> wrote in message
news:QjUdc.12090$R37.11556@read1.cgocable.net...
> Hi Steven
>
> Thank you for your response to my problem.
> Any suggestion? What you say is that I would be better off without that
1:1
> balun? Yes, now I have it at 66feet each leg for a total of 132 feet but
now
> it is not at the best height but kinda sagging and lopping where it is but
> off the ground and about 2 feet above the roof and other obstacles. I also
> have it presently close to steel guy wires and the tower itself. What
would
> be my problem then here now? You believe it is my balun?

The balun is basically what is limiting your multi-band
operation. At crazy impedances the balun
prevents the shield of the coax from assisting in absorbing
some of the mismatch. Others have pointed out that the
optimum situation is to feed your antenna with balanced line...
if you must use coax, and you must have multi-band operation,
then use an antenna tuner without a balun upstairs. RG58
doesn't work nearly as good as RG8... I couldn't make my
inverted vee (resonant at 3750kHz) work 15m until I switched
over to RG8. You should avoid legal-limit operation on the
higher bands with this setup, unless you like burnt coax.

> I was hoping to get
> this up there and then leave it. All this climbing is difficult. Do you
> believe that once I get it up there, with the coax, with the dipole, no
> balun, do you think that would allow me better results with a good antenna
> tuner? Any advice is greatly appreciated.

Yes, the good antenna tuner is the key. Get one
with a built-in balun, so you can try balanced feedline
when you get a chance. It really is hotter, both listening
and transmitting.

You should only climb once, put up a yardarm, rope,
and pulley, and then you can play to your heart's content.
Mounting a wire antenna permanently is pure hubris,
beware!

--
Steve
KI5YG

.

582. HF Antenae, any help here!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 22:09:43 UTC
From: Steve Muir <steve_muir@blueyonder.co.uk>
Message-ID: <wf_dc.59383$Id.32470@news-binary.blueyonder.co.uk>
Source record: 96833

I live in the SW of the UK and have recently bought a Fairhaven RD 500.
While i have a good aerial set up for my VHF / UHF, i need to set up
something for HF / SW, Any suggestions from you knowledgeable folks out
there would be greatly apreciated.

Also what freqs should i be listening too, im into military, aircraft,
amateuir etc etc

Thanks in advance

Steve (Scottish)

583. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 22:10:08 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <k4sg705srg8jlok8th0i07euhqq1j8k4u2@4ax.com>
Source record: 96834

On Sat, 10 Apr 2004 20:12:08 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:
> Wow Richard, measuring antenna gain sounds complicated. I never was good
>at calculus.
>
Hi Jerry,

That's for software to do.

73's
Richard Clark, KB7QHC

584. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 22:15:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r9sg70dj889vlff9g3r8ui8ekmtd86h0nt@4ax.com>
Source record: 96835

On 10 Apr 2004 18:25:04 GMT, n2ey@aol.comSPAMNO (N2EY) wrote:
>All of this supports both your experiences and those of others. If the exact
>characteristics of tubular Twin Lead are important to the design, it's no
>wonder that the reported results cannot be obtained.
>
>One more point. The SWR graphs shown for the 5 band version show quite narrow
>SWR bandwidths. If anyone is interested I can report them in a future post.

Hi Jim,

I stand corrected on the tubular twin lead (must've died in the
mid-60s then).

It offers nothing substantially different to the physics of design
however, just a different velocity factor which is scalable to suit
any implementation.

However, my data to this point confounds the "theory" of it all by
exhibiting stubs that do NOT resonate at their computed length
(complete with correction for ANY velocity factor commonly observed).

More data is always appreciated.

73's
Richard Clark, KB7QHC

585. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 22:39:35 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <a-qdnY1Lr8476uXdRVn-vw@adelphia.com>
Source record: 96836

Bob wrote:
> Hi, Thank you for your response. I do not have ladder line and only have the
> coax basically. Is it acceptable for good results to simply use the coax and
> then split it out to each direction of the copper wire? And not use the 1:1
> balun? I was hoping to simply get the dipole in the air and leave it and
> simply tune it at the transmitter to acceptable SWR and go from there. Now I
> only get good SWR on the 80meters because of the length it is cut at. I was
> hoping also to use the dipole with the tuner on 10, 15, 20 and 40. Is this
> possible? The tuner is good and I know I will lose the power to the tuner
> but would still get to use the other bands when needed.
> Any more advice is greatly appreciated.
> thanks
> Bob

The 1:1 balun isn't effecting the match on the other bands. If you
remove it, there probably wouldn't be much difference at all.

You could maybe put traps on the antenna so that it will be able to
resonate on multiple bands.

Another option would be to make multiple dipoles for the other bands.
The impedance mismatch will make the signal tend to go down the dipole
that corresponds to the desired band. Think of that sort of dipole as a
fan so to speak. If you go this route, You'll want to trim the lowest
band first, then work your way up in frequency for the other parts of
the dipole.

But all of these options are a good deal more work than the ladder line
method. But if you won't or can't use ladder line due to your
circumstances, I'd try the fan dipole.

- Mike KB3EIA -

586. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 22:41:01 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <a-qdnYxLr85h6uXdRVn-vw@adelphia.com>
Source record: 96837

Cecil Moore wrote:

> Bob wrote:
>
>> Hi, Thank you for your response. I do not have ladder line and only
>> have the
>> coax basically.
>
>
> The coax *IS* the problem. If you don't like to climb, you are going to
> have to replace the coax with something like 450 ohm ladder-line. 100
> ft. of such ladder-line costs about $17.
>
> One other possible solution is to install an autotuner at the antenna
> feedpoint but that is a pain to do.

Fer sure! I love my ladder line, and it's foibles are worth putting up
with IMO.

- Mike KB3EIA -

587. Re: Sources for Inexpensive RG-8??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 23:36:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40788536$1_5@corp.newsgroups.com>
Source record: 96838

N2EY wrote:
> Patterns and simulations and SWR curves on websites are great stuff, but what
> really matters to me in terms of "outstanding antenna performance" on FD is how
> many QSOs you have in the log when it's all done.

Some of us regard outstanding performance as how many 807's
have been put away. :-)
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

588. make a loop out of a screwdriver ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 23:39:47 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c5a0l5$2pu5n2$1@ID-225834.news.uni-berlin.de>
Source record: 96839

Is it possible to make a dc shorted loop out of a screwdriver antenna?

I just had the thought after seeing some plans for a dc shorted 440 monopole
http://www.w4dex.com/kc4fwc/proj_2.htm

If this was possible it would be nice.

--
Registered Linux User #346565
http://www.tblx.net
WA5K

589. Re: Earth loop somewhere- humming sound

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-10 23:44:05 UTC
From: Gerhard Beulke <palmcove@email.com>
Message-ID: <MPG.1ae323bec11fc1e29897ad@News.individual.DE>
Source record: 96840

In article <r9id70lqq7adp9g47patasqsjes2lk8gvr@4ax.com>,
kb7qhc@comcast.net says...
> Hi Gerhard,
>
> One way that is quick, but not always effective, is to put a "ground
> breaker" between your equipment's power supply and the mains. I'm not
> sure if this is available for European AC connectors.
>
> Another way is to use extension cords so all equipment that is powered
> connects to the same mains outlet.
>
> You say the antenna is "properly grounded." This is suspicious. Does
> it have a wire going to the SAME ground (earth) connection as the
> mains? If not, then connect the two together. If the first two don't
> work (and even if they do), your problem is probably from this "proper
> ground." The reason for the name "ground loop" is that you have two
> different paths to ground (two different ground connections separated
> by earth).
>
> 73's
> Richard Clark, KB7QHC

Hi Richard,

I put an earth wire between the shield of the areal cable and the earth
of the powerpoint which fixed it.

Cheers

--

Looking for a dream holiday?
http://www.palmcove.net/
Palm Cove- Winner of the Award "Australia's Cleanest Beach"

590. Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 00:58:30 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0404101658.5e77eb3e@posting.google.com>
Source record: 96841

Can anyone recommend a good antenna book that is primarily advanced theory and less practical construction -- a book that is currently available, say, from Amazon? I have the ARRL Antenna Handbook, and John Kraus's 1st (1950) and 3rd (2001) editions of Antennas (looking for 2nd edition (1988) if anyone knows about one). One can never have too many antenna books....

Al, WA4GKQ

591. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 00:59:23 UTC
From: n2ey@aol.comSPAMNO
Message-ID: <20040410205923.12501.00007236@mb-m04.aol.com>
Source record: 96842

In article <r9sg70dj889vlff9g3r8ui8ekmtd86h0nt@4ax.com>, Richard Clark
<kb7qhc@comcast.net> writes:

>On 10 Apr 2004 18:25:04 GMT, n2ey@aol.comSPAMNO (N2EY) wrote:
>>All of this supports both your experiences and those of others. If the exact
>>characteristics of tubular Twin Lead are important to the design, it's no
>>wonder that the reported results cannot be obtained.
>>
>>One more point. The SWR graphs shown for the 5 band version show quite
>narrow
>>SWR bandwidths. If anyone is interested I can report them in a future post.
>
>Hi Jim,
>
>I stand corrected on the tubular twin lead (must've died in the
>mid-60s then).

No biggie. I did not expect to find it in the 1953 catalog, but there it was,
and not a new item either.

Probably unobtanium now.
>
>It offers nothing substantially different to the physics of design
>however, just a different velocity factor which is scalable to suit
>any implementation.
>
Lattin seemed to think it was important. Do you have the 1960 QST article?

>However, my data to this point confounds the "theory" of it all by
>exhibiting stubs that do NOT resonate at their computed length
>(complete with correction for ANY velocity factor commonly observed).
>
>More data is always appreciated.
>

Well, here's the info from the 1960 QST article.

Dipole dimensions:

Innermost section (not a stub; shorted at both ends): 8'
Next section (stub; open at inner end): 6' 11" [resonant at 10 meters?]
Next section (stub, open at inner end): 13' 10" [resonant at 20 meters?]
Outermost section (stub, open at inner end): 27' 5" [resonant at 40 meters?]

Entire antenna 57' 2" per side (plus connections)

SWR, 50 ohm coax, coax length not given (all numbers guesstimated from graph):

80 meters:
Minimum SWR: 3725 kHz - 1.1:1
2:1 SWR points: 3625 & 3800 kHz (175 kHz)
SWR at 3500: 5:1
SWR at 4000: 4.5:1

40 meters:
Minimum SWR: 7225 kHz - 1.6:1
2:1 SWR points: 7150 & 7275 kHz (125 kHz)
SWR at 7000: Off end of scale (5:1 at 7075 kHz)
SWR at 7300: 3:1

20 meters:
Minimum SWR: 14250 kHz - 1.3:1
2:1 SWR points: 14100 & 14375 kHz (275 kHz)
SWR at 14000: 3.5:1
SWR at 14350: 1.8:1

10 meters:
Minimum SWR: 28600 - 1.6:1
2:1 SWR points: 28500 & 28750 kHz (250 kHz)
SWR at 28900: 3:1

Chart for 10 meters covers 28500 to 28900 only. No chart for 15 meters but text says it will work there on 3/2 wavelength resonance of 40 meter section and SWR of not less than 3:1.

Note how tight the 2:1 SWR points are, even on the higher bands.

--

Also described is an 80/40 dipole. Inner section is 28' and shorted both ends, outer stub section is 27' 5". Interesting feature of this one is that in order to achieve 40 meter resonance there are pieces of wire 2' 6" long hung from the junction of the two sections. The text and diagram say the outer section resonates on 40 but the inner section has to be kept at 28 feet or the 80 meter resonance will be too low.

--

Seems to me that the classic W3DZZ trap dipole would be a lot less aggravation to model and get working, plus more flexible in choice of minimum SWR points. Particularly if additional "resonance wires" were added if needed. Certainly easier to make mechanically strong traps than stubs, and adjusting single wire lengths with Burndys is a lot easier than fooling with tubular Twin-Lead.

73 de Jim, N2EY

592. Re: HF Antenae, any help here!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 01:21:08 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <cdudnYATTv_kAOXd4p2dnA@comcast.com>
Source record: 96843

Steve,
I don't know what a Fairhaven RD500 is. However, to hear the services you want on HF, you need a radio with Single Sideband capability, and an IF bandwidth of no more than 3 KHz.

Assuming the above is true, as a *first approximation* the longer the wire and the higher up the better. A 100 foot wire, center fed with coax, and 50 feet up works quite well.

Tam/WB2TT

Tam/WB2TT
"Steve Muir" <steve_muir@blueyonder.co.uk> wrote in message news:wf_dc.59383$Id.32470@news-binary.blueyonder.co.uk...
> I live in the SW of the UK and have recently bought a Fairhaven RD 500.
> While i have a good aerial set up for my VHF / UHF, i need to set up
> something for HF / SW, Any suggestions from you knowledgeable folks out
> there would be greatly apreciated.
>
> Also what freqs should i be listening too, im into military, aircraft,
> amateuir etc etc
>
> Thanks in advance
>
> Steve (Scottish)
>
>

593. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 01:21:21 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <107h7ckr7cgika1@corp.supernews.com>
Source record: 96844

A very complete book (4 volumes), with both theory and practical information, is Lee & Lo, _Antenna Handbook_. It should be in print. For theory, one I particularly like for clarity and insight is King, Mimno, and Wing, _Transmission Lines, Antennas, and Wave Guides_. There's a 1965 Dover paperback reprinting of the 1945 original, that's pretty easy to come by. Another theory book is Jordan and Balmain, _Electromagnetic Waves and Radiating Systems_. And if you really like math and want to get at some fundamentals, try King and Harrison, _Antennas and Waves_. (It'll give you an appreciation for the subtle complexity of even a humble dipole, and a real appreciation for today's modeling programs.) I'm quite sure that all but Lee and Lo are out of print, but it's getting pretty easy to find older books on the web. Amazon has a deal with a lot of small dealers, so you can order older books from Amazon -- I just got a 1965 book on numerical methods from a bookstore in Colorado that I ordered through Amazon.

If you really want to dig into antenna theory, you're really studying electromagnetics. There are a number of good textbooks in that field, also.

Roy Lewallen, W7EL

alhearn wrote:
> Can anyone recommend a good antenna book that is primarily advanced
> theory and less practical construction -- a book that is currently
> available, say, from Amazon? I have the ARRL Antenna Handbook, and
> John Kraus's 1st (1950) and 3rd (2001) editions of Antennas (looking
> for 2nd edition (1988) if anyone knows about one). One can never have
> too many antenna books....
>
> Al, WA4GKQ

594. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 02:07:31 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <4078A864.1ABB1819@shaw.ca>
Source record: 96845

Hey Guys,
I have the original article here. If you want it I can scan it and
send it to those requesting.

This has become an interesting thread. I went through hell with mine,
using flat twin lead and not knowing the velocity factor. I had pieces of wire
hanging from the ends of each trap to try and 'trim' them. I also had the problem
of support -- strung a string through the line through holes poked in the twinlead
with a soldering pencil. It came close, but it was quite a while ago. I mentioned
Bob, VE6TE (now SK) who had the full model -- probably the tubular twin lead too --
he never threw anything away! The tubular was a precursor to foam filled (I would
imagine).

If I were ever to go near this antenna again, I'd build a two band model which
might be simpler, and of course now I have a MFJ-259B which might help a bit. It
lies rolled up in a corner of the shack gathering dust -- I had so much hell with it
that I'm reluctant to ever look at it again. One alternative would be to make a
vertical model operating against a good ground -- it would be simpler!

The only reason I built it was because of VE6TE -- and my desire to find the
'ultimate' cheap and simple multiband antenna! Dream on!

Irv VE6BP

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

595. Impressive Expertise Here, but What Antenna Should I Use???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 02:57:48 UTC
From: CentralNJBill <winelover08816@hotmail.com>
Message-ID: <_N2dnSYT4uerKeXdRVn-ig@comcast.com>
Source record: 96846

I have no doubt that this is the place to go if you're a hardcore radio fan.

I started reading this group in hopes of finding out how to pick a better antenna for my RadioLabs-modded Sangean 909, but have to admit that I've come away more confused than ever.

To keep my needs simple, I need an external antenna for a wide range of bands (between 150 and 30K KHz) that mates with my RCA jacks. I've read about the benefits (or necessity) of a separate antenna tuner, and some brands have come up. I've heard about the Sony AN-1, but found that it's discontinued and Ebay may be the only source, and there are some other loop antennas that I cold lay out on my roof...but I guess I don't know what's best.

What thrills me about listening to my radio is picking up signals from all over the world, finding out what other people think and say. It was always cool to me, even when I was a little kid and sat around an old Sony FY-410 worldband radio (which I still have, and it still picks up plenty nearly 40 years later). I don't plan to ever transmit--it's a passive sport for me--and I live in Central New Jersey (USA) so there's plenty of noise to compete with.

So, can you hook a brother up? LOL

596. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 02:59:50 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4078b4d8$1_2@corp.newsgroups.com>
Source record: 96847

alhearn wrote:
> Can anyone recommend a good antenna book that is primarily advanced
> theory and less practical construction -- a book that is currently
> available, say, from Amazon? I have the ARRL Antenna Handbook, and
> John Kraus's 1st (1950) and 3rd (2001) editions of Antennas (looking
> for 2nd edition (1988) if anyone knows about one). One can never have
> too many antenna books....

"Antenna Theory" by Constantine A. Balanis is pretty good - good
enough for me to have it. :-)
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

597. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 03:03:39 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4078b5bf_2@corp.newsgroups.com>
Source record: 96848

N2EY wrote:
> Innermost section (not a stub; shorted at both ends): 8'

No wonder it didn't work on EZNEC. The web page I referenced
had that as a stub.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

598. long wires around the farm

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 03:53:49 UTC
From: Dan Jacobson <jidanni@jidanni.org>
Message-ID: <878yh3gofm.fsf@jidanni.org>
Source record: 96812

http://www.hard-core-dx.com/nordicdx/antenna/wire/beverage/view1.html
got me thinking about all those long AC wires to the pumps on the
farm. When not in use they could instead be used as antennas, eh?
One would use a double knife switch of course to make sure AC would
supposedly never get to our transceiver.

Say, would water in long plastic pipes count as an antenna? I suppose
it would have to be rather impure water.

599. Re: HELP: Icom IC-RP1220 (1.2GHz) repeater drifted.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 04:32:29 UTC
From: phoneguy99 <phoneguy99unspam@unspamsympatico.ca>
Message-ID: <QS3ec.43600$wq4.2805055@news20.bellglobal.com>
Source record: 96849
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna

After re-reading the manual (and an hour or two of net surfing) it turns out the reference frequency is tweakable via the TT remote command set. More than ample adjustment to get it spot on.

(...I really have to learn to not read manuals when I'm over-tired. It was there in a table. No reference to the feature in the manual, but it was listed as a command none the less...)

Thanks to all who read my original post.

Pat

600. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 06:37:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <knph709ob66fdhr315fql5vj4skgi73qtf@4ax.com>
Source record: 96850

On Sun, 11 Apr 2004 02:07:31 GMT, Irv Finkleman <finkirv@shaw.ca>
wrote:

>Hey Guys,

Hi Irv,

> I have the original article here. If you want it I can scan it and
>send it to those requesting.

Put me on your distribution list.
>
> If I were ever to go near this antenna again, I'd build a two band model which
>might be simpler, and of course now I have a MFJ-259B which might help a bit.

I've got two and three band models right now. Just not the right
bands is all.

>One alternative would be to make a
>vertical model operating against a good ground -- it would be simpler!

That's exactly how I start. It gives me a faster running model so I
can go through the iterations quicker.

73's
Richard Clark, KB7QHC

601. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 06:39:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0vph701neq13jlfseuu4q1cu905atruop2@4ax.com>
Source record: 96851

On 11 Apr 2004 00:59:23 GMT, n2ey@aol.comSPAMNO (N2EY) wrote:

>Lattin seemed to think it was important. Do you have the 1960 QST article?
>
Hi Jim,

No, but hopefully Irv will rectify that.
>
>Well, here's the info from the 1960 QST article.

I will keep those numbers close by, thanx.

73's
Richard Clark, KB7QHC

602. Re: Impressive Expertise Here, but What Antenna Should I Use???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 06:44:47 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <13ph70lhqacrdlevcq3pdo5pjg3no1u7da@4ax.com>
Source record: 96852

On Sat, 10 Apr 2004 22:57:48 -0400, "CentralNJBill"
<winelover08816@hotmail.com> wrote:

>I have no doubt that this is the place to go if you're a hardcore radio fan.
>
>I started reading this group in hopes of finding out how to pick a better
>antenna for my RadioLabs-modded Sangean 909, but have to admit that I've
>come away more confused than ever.
>
>To keep my needs simple, I need an external antenna for a wide range of
>bands (between 150 and 30K KHz) that mates with my RCA jacks. I've read
>about the benefits (or necessity) of a separate antenna tuner, and some
>brands have come up. I've heard about the Sony AN-1, but found that it's
>discontinued and Ebay may be the only source, and there are some other loop
>antennas that I cold lay out on my roof...but I guess I don't know what's
>best.
>
>What thrills me about listening to my radio is picking up signals from all
>over the world, finding out what other people think and say. It was always
>cool to me, even when I was a little kid and sat around an old Sony FY-410
>worldband radio (which I still have, and it still picks up plenty nearly 40
>years later). I don't plan to ever transmit--it's a passive sport for
>me--and I live in Central New Jersey (USA) so there's plenty of noise to
>compete with.
>
>So, can you hook a brother up? LOL
>
My recommendation is a random wire with a coax transmission line. Use
75 ohm "cable tv coax" as impedence isn't an issue, the loss is as
minimal as RG-8 type cable and you can't beat the availability & cost
Radio Shack sells an 'F' to phono plug adapter if you don't want to
fiddle with soldering the phno plug to the coax. For a proven method
of how to minimize noise the following article is a 'must read':
http://www.anarc.org/naswa/badx/antennas/low-noise_antenna.html

You will find many other useful ideas if you browse many of the
articles on the 'parent' site http://dxworld.com/dxnews.html#ANT and
then for even more info on shortwave, and broadcast band monitoring,
the 'grandparent' site http://www.cybercomm.net/~slapshot/speedx.html
is highly recommended.

As to the tuner, or preselector - different animals though some use
the terminology interchangeably, I'd hold off on worrying about using
one. A tuner matches the impedence of the antenna to that of the
radio, whereas a preselector works as a bandpass where it rejects

signals outside the frequency where it is tuned. First order of business is to get the antenna installed, pay attention to grounding, keeping the antenna clear of powerlines (can be hard in a city, if possible run the antenna perpendicular to the power lines, it can help to reduce noise) and when routing the cable into your home keep it as clear of the household wiring as possible.

There ya go, all "hooked up"

Howard

603. Re: Earth loop somewhere- humming sound

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 06:45:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <19qh70571ur4jht3didhbclpqilc9la89h@4ax.com>
Source record: 96853

On Sun, 11 Apr 2004 09:44:05 +1000, Gerhard Beulke
<palmcove@email.com> wrote:

>Hi Richard,
>
>I put an earth wire between the shield of the areal cable and the earth
>of the powerpoint which fixed it.
>
>Cheers

Hi Gerhard,

Sehr gut!

73's
Richard Clark, KB7QHC
>

604. Re: Impressive Expertise Here, but What Antenna Should I Use???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 06:54:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <teqh70lj69tcuv81d5e6q6tdpnq9lft6qh@4ax.com>
Source record: 96854

On Sat, 10 Apr 2004 22:57:48 -0400, "CentralNJBill"
<winelover08816@hotmail.com> wrote:
>To keep my needs simple, I need an external antenna for a wide range of
>bands (between 150 and 30K KHz) that mates with my RCA jacks. I've read
>about the benefits (or necessity) of a separate antenna tuner

Must have, but you don't need to spend big bucks.

>, and some
>brands have come up. I've heard about the Sony AN-1, but found that it's
>discontinued and Ebay may be the only source

Buy the cheapest Ham radio antenna tuner (especially without meters
you don't need). Used is OK (as long as it isn't burned out).

>, and there are some other loop
>antennas that I cold lay out on my roof...but I guess I don't know what's
>best.

A long wire as high as you can get it will fill your bands. A loop
may be more useful for AM DX.
>
>What thrills me about listening to my radio is picking up signals from all
>over the world, finding out what other people think and say. It was always
>cool to me, even when I was a little kid and sat around an old Sony FY-410
>worldband radio (which I still have, and it still picks up plenty nearly 40
>years later). I don't plan to ever transmit--it's a passive sport for
>me--and I live in Central New Jersey (USA) so there's plenty of noise to
>compete with.

Hi OM,

For that anticipated noise: search the archives of this group for
"chokes" for antennas, also use keywords like "ferrite" and "1:1
Balun."

73's
Richard Clark, KB7QHC

605. HF MOBILE OF THE MONTH

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 14:04:30 UTC
From: BJ <webmaster@k2bj.com>
Message-ID: <Ofcec.26982$M3.3585@twister.nyroc.rr.com>
Source record: 96855

Submit your photos for May's feature:

http://www.k2bj.com

606. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 15:53:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40796a2b_6@corp.newsgroups.com>
Source record: 96858

N2EY wrote:
> Dipole dimensions:
> Innermost section (not a stub; shorted at both ends): 8'
> Next section (stub; open at inner end): 6' 11" [resonant at 10 meters?]
> Next section (stub, open at inner end): 13' 10" [resonant at 20 meters?]
> Outermost section (stub, open at inner end): 27' 5" [resonant at 40 meters?]

Is this just an attempt at a trapped antenna using stubs for traps?
It doesn't seem to model out to be very functional. The outermost
stub on 40m needs to have a very high impedance, i.e. 1/4WL shorted.
That works well to resonate the vertical on 40m, but 1/8WL on 80m
makes the antenna resonant at 3 MHz according to EZNEC.
--
73, Cecil, W5DXP

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

607. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 16:31:10 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <40781b98_4@newsfeed.slurp.net>
Source record: 96859

Al, check Aamazon for anything by Maxwell - he's pretty much the man.

The other great source is RSGB - they put out some great antenna books - you
can buy them through the ARRL Book shop...

73,
Mike KI6PR
El Rancho R.F., CA

"alhearn" wrote
> Can anyone recommend a good antenna book that is primarily advanced
> theory and less practical construction -- a book that is currently
> available, say, from Amazon? I have the ARRL Antenna Handbook, and
> John Kraus's 1st (1950) and 3rd (2001) editions of Antennas (looking
> for 2nd edition (1988) if anyone knows about one). One can never have
> too many antenna books....
>
> Al, WA4GKQ

608. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 16:48:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <s7ti70522hb6r3mbvb4jib4fu3csfpq1iq@4ax.com>
Source record: 96860

On Sun, 11 Apr 2004 08:36:19 -0700, Bill Turner <noway@nohow.com>
wrote:
>For ham radio purposes, antenna gain and
>directivity are essentially interchangeable.

Close enough for Government work.

>On the other hand, if you try that on your dissertation for your PhD in
>physics, you may end up working at McDonalds.

Hi Bill,

My first assignment out of Metrology school was in Charleston S. C.
loaned to the SeaBees (because my ship was still in Rota Spain). They
took full stock of my million dollar training and found I was
qualified to dig ditches in the clay banks along the Charles river.
They were impressed I knew which end of the shovel went into the
ground and we became fast friends (made me an honorary SeaBee).

Navy motto, "those that work hard together, play hard together" (I
had already learned that from my Pig-boat buddies.)

73's
Richard Clark, KB7QHC

609. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 17:23:01 UTC
From: w9dmk@crosslink.net
Message-ID: <40797c22.5581896@news.crosslink.net>
Source record: 96857

On Sat, 10 Apr 2004 17:29:56 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Knowing the angles the 'Gain' is calculated by dividing 41259 by the
>product of the horizontal and vertical angles corresponding to the 1/2
>power point. [Note: 41259 is the surface of the sphere measured in
>square steradians.]

I'm sure that most are aware that a sphere has 4 Pi steradians, but
you've lost me with your number 41259, and what is a "square"
steradian? I've never heard of such a thing.
Bob, W9DMK, Dahlgren, VA
http://www.qsl.net/w9dmk

610. Re: Earth loop somewhere- humming sound

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 17:23:02 UTC
From: w9dmk@crosslink.net
Message-ID: <40797cca.5750508@news.crosslink.net>
Source record: 96856

On Sun, 11 Apr 2004 09:44:05 +1000, Gerhard Beulke
<palmcove@email.com> wrote:

>I put an earth wire between the shield of the areal cable and the earth
>of the powerpoint which fixed it.
>

Ausgezeichnet!

Bob, W9DMK, Dahlgren, VA
http://www.qsl.net/w9dmk

611. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 17:27:04 UTC
From: Bob <nubob5001@yahoo.com>
Message-ID: <Nkfec.12186$R37.9062@read1.cgocable.net>
Source record: 96861

Hi all

I have it back up without the balun, and still have to use the coax for now. I am able to tune it now on all bands but I am sure there is a lot of power loss from the tuner. I grounded out all devices in the shack but still receiving a lot of RF interferrence on tv, computer, and home alarm.
Thanks for all the advice, really appreciate it.

"N2EY" <n2ey@aol.comSPAMNO> wrote in message
news:20040410135147.08081.00000344@mb-m18.aol.com...
> In article <SjTdc.12081$R37.5090@read1.cgocable.net>, "Bob"
> <nubob5001@yahoo.com> writes:
>
> >We have put together a dipole, each leg is 66 feet. We put a 1:1 balun
and
> >it is running about 60 feet of 50 ohm coax. Presently it is about half
way
> >up the tower it is intended for so we could check the SWR before getting
it
> >up to the highest point. Presently each leg has some lags and dips, no
major
> >bends but it is just hanging there, over some bushes and the entire thing
is
> >over top of the house, and not touching anything but is very close to
some
> >steel guy wires (uninsulated).
>
> What you have is the classic dipole for 80 meters.
>
> >Now we can only tune this down to a useable SWR on the 80m band. On all
> >other bands we cannot tune it down to a safe operating range. We are
using a
> >good antenna tuner but cannot get anything useable except for 80m. Here
we
> >are able to tune the SWR right down.
>
> That is normal behavior.
> >
> >Questions???
> >Would we be better without that balun?
> >
> No.
>
> >Is the fact that the dipole is still too low and close to the guy wires (
> >but not touching) our problem?

>
> No.
>
> > Any suggestions please??
>
> The problem is this:
>
> The antenna you describe is approximately:
>
> one half-wavelength long on 80 meters
>
> two half-wavelengths long on 40 meters
>
> four half-wavelengths long on 20 meters
>
> six half-wavelengths long on 15 meters
>
> etc.
>
> Such a center-fed dipole antenna has a feed point impedance that is fairly
> "low" (that is, under about 100 ohms) on frequencies where it is an *odd*
> number of half-wavelengths. On frequencies where it is an *even* number of
half
> wavelengths, the feed point impedance is very high - greater than 1000
ohms.
>
> The 1:1 balun and 50 ohm coax you are using are low-impedance devices, so
they
> work fine on 80 meters. But on the other bands, they do not work with the
high
> impedance of the antenna. A tuner at the shack end of the coax cannot make
up
> for the enormous mismatch at the antenna end. Even if it could, the loss
in the
> coax from being operated at such a high SWR would make such a system very
> inefficient.
>
> There are several possible solutions:
>
> 1) Use a different transmission line (high impedance balanced line) and
> eliminate the balun. This requires a balanced antenna tuner and the
mechanical
> difficulties of using non-coax transmission lines
>
> 2) Use a different sort of dipole that is an odd number of
half-wavelengths on
> the desired bands. One form of this dipole is the "trap dipole", in which
tuned
> circuits (traps) electrically alter the effective antenna length.
>

> A really good information source is W4RNL's (Cebik) website. Goole on his
name
> or call to find it.
>
> 73 de Jim, N2EY
>
>

612. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 17:43:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ei0j70hv0o78ju892vuqd30r37q6q7q9ig@4ax.com>
Source record: 96862

On Sun, 11 Apr 2004 13:27:04 -0400, "Bob" <nubob5001@yahoo.com> wrote:

>Hi all
>
>I have it back up without the balun, and still have to use the coax for now.
>I am able to tune it now on all bands but I am sure there is a lot of power
>loss from the tuner. I grounded out all devices in the shack but still
>receiving a lot of RF interferrence on tv, computer, and home alarm.
>Thanks for all the advice, really appreciate it.

Hi Bob,

Unfortunately you have proven that the BalUn was very effective in
doing what it is designed to do - prevent all the problems you have
now inherited from those who blamed your coax.

Mikes suggestion was the best - fix the antenna. The golden rule of
consulting is to give the customer advice they can perform. You are
limited to coax and they all had twin lead answers. Mike's suggestion
of making multiple dipoles AKA fan dipole is the simplest and quickest
(just make sure that you drop the ends away from each run by one to
two feet - the fan).

73's
Richard Clark, KB7QHC

613. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 17:51:17 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40798597.8067513A@shaw.ca>
Source record: 96863

Richard Clark wrote:
>
> On Sun, 11 Apr 2004 02:07:31 GMT, Irv Finkleman <finkirv@shaw.ca>
> wrote:
>
> >Hey Guys,
>
> Hi Irv,
>
> > I have the original article here. If you want it I can scan it and
> >send it to those requesting.
>
> Put me on your distribution list.
> >.....

It's in the e-mail! Just fired it off now!

Irv
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

614. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 17:52:49 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <hPGdnf2Ar9d1GOTdRVn-hA@comcast.com>
Source record: 96864

> Mikes suggestion was the best - fix the antenna. The golden rule of
> consulting is to give the customer advice they can perform. You are
> limited to coax and they all had twin lead answers. Mike's suggestion
> of making multiple dipoles AKA fan dipole is the simplest and quickest
> (just make sure that you drop the ends away from each run by one to
> two feet - the fan).

This is the approach that I'm taking,
6 and 20m dipoles up now with balun, and more as I have time/inclination.

Me, I like the antenna to do the radiating, not the feedline.

615. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 17:58:39 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <jHfec.14058$F9.10633@nwrddc01.gnilink.net>
Source record: 96865

Bill

First - I want to be clear that I have absolutely no problem with using
the term GAIN for describing antenna performance.
I did think had not been established, in this thread, that an antena's
gain has to be referanced to some standard antenna, like a dipole or
theoretical radiator like 'isotropic'. I'd submit that, what we refer to as
antenna gain could be more accurately be called 'specific gain'. I also
tink that the term Directivity clears up any misunderstanding about what can
be done to improve an antenna's performance. And, I realize that my
thinking about Gain and about Directivity dont imply that anyone needs to
exclude either from their vocabulary

I suspect my caution about antenna gain stems from reading specs that
display extremely high "gain" numbers while the antennas are actually quite
ordinary.

Jerry

"Bill Turner" <noway@nohow.com> wrote in message
news:1aoi70h8unmg6ocnq0eriorbc1v20kpn0r@4ax.com...
> On Sat, 10 Apr 2004 15:59:56 GMT, "Jerry Martes" <j.jmartes@verizon.net>
> wrote:
>
> > I'll be carefull if you'll tell me how to do it.
> >
> > Jerry
>
> ____
>
> Only one "l" in careful Jerry, not a good start. :-)
>
>
> 1. Decide on your reference, most likely a dipole.
>
> 2. Measure the field strength of the dipole in its most favored
> direction.
>
> 3. Measure the field strength of the antenna under test in its most
> favored direction.
>
> 4. Calculate the gain or loss of the antenna under test.
>
> 5. Post the results here and be prepared for an onslaught of criticism.
>

> --
> Bill, W6WRT
> QSLs via LoTW
>

616. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 18:22:20 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <Yd2dnUTqxf9OEeTdRVn-gw@comcast.com>
Source record: 96866

> I suspect my caution about antenna gain stems from reading specs that
> display extremely high "gain" numbers while the antennas are actually
quite
> ordinary.

Absolutely. Whenever I see a gain number that dosen't reference something,
I assume they mean dBi, rather than dBd.

617. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 18:28:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40798e7f$1_4@corp.newsgroups.com>
Source record: 96867

Dave VanHorn wrote:
> Me, I like the antenna to do the radiating, not the feedline.

Not a problem with a balanced antenna and a current
balanced feedline.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

618. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 18:31:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40798f30$1_4@corp.newsgroups.com>
Source record: 96868

Dave VanHorn wrote:
> Absolutely. Whenever I see a gain number that dosen't reference something,
> I assume they mean dBi, rather than dBd.

Looks like some antenna retailers reference dBdl. :-)
(dl stands for dummy load)
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

619. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 19:27:10 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <fsKdnTgkWPaZAeTd4p2dnA@comcast.com>
Source record: 96769

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40798f30$1_4@corp.newsgroups.com...
> Dave VanHorn wrote:
> > Absolutely. Whenever I see a gain number that dosen't reference
something,
> > I assume they mean dBi, rather than dBd.
>
> Looks like some antenna retailers reference dBdl. :-)
> (dl stands for dummy load)

I've seen a few antennas that should be spec'd as negative dBdl. :)

620. BANNED Survivor Pics (sxBUSHES3.) 8846

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 19:30:12 UTC
From: lgjrhp@tv.com
Message-ID: <c5c6c2$b0r$8@news.loxinfo.co.th>
Source record: 96770
Body handling: Inline uuencoded payload not displayed:
C:\AAA-Data\WebSites\XSites\Zpromo\NEWS\Headers\Pics\Pic3\arrow3.gif

Ever Wondered What Happens When the Cameras
are not On During Survivor or Temptations Island ?

Curious About What Happens Behind Closeed Doors
On Big Brother or American Idol?

You Know Crazy, Wild and even Obscene things Happen!

The Networks Dont Want you to See This!!!!
BUT WE SHOW IT TO YOU!!!

---> http://outtakes.bigthicketdirectory.net/ <---

BECAUSE THE CAMERA WERE ROLLING the Shots just got
BANNED or CENCORED but we Have the SECRETS from REALITY TV

This is for real You Know You Want to See It!

More Erotic Than Temptation Island
Beyong BigBrother
Sexior than Survivor
Better than the Bachelor
Raunchier than The Amazing Race

Nasty Obscene, erotic, dirty, insestuous, gross, indecent,
sleezy, impure, wild, erotic, pornographic, smutty,
risque, sensual, sexy.....
YOU NAME IT - THEY DID IT
ADD WE HAVE THE PROOF

---> http://thbgnwphs.nom.vg/ <---

The Contestants Did it all and the NetWorks Couldnt
Show it, it was Banned, Cencored there Secret
Now we show you what they were doing!!!!

Fetishes, Lingere, Lesbianism, Bi Sexual Experiments,
Foot Fetishes, FORCED SEX, Cross Dressing, Swinging,
jacuzzi group sex, threesomes, hi heels, rubber,
Whatever turns you on - they did it while they
thought no one was watching.

The Real Private Secrets from, Survivor, Bachelor,
Bachelorette, Temptation Island, Mole, Joe Millionare

Contestants caught naked, stripping, playing, sucking, fucking

Did you know some contestants were lesbians some were sluts, On one show a chick gave everyone a blowjob including the camera MEN!!!!

Behind Closed doors, in changing rooms, dressing rooms, in the bushes, private sets, closets, showers, lakes, all sorts of places they thought the cameras were not around, BUT THEY WERE and WE GOT THE SHOTS!!!!!

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[Inline uuencoded payload not displayed:
C:\AAA-Data\WebSites\XSites\Zpromo\NEWS\Headers\Pics\Pic3\arrow3.gif]

`
end

621. SEM QRM Eliminator... Help Required

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 19:49:39 UTC
From: johnandsimone@aol.comQRM
Message-ID: <20040411154939.19631.00000276@mb-m10.aol.com>
Source record: 96771

Hi there,

Anyone have one of these? Ive just bought one with no manual. What aux antenna should I be using and where should the aux antenna be located in relation to my main antenna.

Secondly, what is the procedure for tuning the gain,phase1 and phase2 controls.

Mnay thanks, John G0WPA

622. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 19:56:39 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <Xphec.4343$kM2.1264@lakeread05>
Source record: 96772

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ei0j70hv0o78ju892vuqd30r37q6q7q9ig@4ax.com...
> On Sun, 11 Apr 2004 13:27:04 -0400, "Bob" <nubob5001@yahoo.com> wrote:
>
> >Hi all
> >
> >I have it back up without the balun, and still have to use the coax for
now.
> >I am able to tune it now on all bands but I am sure there is a lot of
power
> >loss from the tuner. I grounded out all devices in the shack but still
> >receiving a lot of RF interferrence on tv, computer, and home alarm.
> >Thanks for all the advice, really appreciate it.
>
> Hi Bob,
>
> Unfortunately you have proven that the BalUn was very effective in
> doing what it is designed to do - prevent all the problems you have
> now inherited from those who blamed your coax.
>
> Mikes suggestion was the best - fix the antenna. The golden rule of
> consulting is to give the customer advice they can perform. You are
> limited to coax and they all had twin lead answers. Mike's suggestion
> of making multiple dipoles AKA fan dipole is the simplest and quickest
> (just make sure that you drop the ends away from each run by one to
> two feet - the fan).
>
> 73's
> Richard Clark, KB7QHC

Actually the first to suggest the multiple-dipole approach was Steve KI5YG,
and that should indeed work extremely well, bearing in mind that the lowest
dipole should still maintain an angle from leg-to-leg of greater than 120
degrees, if possible. I use just one "fan" under the main resonant frequency
(around 60 meters), and it is also resonant at the tuned length of the
"fan", or second dipole as well. Using the tuner works very well up to the
required 15mhz range that my particular station requires. "Very well" to me
means that bareback testing is receivable from a station in Caracas,
Venezuela, which is over 2,000nm away.

Jack
Va Beach

623. Re: Impressive Expertise Here, but What Antenna Should I Use???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 19:59:27 UTC
From: johnandsimone@aol.comQRM
Message-ID: <20040411155927.19631.00000281@mb-m10.aol.com>
Source record: 96773

Hi there,

I had a Sangean type Roberts RC818 as my first radio, that was a great performer.

For HF listening, you cant beat a longwire!! Run the wire as long and as high as you can! Match it to the receiver using either a cheap RX only ATU or a Magnetic Longwire Balun ($ 25-ish). There is NO NEED for active antennas, there is so much signal on HF, and your receiver is sensitive enough to work with a little telescopic. A properly matched long wire will haul the signals in...

John.

624. UHF Load Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 20:14:47 UTC
From: George <look@signature_to.reply>
Message-ID: <XGhec.5302$k05.834@newsread2.news.pas.earthlink.net>
Source record: 96774

What's the best reference source I can use for designing loads in UHF antenna elements? (To make physically shortened elements electrically full-size.) For example, 200 ohms reactive at 500 MHz with Q 75-100?

Thanks.

George K6GW

625. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 21:52:12 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0404111352.7e3481f4@posting.google.com>
Source record: 96775

Just the guys whose opinions I would hope for. Thanks Roy, Cecil.

I'm off to search for the books you suggested. The web is certainly the place to find the old books, and the new books for the best prices. I found both my Kraus books on eBay.

Thanks again.

Al, WA4GKQ

626. Re: 80M camping/portable dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 22:10:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4079c295_1@corp.newsgroups.com>
Source record: 96776

Cecil Moore wrote:
> Jerry Martes wrote:
>> Would the antenna's impedance plot at 0.057 -j1.14 on a 300 ohm Smith
>> Chart? Thats what I calculated.
>
> Nope, 29.5 feet (0.127 lambda) around the 300 ohm SWR circle from the
> 17-j343 antenna, the impedance will be 7-j17 without the stub.

Hi Jerry, I need to apologize to you. I realize now that your 0.057
-j1.14 figure is a value *normalized* to 300 ohms. 17-j343 is indeed
0.057-j1.14 when normalized to 300 ohms. Sorry about the misunderstanding.
Guess I'm getting senile.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

627. Low Pass Filter ??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 22:11:40 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <wojec.14820$Yi3.8319@newssvr22.news.prodigy.com>
Source record: 96777

I just swept a Drake TV-1000-LP and Bud Variable Low-Pass Filter #LF-601 using an HP 8443 and HP141T with a 8552B and 8553B. The Drake goes from 0 dB at 51.3 MHz and drops to -50 dB at 57.1 MHz. While adjusting the Bud it was kind of neat to watch the impact of each of the 5 varaible capacitors in real time I got 0 dB at 41.7 MHz and 60 dB attenuation at 54.5 Mhz. I didn't try to optimize the Bud for channel 2 as yet, that's next. I'm guessing I'll lose the extra 10 dB attenuation the Bud provides but maybe I'll get a sharper knee after I optimize it for channel 2 attenutation. My question is what happens to the attenuated energy that the low pass blocks as there are no resistors in either? I'm sure I'll see some surprises as soon as I sweep both with my return loss bridge as soon as I find it.
Tnx
HankWD5JFR

628. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 22:33:15 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c5ch39$6mq6$1@ID-225206.news.uni-berlin.de>
Source record: 96778

Antenna Engineering Handbook ,by Henry Jassic, 1961 (could be newer too) is
a good one if you can find it.

"alhearn" <alhearn@earthlink.net> wrote in message
news:361741e8.0404101658.5e77eb3e@posting.google.com...
> Can anyone recommend a good antenna book that is primarily advanced
> theory and less practical construction -- a book that is currently
> available, say, from Amazon? I have the ARRL Antenna Handbook, and
> John Kraus's 1st (1950) and 3rd (2001) editions of Antennas (looking
> for 2nd edition (1988) if anyone knows about one). One can never have
> too many antenna books....
>
> Al, WA4GKQ

629. Re: 80M camping/portable dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 22:35:36 UTC
From: jgboyles@aol.com
Message-ID: <20040411183536.22245.00000235@mb-m06.aol.com>
Source record: 96779

>Hi Jerry, I need to apologize to you. I realize now that your 0.057
>-j1.14 figure is a value *normalized* to 300 ohms. 17-j343 is indeed
>0.057-j1.14 when normalized to 300 ohms. Sorry about the misunderstanding.

Hi Jerry and Cecil, When I did my plots it was with a 50 ohm chart. I must confess I use a Smith Chart program that lets you plot any impedance on the normalized 50 ohm chart, with correct results. The program prompts when using Lines, Impedance=? Having been spoiled by the computer, I never really considered plotting transmission line Impedances on a Smith Chart that were different from the normalized Impedance.
This is a neat little free demo program I use. Maybe I need to get back to basics.
73 Gary N4AST

630. Re: Low Pass Filter ??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 22:39:32 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c5chev$7ef9$1@ID-225206.news.uni-berlin.de>
Source record: 96780

it is reflected back. A small amount is dissipated in filter and its
construction materials, and spacing of shields to coils, silver is lowest
loss. I just found my return loss bridge in the garage, yesterday, in that
"pile of stuff that I could need someday".

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:wojec.14820$Yi3.8319@newssvr22.news.prodigy.com...
> I just swept a Drake TV-1000-LP and Bud Variable Low-Pass Filter #LF-601
> using an HP 8443 and HP141T with a 8552B and 8553B. The Drake goes from 0
> dB at 51.3 MHz and drops to -50 dB at 57.1 MHz. While adjusting the Bud
it
> was kind of neat to watch the impact of each of the 5 varaible capacitors
in
> real time I got 0 dB at 41.7 MHz and 60 dB attenuation at 54.5 Mhz. I
> didn't try to optimize the Bud for channel 2 as yet, that's next. I'm
> guessing I'll lose the extra 10 dB attenuation the Bud provides but maybe
> I'll get a sharper knee after I optimize it for channel 2 attenutation.
My
> question is what happens to the attenuated energy that the low pass blocks
> as there are no resistors in either? I'm sure I'll see some surprises as
> soon as I sweep both with my return loss bridge as soon as I find it.
> Tnx
> HankWD5JFR
>
>

631. Re: UHF Load Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 22:46:18 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <4079CABD.7ECC901F@shaw.ca>
Source record: 96781

George wrote:
>
> What's the best reference source I can use for designing loads in UHF
> antenna elements? (To make physically shortened elements electrically
> full-size.) For example, 200 ohms reactive at 500 MHz with Q 75-100?
>
> Thanks.
>
> George K6GW

Just curious, George! Because antennas at that frequency are relatively small to begin with, I've never considered loading anything like that. I'm curious as to why you would want to -- there must be a good reason, isn't there?

Irv VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

632. FS: CU-168/FRR

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 22:52:20 UTC
From: name <someone@microsoft.com>
Message-ID: <J4kec.19047$192.3865@lakeread06>
Source record: 96782
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.swap

Very nice condition CU-168, made by Gailbraith-Pilot Marine. Has been in daily use in my shack for the last 6 months or so. Good front panel, handles have some paint chips. Includes SO-239 to N-Connector adapters..

I want $80, plus shipping, approximately 50 lbs.. I will make sure that it is well-packed!

73,

Larry Keith
KQ4BY

Larry Keith
231 Shenandoah Trail
Warner Robins, GA 31088-6289
KQ4BY-@-rocketmail.com
478-329-0030
----

633. Re: Homemade Antennae, help

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 23:06:42 UTC
From: johnandsimone@aol.comQRM
Message-ID: <20040411190642.12558.00000215@mb-m26.aol.com>
Source record: 96783

If you use a Magnetic Longwire Balun, ANY length of wire should present roughly 50 ohms to the receiver. The amount of extra signal will be considerable! I used 33 feet of wire with a Roberts RC818 some years ago, which worked really well, but when I added the MLB, there was a vast improvement. These MLBs have a PL259(actually SO239) connection at one end and a wing nut for your longwire at the other end. Hayden, W&S, and Maplin all supply them here in the UK for about ï¿½20. A worthwhile investment for the terminally lazy! Otherwise, an ATU is perhaps a better option, except that browsing a band will require constant retuning of the ATU. Personally Id suggest an ATU over an MLB because there will be attenuation of off freq signals that may otherwise cause you problems. So theres your choice! If you want some help building an ATU or sourcing parts, E-mail me, but take QRM off my e-mail addy, :) ...John.

634. screwdriver tuneing 2m ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 23:15:50 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c5cjka$4pd2$1@ID-225834.news.uni-berlin.de>
Source record: 96784

Has anyone used a screwdriver antenna, that wasn't officially rated to do
so, to tune up on 2m ?

--
Registered Linux User #346565
http://www.tblx.net
WA5K

635. Re: HF Antenae, any help here!!!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 23:23:11 UTC
From: johnandsimone@aol.comQRM
Message-ID: <20040411192311.12558.00000217@mb-m26.aol.com>
Source record: 96785

Hi there,

Ive answered your other posting, Homemade Antenae help re: ATUs and Magnetic Longwire Baluns etc. As for frequencies, try this site....
http://www.ajpotts.fsnet.co.uk/links.html
its packet with HF military, marine, civil air and Amateur band frequencies. A copy of Shortwave Magazine is a great read every month(WH smiths), they have HF utility stuff and wierd stuff like Maritime beacon listening, Numbers stations and propaganda stuff, its all good fun...
John, G0WPA, Bournemouth.

Having given my Ham callsign, id better make it clear that listening to ANYTHING except Terry Wogan radio2 is illegal, :) and up 2 you. mail me if I can be of any help....

636. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 23:27:39 UTC
From: John Moriarity <k6qq@hdo.net>
Message-ID: <107jl2le1q8ln59@corp.supernews.com>
Source record: 96786

> Antenna Engineering Handbook ,by Henry Jassic, 1961

It's spelled Jasik. That might make it easier to find ;-)

73, John - K6QQ

637. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-11 23:55:08 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5imj705ct62bouci0vcu98p4up39eacqo9@4ax.com>
Source record: 96787

On Sun, 11 Apr 2004 17:51:17 GMT, Irv Finkleman <finkirv@shaw.ca>
wrote:
>It's in the e-mail! Just fired it off now!

Damn!

I can see the problem now. The crazy thing is calibrated in MC. No
wonder it stopped resonating after the 60s.

Thanx, Irv, for the copies.

73's
Richard Clark, KB7QHC

638. Lattin antenna patent info/query

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 00:24:52 UTC
From: carkenord@juno.com
Message-ID: <4346b55e.0404111624.b71cd93@posting.google.com>
Source record: 96788

William J. Lattin was awarded patent # 2,535,298 on Dec 26, 1950.
This was a patent for the recently discussed "Lattin Antenna".

I have a photocopy of that patent in my possession.

However, when I go to the website of the US Patent Office, I'm not computer geeky enough to be able to wade thru the extraneous government fluff and see his patent.

Here is the URL of the Patent Office:

http://www.uspto.gov/index.html

Has anyone else had any luck accessing Mr. Lattins patent at the Patent Office website?

Lee Carkenord KA0FPJ Denver CO

639. Re: UHF Load Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 00:39:23 UTC
From: George <look@signature_to.reply>
Message-ID: <%ylec.6222$A_4.422@newsread1.news.pas.earthlink.net>
Source record: 96789

Yep, there is. I'm designing a very small hand-held antenna for direction finding. The smaller the better. On paper so far I have shortened "half-wave" dipole elements to 0.32 lambda and am giving up 1 dB of gain in the process, assuming the coils I mentioned in each side of the dipoles.

Now the question becomes, is it practical and buildable?

BTW, congrats on your numbers! I, too, have seen a big improvement in my own cholesterol numbers as a result of diet and exercise, not to mention overall fitness ... :o)))

George K6GW

"Irv Finkleman" <finkirv@shaw.ca> wrote in message
news:4079CABD.7ECC901F@shaw.ca...
> George wrote:
> >
> > What's the best reference source I can use for designing loads in UHF
> > antenna elements? (To make physically shortened elements electrically
> > full-size.) For example, 200 ohms reactive at 500 MHz with Q 75-100?
> >
> > Thanks.
> >
> > George K6GW
>
> Just curious, George! Because antennas at that frequency are relatively
> small to begin with, I've never considered loading anything like that.
I'm curious
> as to why you would want to -- there must be a good reason, isn't there?
>
> Irv VE6BP
> --
> ------------------------------------
> Diagnosed Type II Diabetes March 5 2001
> Beating it with diet and exercise!
> 297/215/210 (to be revised lower)
> 58"/43"(!)/44" (already lower too!)
> ------------------------------------
> Visit my HomePage at http://members.shaw.ca/finkirv/
> Visit my very special website at http://members.shaw.ca/finkirv4/
> Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
http://members.shaw.ca/finkirv5/
> --------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP

> Calgary, Alberta, Canada

640. Re: Lattin antenna patent info/query

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 00:52:24 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <4uoj70pmggck4dtvk5ldp6f3ilqa75ah0h@4ax.com>
Source record: 96790

On 11 Apr 2004 17:24:52 -0700, carkenord@juno.com (Lee Carkenord)
wrote:

>William J. Lattin was awarded patent # 2,535,298 on Dec 26, 1950.
>This was a patent for the recently discussed "Lattin Antenna".
>
>I have a photocopy of that patent in my possession.
>
>However, when I go to the website of the US Patent Office, I'm not
>computer geeky enough to be able to wade thru the extraneous
>government fluff and see his patent.
>
>Here is the URL of the Patent Office:
>
>http://www.uspto.gov/index.html
>
>Has anyone else had any luck accessing Mr. Lattins patent at the
>Patent Office website?
>
Looking up other patents, I know that they do not have all patents
before a certain date actually online in text form.

The older method was to go to either the main Patent office in DC, or
one of the 10 repositories in certain city libraries around the
country, where they have hard copies or microfiche of the older
patents, (now combined with access to the online resources). For
example, for New England, they are at the Boston Public Library's main
branch in Copley Square.

I looked up that one in a patent number search, and they do not have
it in text form, only in image form. I saw the 4 pages. They are in
some QuickTime readable format, so check that you have the free
software installed. To print you need to install very specific
software detailed in their FAQ.

This URL may help you find the specific patent:
<http://patimg2.uspto.gov/.piw?Docid=02535298&homeurl=http%3A%2F%2Fpatft.uspto.gov%2Fnetacgi%2Fnph-Parser%3FSect1%3DPTO1%2526Sect2%3DHITOFF%2526d%3DPALL%2526p%3D1%2526u%3D%2Fnetahtml%2Fsrchnum.htm%2526r%3D1%2526f%3DG%2526l%3D50%2526s1%3D2,535,298.WKU.%2526OS%3DPN%2F2,535,298%2526RS%3DPN%2F2,535,298&PageNum=&Rtype=&SectionNum=&idkey=4641AA8514F7>

See this page for the FAQ on viewing and printing these images:
<http://www.uspto.gov/patft/help/images.htm>

Happy trails,
Gary (net.yogi.bear)

---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

641. Re: Low Pass Filter ??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 00:54:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <nqpj70lpkbps83na0fhssapftl0rm6q186@4ax.com>
Source record: 96791

On Sun, 11 Apr 2004 22:11:40 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:
>My
>question is what happens to the attenuated energy that the low pass blocks

Hi Henry,

Returned to sender - postage due (the source pays the penalty).

It never even makes it into the filter (such is the success of its
design). The mismatch could cause an arc over at the input port, but
then you have one nasty mis-behavin' transmitter (which is one very
good reason to use filters). The sense of "attenuation" is not so
much that the filter grinds down the rough edges, it is more that it
didn't fit through.

73's
Richard Clark, KB7QHC

642. Re: Lattin antenna patent info/query

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 01:04:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <olqj70t62f6gg2itolca07fvlldbmqo9m7@4ax.com>
Source record: 96792

On 11 Apr 2004 17:24:52 -0700, carkenord@juno.com (Lee Carkenord)
wrote:
>Has anyone else had any luck accessing Mr. Lattins patent at the
>Patent Office website?

Hi Lee,

Yup, as Gary suggests, it requires a patent number search. Inventor
names and other sorts do not work because patents before 1976 are
stored as images.

As I reported elsewhere, the patent and the web available rendition
are two very different tunes.

73's
Richard Clark, KB7QHC

643. Re: Homemade Antennae, help

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 01:17:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4079ee59_3@corp.newsgroups.com>
Source record: 96793

John - G0WPA wrote:
> If you use a Magnetic Longwire Balun, ANY length of wire should present roughly
> 50 ohms to the receiver.

Where can I get one of those magic baluns? It doesn't happen to
have a 50 ohm resistor in it, does it?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

644. Re: screwdriver tuneing 2m ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 01:19:15 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4079eec9$1_3@corp.newsgroups.com>
Source record: 96794

Jeremy Salch wrote:
> Has anyone used a screwdriver antenna, that wasn't officially rated to do
> so, to tune up on 2m ?

It would be too long and thus have a high take off angle,
something you definitely don't want on 2m unless you are
working satellites.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

645. Re: HELP: Icom IC-RP1220 (1.2GHz) repeater drifted.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 01:21:48 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <4079f0d3_4@news1.prserv.net>
Source record: 96795
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna

That feature seems to be a common characteristic of Japanese manuals. I repaired a Kenwood 440 for a friend. Looked all over for instructions of how to set up one of the oscillators. Not mentioned in the index or anywhere in the text. Appeared as a note on the schematic. Only took a couple of extra hours to find it. Same manual lists every metric screw, nut and washer in painful detail. Why?

--
Crazy George
Remove N O and S P A M imbedded in return address

"phoneguy99" <phoneguy99unspam@unspamsympatico.ca> wrote in message news:QS3ec.43600$wq4.2805055@news20.bellglobal.com...
> After re-reading the manual (and an hour or two of net surfing) it turns
> out the reference frequency is tweakable via the TT remote command set.
> More than ample adjustment to get it spot on.
>
>
> (...I really have to learn to not read manuals when I'm over-tired. It
> was there in a table. No reference to the feature in the manual, but it
> was listed as a command none the less...)
>
> Thanks to all who read my original post.
>
> Pat
>

646. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 01:33:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <107jsg1svups5a1@corp.supernews.com>
Source record: 96796

The newer editions of that book (at least from the third edition) are edited by Richard C. Johnson. It's an excellent reference, but I didn't include it in my recommendations because Al specifically asked for books on antenna theory. Jasik/Johnson has a lot of qualitative explanation of antenna operation and a wealth of practical information for making antennas, but I wouldn't characterize it as one that goes very deeply into antenna theory. It does, though, have a very good treatment of phased arrays of a few elements that you won't find many other places. I do recommend it for any antenna library, but not as a source of fundamental antenna theory.

Roy Lewallen, W7EL

John Moriarity wrote:
>>Antenna Engineering Handbook ,by Henry Jassic, 1961
>
>
> It's spelled Jasik. That might make it easier to find ;-)
>
> 73, John - K6QQ
>
>

647. Re: screwdriver tuneing 2m ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 01:48:21 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c5csi9$93f0$1@ID-225834.news.uni-berlin.de>
Source record: 96797

Cecil Moore wrote:

> Jeremy Salch wrote:
>> Has anyone used a screwdriver antenna, that wasn't officially rated to do
>> so, to tune up on 2m ?
>
> It would be too long and thus have a high take off angle,
> something you definitely don't want on 2m unless you are
> working satellites.
> --
> 73, Cecil, W5DXP
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

good point, well I guess that idea is out

--
Registered Linux User #346565
http://www.tblx.net
WA5K

648. Re: Homemade Antennae, help

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 02:16:32 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <TbSdnTQQx8xjZuTdRVn-ig@adelphia.com>
Source record: 96798

John - G0WPA wrote:

> If you use a Magnetic Longwire Balun, ANY length of wire should present roughly
> 50 ohms to the receiver. The amount of extra signal will be considerable!

I wonder how the Magnetic longwire baluns work with the Isotron?

;^)

- Mike KB3EIA -

649. Stolen Tower and Antenna - Las Vegas, NV - April 10, 2004

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 02:50:55 UTC
From: googlepost@massageglove.com
Message-ID: <a3b36c48.0404111850.25d9616c@posting.google.com>
Source record: 96799

Stolen from 100 Ironwood Drive in Las Vegas, Nevada sometime between
April 10 and April 11, 2004:

Two sections Rohn 25G Tower
One Rohn 25G Top section
One Rohn Roof/Eve Mount

One Hy-Gain TH7-DX 10/15/20 Triband HF Beam

One Ham-IV Rotor

Two homemade sloper antennas

One 440MHz business band Yagi

All of this equipment was formerly owned by Alan Foster, KB7UI and
disassembled and purchased by Jason Creager, KC0ERG, before Al moved
to Yuma, Arizona this weekend.

There are several items missing from the complete package, so if you
hear of anything being "parted out" and think "That's odd. Why is THAT
missing?" please contact me as I can identify all of the stolen items
. If you know the whereabouts of this antenna, please contact me at:

StolenTower@cox.net

I'm really hoping that this was an honest mistake and that someone
picked up the gear from the hiding spot at the house to keep it from
being accidentally thrown away.

Please forward this message (in a nonannoying method :-) to any mail
reflectors for ham organizations in the Western United States.

Thanks very much,
Jason

650. Re: 80M camping/portable dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 03:13:29 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <tPnec.344$hg1.336@nwrddc02.gnilink.net>
Source record: 96800

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20040411183536.22245.00000235@mb-m06.aol.com...
> >Hi Jerry, I need to apologize to you. I realize now that your 0.057
> >-j1.14 figure is a value *normalized* to 300 ohms. 17-j343 is indeed
> >0.057-j1.14 when normalized to 300 ohms. Sorry about the
misunderstanding.
>
> Hi Jerry and Cecil, When I did my plots it was with a 50 ohm chart. I
must
> confess I use a Smith Chart program that lets you plot any impedance on
the
> normalized 50 ohm chart, with correct results. The program prompts when
using
> Lines, Impedance=? Having been spoiled by the computer, I never really
> considered plotting transmission line Impedances on a Smith Chart that
were
> different from the normalized Impedance.
> This is a neat little free demo program I use. Maybe I need to get back
to
> basics.
> 73 Gary N4AST

Gary

Theres a very good article on use of Smith Chart for impedance matching in
the July 1966 isue of Electronic Design. I like it because I wrote it.
Other than that, it is of little value or interest.

Jerry

651. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 03:15:26 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c5d1mf$9vog$1@ID-225206.news.uni-berlin.de>
Source record: 96801

Thanks for the correction on "Jasik", my fingers get dyslectic.
I agree with Roy below, it is like a survey book, not as deep math wise as it could go, then some good sections. Usally It or Krause have something on an antenna.
Krause has another "book" out, on astromonical antennas, (about 1958?) not a hardback, and was sold in the back of Sky and Telescope magazine a few years ago. Excellent book, I cant find it right now, I think it was Astrominical Antennas, some discussion of the giant antennas he built on campus. Not amateur radio stuff.

I would like to find a good antenna book on Log periodic below 1 GHz. I have other antenna books in microwave region, most are all math, waveguides, feedhorns and so on. But a lot of it scales.

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:107jsg1svups5a1@corp.supernews.com...
> The newer editions of that book (at least from the third edition) are
> edited by Richard C. Johnson. It's an excellent reference, but I didn't
> include it in my recommendations because Al specifically asked for books
> on antenna theory. Jasik/Johnson has a lot of qualitative explanation of
> antenna operation and a wealth of practical information for making
> antennas, but I wouldn't characterize it as one that goes very deeply
> into antenna theory. It does, though, have a very good treatment of
> phased arrays of a few elements that you won't find many other places. I
> do recommend it for any antenna library, but not as a source of
> fundamental antenna theory.
>
> Roy Lewallen, W7EL
>
> John Moriarity wrote:
> >>Antenna Engineering Handbook ,by Henry Jassic, 1961
> > >
> > >
> > > It's spelled Jasik. That might make it easier to find ;-)
> > >
> > > 73, John - K6QQ
> > >
> > >

652. Re: Homemade Antennae, help

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 03:44:08 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <zM6dnThEn-MVjefdRVn-ig@comcast.com>
Source record: 96802

It's not a balun and it doesn't magically autotune though they do help quite a bit depending on circumstances.

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:4079ee59_3@corp.newsgroups.com...
>
> Where can I get one of those magic baluns? It doesn't happen to
> have a 50 ohm resistor in it, does it?
> --
> 73, Cecil, W5DXP
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

653. Re: UHF Load Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 04:19:02 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <WMoec.403$hg1.90@nwrddc02.gnilink.net>
Source record: 96803

"George" <look@signature_to.reply> wrote in message
news:%ylec.6222$A_4.422@newsread1.news.pas.earthlink.net...
> Yep, there is. I'm designing a very small hand-held antenna for direction
> finding. The smaller the better. On paper so far I have shortened
> "half-wave" dipole elements to 0.32 lambda and am giving up 1 dB of gain
in
> the process, assuming the coils I mentioned in each side of the dipoles.
>
> Now the question becomes, is it practical and buildable?
>
> BTW, congrats on your numbers! I, too, have seen a big improvement in my
> own cholesterol numbers as a result of diet and exercise, not to mention
> overall fitness ... :o)))
>
> George K6GW
>
>
>
> "Irv Finkleman" <finkirv@shaw.ca> wrote in message
> news:4079CABD.7ECC901F@shaw.ca...
> > George wrote:
> > >
> > > What's the best reference source I can use for designing loads in UHF
> > > antenna elements? (To make physically shortened elements electrically
> > > full-size.) For example, 200 ohms reactive at 500 MHz with Q 75-100?
> > >
> > > Thanks.
> > >
> > > George K6GW
> >
> > Just curious, George! Because antennas at that frequency are relatively
> > small to begin with, I've never considered loading anything like that.
> I'm curious
> > as to why you would want to -- there must be a good reason, isn't there?
> >
> > Irv VE6BP
> > --
> > ------------------------------------
> > Diagnosed Type II Diabetes March 5 2001
> > Beating it with diet and exercise!
> > 297/215/210 (to be revised lower)
> > 58"/43"(!)/44" (already lower too!)
> > ------------------------------------
> > Visit my HomePage at http://members.shaw.ca/finkirv/

> > Visit my very special website at http://members.shaw.ca/finkirv4/
> > Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at
> http://members.shaw.ca/finkirv5/
> > --------------------
> > Irv Finkleman,
> > Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> > Calgary, Alberta, Canada

Irv

George

I'm not sure of the lengths of your "dipole" elements . I'm going to assume you have a 1/2 wave dipole antenna shortened to about 1/3 wavelength overall. That would have two identical elements about 1/6th wavelength each. If this understanding is correct, I could suggest a method of including 200 ohms in series with each 1/2 of the dipole.

A 1/6th wavelength long piece of 120 ohm coax would look like a 200 ohm inductor if it was shorted at its other end.
Perhaps I could describe a method of building an antenna by using two pieces of 100 ohm coax. It would look much the same as a conventional centerfed dipole but its total length would be shorter than the usual 1/2 wavelength. If you dont already have a picture of what I'd try to describe, maybe I can write more. But, I want to consider the outside of the coaxial stub to be the radiating surface.

Jerry

654. Re: HELP: Icom IC-RP1220 (1.2GHz) repeater drifted.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 06:39:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r8ek70poi8fcf7rqspjen3h0la7k2vfmdu@4ax.com>
Source record: 96804
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna

On Sun, 11 Apr 2004 20:21:48 -0500, "Crazy George"
<muNnscOh@attSglPobaAl.nMet> wrote:

>That feature seems to be a common characteristic of Japanese manuals. I
>repaired a Kenwood 440 for a friend. Looked all over for instructions of
>how to set up one of the oscillators. Not mentioned in the index or
>anywhere in the text. Appeared as a note on the schematic. Only took a
>couple of extra hours to find it. Same manual lists every metric screw, nut
>and washer in painful detail. Why?

Hi George,

This was also an American specialty from the likes of Intel in the
late seventies. If there was any important feature deserving mention,
such was done "somewhere" - once.

73's
Richard Clark, KB7QHC

655. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 07:20:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <107kgqf20s6tf41@corp.supernews.com>
Source record: 96805

The Kraus book you're probably referring to is, I believe, "Big Ear", which I don't have, but have heard about. Among his other books, Kraus' _Electromagnetics_ is one of my most-used texts on that subject.

For antenna books on specialized topics like log periodics, you might check Artech House.

Roy Lewallen, W7EL

John Smith wrote:

> Thanks for the correction on "Jasik", my fingers get dyslectic.
> I agree with Roy below, it is like a survey book, not as deep math wise as
> it could go, then some good sections. Usally It or Krause have something on
> an antenna.
> Krause has another "book" out, on astromonical antennas, (about 1958?) not a
> hardback, and was sold in the back of Sky and Telescope magazine a few years
> ago. Excellent book, I cant find it right now, I think it was Astrominical
> Antennas, some discussion of the giant antennas he built on campus. Not
> amateur radio stuff.
>
> I would like to find a good antenna book on Log periodic below 1 GHz. I
> have other antenna books in microwave region, most are all math, waveguides,
> feedhorns and so on. But a lot of it scales.
>
>

656. Re: UHF Load Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 11:16:58 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c5dtra$c2r$1@hercules.btinternet.com>
Source record: 96806

For a loading coil of j200 ohms at 500 MHz you need an inductance of 0.057 uH.

Wind 4 complete turns of 16 awg wire on a former 5.6 mm diameter, 10 mm long. Q will be around 600.

For the above little calculation and many others use program SOLNOID3.
Download in a few seconds from website below and run immediately.

....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
....

657. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 13:08:24 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <107l56t8le29qaf@corp.supernews.com>
Source record: 96807

"Big Ear" is autobiographical with a good deal of discussion about the large antenna built near Delaware, Ohio. As I recall, there was a second edition too. Prof. Kraus gives credit to all who he worked with.

Smith published a big blue book on log periodic antennas. Most discussion is to be found in published papers. The book Cecil mentioned has a rehash of some of the conventional "wisdom" about LPDA. Use with care.

I find that the first edition (edited by Jasik) is the best of that series.

Watt has an excellent book on VLF (short) antennas.

I am still trying to find my own copy of LaPort's practical and insightful book. Please let me know if you find an extra copy. 73
Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

658. Re: screwdriver tuneing 2m ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 13:43:55 UTC
From: Lloyd Mitchell <lloydm75@hotmail.com>
Message-ID: <NZwec.14612$ux4.10443@bignews5.bellsouth.net>
Source record: 96809

No entirely... IF you are using for repeater work or close in simplex you
may be surprized at the results.

Mitch KD4HTW

"Jeremy Salch" <salchNOSPAM@tblx.net> wrote in message
news:c5csi9$93f0$1@ID-225834.news.uni-berlin.de...
> Cecil Moore wrote:
>
> > Jeremy Salch wrote:
> >> Has anyone used a screwdriver antenna, that wasn't officially rated to
do
> >> so, to tune up on 2m ?
> >
> > It would be too long and thus have a high take off angle,
> > something you definitely don't want on 2m unless you are
> > working satellites.
> > --
> > 73, Cecil, W5DXP
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 100,000 Newsgroups - 19 Different Servers! =-----
>
> good point, well I guess that idea is out
>
>
> --
> Registered Linux User #346565
> http://www.tblx.net
> WA5K

659. Re: Recommend Antenna Book?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 13:44:06 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c5e6f0$l28a$1@ID-225206.news.uni-berlin.de>
Source record: 96808

I found the book, it is "Radio Astronomy" by John D Kraus, 2nd edition 1986
(first was 1966) printed by Cygnus-Quasar Books in Ohio. A lot of math.
Great book for EME building too

....
"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:107l56t8le29qaf@corp.supernews.com...
> "Big Ear" is autobiographical with a good deal of discussion about the
> large antenna built near Delaware, Ohio. As I recall, there was a
> second edition too. Prof. Kraus gives credit to all who he worked with.
>
> Smith published a big blue book on log periodic antennas. Most
> discussion is to be found in published papers. The book Cecil mentioned
> has a rehash of some of the conventional "wisdom" about LPDA. Use with
> care.
>
> I find that the first edition (edited by Jasik) is the best of that
> series.
>
> Watt has an excellent book on VLF (short) antennas.
>
> I am still trying to find my own copy of LaPort's practical and
> insightful book. Please let me know if you find an extra copy. 73
> Mac N8TT
>
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>

660. Re: Homebrew dipole help please?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 13:49:45 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0404120549.d56054a@posting.google.com>
Source record: 96810

"Bob" <nubob5001@yahoo.com> wrote in message
news:<Nkfec.12186$R37.9062@read1.cgocable.net>...
> Hi all
>
> I have it back up without the balun, and still have to use the coax for now.
> I am able to tune it now on all bands but I am sure there is a lot of power
> loss from the tuner.

The power loss from the tuner is insignificant compared to the loss
from operating the coax at high SWR.

> I grounded out all devices in the shack but still
> receiving a lot of RF interferrence on tv, computer, and home alarm.
> Thanks for all the advice, really appreciate it.

Here's what's probably happening:

The antenna is not a good load for the coax on any ham band except 80
meters. The enormous mismatch where the coax joins the antenna, plus
the lack of a balance device, is probably causing the coax outer
shield to radiate. This permits your tuner to match it - sort of - and
at the same time dumps RF all over where you don't want it.

Since you don't want to fool with ladder/openline, the thing to do is
"fix the antenna" so that it presents a more-suitable load to coax on
bands other than 80.

Good luck!

73 de Jim, N2EY

>
>
>
>
>
>
> "N2EY" <n2ey@aol.comSPAMNO> wrote in message
> news:20040410135147.08081.00000344@mb-m18.aol.com...
> > In article <SjTdc.12081$R37.5090@read1.cgocable.net>, "Bob"
> > <nubob5001@yahoo.com> writes:
> >
> > >We have put together a dipole, each leg is 66 feet. We put a 1:1 balun
> and
> > >it is running about 60 feet of 50 ohm coax. Presently it is about half
> way
> > >up the tower it is intended for so we could check the SWR before getting

> it
> > >up to the highest point. Presently each leg has some lags and dips, no
> major
> > >bends but it is just hanging there, over some bushes and the entire thing
> is
> > >over top of the house, and not touching anything but is very close to
> some
> > >steel guy wires (uninsulated).
> >
> > What you have is the classic dipole for 80 meters.
> >
> > >Now we can only tune this down to a useable SWR on the 80m band. On all
> > >other bands we cannot tune it down to a safe operating range. We are
> using a
> > >good antenna tuner but cannot get anything useable except for 80m. Here
> we
> > >are able to tune the SWR right down.
> >
> > That is normal behavior.
> > >
> > >Questions???
> > >Would we be better without that balun?
> > >
> > No.
> >
> > >Is the fact that the dipole is still too low and close to the guy wires (
> > >but not touching) our problem?
> >
> > No.
> >
> > > Any suggestions please??
> >
> > The problem is this:
> >
> > The antenna you describe is approximately:
> >
> > one half-wavelength long on 80 meters
> >
> > two half-wavelengths long on 40 meters
> >
> > four half-wavelengths long on 20 meters
> >
> > six half-wavelengths long on 15 meters
> >
> > etc.
> >
> > Such a center-fed dipole antenna has a feed point impedance that is fairly
> > "low" (that is, under about 100 ohms) on frequencies where it is an *odd*
> > number of half-wavelengths. On frequencies where it is an *even* number of
> half

> > wavelengths, the feed point impedance is very high - greater than 1000
> ohms.
> >
> > The 1:1 balun and 50 ohm coax you are using are low-impedance devices, so
> they
> > work fine on 80 meters. But on the other bands, they do not work with the
> high
> > impedance of the antenna. A tuner at the shack end of the coax cannot make
> up
> > for the enormous mismatch at the antenna end. Even if it could, the loss
> in the
> > coax from being operated at such a high SWR would make such a system very
> > inefficient.
> >
> > There are several possible solutions:
> >
> > 1) Use a different transmission line (high impedance balanced line) and
> > eliminate the balun. This requires a balanced antenna tuner and the
> mechanical
> > difficulties of using non-coax transmission lines
> >
> > 2) Use a different sort of dipole that is an odd number of
> half-wavelengths on
> > the desired bands. One form of this dipole is the "trap dipole", in which
> tuned
> > circuits (traps) electrically alter the effective antenna length.
> >
> > A really good information source is W4RNL's (Cebik) website. Goole on his
> name
> > or call to find it.
> >
> > 73 de Jim, N2EY
> >
> >

661. Re: UHF Load Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 15:24:38 UTC
From: George <look@signature_to.reply>
Message-ID: <Wwyec.6194$k05.1041@newsread2.news.pas.earthlink.net>
Source record: 96811

Reg,

Nice program! Thanks much ... :o)

73,
George K6GW

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c5dtra$c2r$1@hercules.btinternet.com...
> For a loading coil of j200 ohms at 500 MHz you need an inductance of 0.057
> uH.
>
> Wind 4 complete turns of 16 awg wire on a former 5.6 mm diameter, 10 mm
> long. Q will be around 600.
>
> For the above little calculation and many others use program SOLNOID3.
> Download in a few seconds from website below and run immediately.
> ----
> ....
> Regards from Reg, G4FGQ
> For Free Radio Design Software go to
> http://www.btinternet.com/~g4fgq.regp
> ....
>
>

662. moving two UHF TV antennas about the lawn till in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 16:28:03 UTC
From: Dan Jacobson <jidanni@jidanni.org>
Message-ID: <87isg56u0c.fsf@jidanni.org>
Source record: 96813

Looking at these articles about stacking,
http://kyes.com/antenna/stackluge.html
http://www.signalengineering.com/ultimate/co_phasing.html
one worries about exact cable lengths to not get the antennas out of phase.

But say for a temporary set up, with two small UHF TV yagis, each on a pedestal that can be moved around the lawn, it seems one can cut the all three pieces of coax to any short length, and just move the antennas about, until one gets the best picture, meaning they are then also in phase, no?

Of course the driven element would be on the same side of each (but by using opposite sides, the second antenna could be pointed near directions we wanted to null out?)

663. Re: UHF Load Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 16:53:30 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404120853.36516500@posting.google.com>
Source record: 96814

I think I see where you're going with that, Jerry...that's pretty
cool. In fact, I can imagine making the center out of tubing and the
outer ends out of rod, and having it so the rod can be unscrewed or
otherwise unfastened and pulled out, making a very compact (narrow)
package for storage. Would have to be careful to make the rod
attachment a reliably low resistance so the Q of the effective
inductance would stay high. If the coax stub part is filled with
dielectric (like Teflon) it would give more flexibility about the
lengths and impedances.

Cheers,
Tom

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:<WMoec.403$hg1.90@nwrddc02.gnilink.net>...
...
>
> I'm not sure of the lengths of your "dipole" elements . I'm going to
> assume you have a 1/2 wave dipole antenna shortened to about 1/3 wavelength
> overall. That would have two identical elements about 1/6th wavelength
> each. If this understanding is correct, I could suggest a method of
> including 200 ohms in series with each 1/2 of the dipole.
>
> A 1/6th wavelength long piece of 120 ohm coax would look like a 200 ohm
> inductor if it was shorted at its other end.
> Perhaps I could describe a method of building an antenna by using two
> pieces of 100 ohm coax. It would look much the same as a conventional
> centerfed dipole but its total length would be shorter than the usual 1/2
> wavelength. If you dont already have a picture of what I'd try to describe,
> maybe I can write more. But, I want to consider the outside of the coaxial
> stub to be the radiating surface.
>
> Jerry

664. Re: UHF Load Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 17:42:59 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <DyAec.23296$hd3.7531@nwrddc03.gnilink.net>
Source record: 96815

Tom

I was actualy thinking about George's antenna with the coax's center conductor as being the little 'rod' and the outer jacket of the coax as the 'tube'. I was suggesting that the twin line feeding the pair of elements could be connected to the two 'rods'.
There would be alot of lattitude for changing this concept. Loading the coax with any dielectric could effect the mechanical rigidity and, of course, the electrical length inside the coax shorted stubs. You have some good ideas, already.

Jerry

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0404120853.36516500@posting.google.com...
> I think I see where you're going with that, Jerry...that's pretty
> cool. In fact, I can imagine making the center out of tubing and the
> outer ends out of rod, and having it so the rod can be unscrewed or
> otherwise unfastened and pulled out, making a very compact (narrow)
> package for storage. Would have to be careful to make the rod
> attachment a reliably low resistance so the Q of the effective
> inductance would stay high. If the coax stub part is filled with
> dielectric (like Teflon) it would give more flexibility about the
> lengths and impedances.
>
> Cheers,
> Tom
>
>
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:<WMoec.403$hg1.90@nwrddc02.gnilink.net>...
> ...
> >
> > I'm not sure of the lengths of your "dipole" elements . I'm going
to
> > assume you have a 1/2 wave dipole antenna shortened to about 1/3
wavelength
> > overall. That would have two identical elements about 1/6th wavelength
> > each. If this understanding is correct, I could suggest a method of
> > including 200 ohms in series with each 1/2 of the dipole.
> >
> > A 1/6th wavelength long piece of 120 ohm coax would look like a 200
ohm
> > inductor if it was shorted at its other end.
> > Perhaps I could describe a method of building an antenna by using two

> > pieces of 100 ohm coax. It would look much the same as a conventional
> > centerfed dipole but its total length would be shorter than the usual
1/2
> > wavelength. If you dont already have a picture of what I'd try to
describe,
> > maybe I can write more. But, I want to consider the outside of the
coaxial
> > stub to be the radiating surface.
> >
> > Jerry

665. Re: long wires around the farm

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 18:16:57 UTC
From: dplatt@radagast.org
Message-ID: <107ln8pfq8obj4b@corp.supernews.com>
Source record: 96816

>http://www.hard-core-dx.com/nordicdx/antenna/wire/beverage/view1.html
>got me thinking about all those long AC wires to the pumps on the
>farm. When not in use they could instead be used as antennas, eh?
>One would use a double knife switch of course to make sure AC would
>supposedly never get to our transceiver.

This would probably be a violation of the electrical code, everywhere in the United States, due to the obvious safety issues. I'd really suggest against doing anything like this.

>Say, would water in long plastic pipes count as an antenna? I suppose
>it would have to be rather impure water.

Unless you're raising a crop of nori or other seaweed, and are piping around a mess of sea-water, I don't think the water in your pipes would have anywhere near a high enough conductivity to serve as a useful antenna.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

666. Re: moving two UHF TV antennas about the lawn till in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 18:30:18 UTC
From: dplatt@radagast.org
Message-ID: <107lo1qn65djhc3@corp.supernews.com>
Source record: 96817

>Looking at these articles about stacking,
>http://kyes.com/antenna/stackluge.html
>http://www.signalengineering.com/ultimate/co_phasing.html
>one worries about exact cable lengths to not get the antennas out of phase.

>But say for a temporary set up, with two small UHF TV yagis, each on a
>pedestal that can be moved around the lawn, it seems one can cut the
>all three pieces of coax to any short length, and just move the
>antennas about, until one gets the best picture, meaning they are then
>also in phase, no?

I believe so. You'll find that there are numerous (in theory,
infinitely many) pairs of positions which will result in an in-phase
relationship. If you assume (without loss of generality) that the two
coaxes from the two antennas to the combining point are of equal
length, then placing the two antennas so that they are equidistant
from the desired transmitter will put them in-phase, and you can put
them anywhere along the equidistant line which is convenient. Putting
them too close together might result in interaction and pattern
disruptions.

Or, you can put one at a distance X from the desired transmitter, and
the other along a line which is (X + lambda) or (X + 2*lambda) or ...
away from the desired transmitter. This will also result in an
in-phase relationship.

If one coax is a bit shorter than the other, then the antenna with the
longer coax would go at distance X from the transmitter, and the other
at any position (X + delta + N*lambda) where "delta" is the
(electrical) difference in coax lengths and N is any integer.

>Of course the driven element would be on the same side of each (but by
>using opposite sides, the second antenna could be pointed near
>directions we wanted to null out?)

No, I don't think that would work well. That would result in the
second antenna having maximum signal pickup for the signals arriving
from the "null" direction. The antenna pointed towards the desired
source would have a much lower signal pickup from the "null"
direction, and even if the signals from the two antennas are out of
phase you'd find that their amplitudes don't match, and they would not
cancel out well.

A better approach is to aim both antennas at (or nearly at) the
desired transmitter. Put them in positions as indicated above, so
that the signals from the desired transmitter are in-phase. Then,

slide one of them sideways along the equidistant line. You should be able to find a position where the signals from the desired transmitter arrive at the combining point in-phase, but the signals from the undesired direction arrive at the combining point with equal intensity but at 180-degree phase difference, and null out.

Once again, there are numerous combinations of antenna position and coax length which can make this possible.

If you know the directions to the two transmitters/sources, and their frequencies, and the velocity figure of your coax, you can precalculate all of the lengths and positions and be very close to "spot on" when you set up your antennas.

There was a very good article on this topic (dealing specifically with FM radio broadcast reception) in Audio Magazine back in the first half of the 1970s.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

667. Re: long wires around the farm

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 19:38:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <iorl709d37luc58tjpn21u0148anl2n3co@4ax.com>
Source record: 96818

On Sun, 11 Apr 2004 11:53:49 +0800, Dan Jacobson <jidanni@jidanni.org>
wrote:

>http://www.hard-core-dx.com/nordicdx/antenna/wire/beverage/view1.html
>got me thinking about all those long AC wires to the pumps on the
>farm. When not in use they could instead be used as antennas, eh?
>One would use a double knife switch of course to make sure AC would
>supposedly never get to our transceiver.

Hi Dan,

As Dave says, "dangerous."

Instead, loop couple to the run and take what you can get.

>
>Say, would water in long plastic pipes count as an antenna? I suppose
>it would have to be rather impure water.

No. In spite of the supposed conductivity of salt water, it is not,
and fresh water even less (even if impure). You would do better
trying to load a coal seam.

73's
Richard Clark, KB7QHC

668. Re: moving two UHF TV antennas about the lawn till in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 19:46:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <12sl70pui7fq8r4dcqqfu9004195g4d7lp@4ax.com>
Source record: 96719

On Mon, 12 Apr 2004 18:30:18 -0000, dplatt@radagast.org (Dave Platt)
wrote:
>>Of course the driven element would be on the same side of each (but by
>>using opposite sides, the second antenna could be pointed near
>>directions we wanted to null out?)
>
>No, I don't think that would work well. That would result in the
>second antenna having maximum signal pickup for the signals arriving
>from the "null" direction. The antenna pointed towards the desired
>source would have a much lower signal pickup from the "null"
>direction, and even if the signals from the two antennas are out of
>phase you'd find that their amplitudes don't match, and they would not
>cancel out well.
>
>A better approach is to aim both antennas at (or nearly at) the
>desired transmitter. Put them in positions as indicated above, so
>that the signals from the desired transmitter are in-phase.

Hi Guys,

If the goal is to reduce interference, aim the best null(s) at the
offending station and accept the combined mediocre peaks for the
favored station. The signal to interference ratio may be more
important than actual desired signal strength. Two antennas NOT
pointing directly at the favored station may combine enough signal to
allow optimizing the null. This probably has more combinations than
simple boresight aiming, and may yield non intuitive yet useful
results.

73's
Richard Clark, KB7QHC

669. Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 20:08:29 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407af777_3@corp.newsgroups.com>
Source record: 96720

Forget about the feasibility of this question for the moment.
Could a column of mercury inside a tube of glass be used as an
antenna?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

670. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 20:23:07 UTC
From: "H. Adam Stevens" <mayaone@earthlink.net>
Message-ID: <LUCec.7077$A_4.5854@newsread1.news.pas.earthlink.net>
Source record: 96721

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:407af777_3@corp.newsgroups.com...
> Forget about the feasibility of this question for the moment.
> Could a column of mercury inside a tube of glass be used as an
> antenna?
> --
> 73, Cecil, W5DXP
>
>

Yes, of course, but make mine copper, please.

Material Resistivity r(ohm m)

Silver 1.59
Copper 1.68
Aluminum 2.65
Tungsten 5.6
Iron 9.71
Platinum 10.6
Lead 22
Mercury 98

Incidentally, Keith Monk used to make a tone arm with mercury contacts.
(For those of you who don't recognize the term "tone arm" it was a device
used in the playing of "records".)

73
H.
NQ5H

671. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 20:33:40 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <E2Dec.24306$rg5.40991@attbi_s52>
Source record: 96722

Cecil Moore wrote:

> Forget about the feasibility of this question for the moment.
> Could a column of mercury inside a tube of glass be used as an
> antenna?
> --
> 73, Cecil, W5DXP
>

OK Cecil I'll bite. Yep! [I think there may be a Troll here :-)]

Mercury is a metal, albeit a dangerous one. It has a resistivity about 55 times that of copper. To a first approximation it's thermal coefficients are within a factor of 2 or less. It's location in the electrochemical series indicates that the relative potential between copper and mercury of -0.4546 volts would be subject to corrosive effects. Coupling RF to the column would require indirect coupling such as inductive.

Why in Heaven would you or anyone want to do it? [I think there may be a Troll here :-)]

Deacon Dave

Glass is an insulator and has dielectric properties.

My conclusion: Yep! But it would have much higher losses than copper

672. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 20:39:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jgvl7054jgugsv4po7ht8as83r5h7k9h1c@4ax.com>
Source record: 96723

On Mon, 12 Apr 2004 20:33:40 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:
>> Could a column of mercury inside a tube of glass be used as an
>> antenna?
>
>OK Cecil I'll bite. Yep! [I think there may be a Troll here :-)]
Bite? SHF antenna arrays in a set of fillings?

673. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 20:50:56 UTC
From: dplatt@radagast.org
Message-ID: <107m09g3um2jg26@corp.supernews.com>
Source record: 96724

>Forget about the feasibility of this question for the moment.
>Could a column of mercury inside a tube of glass be used as an
>antenna?

Sure, I don't see why not. You'd have to put up with a bit of tuning drift, as the resonant frequency would drop in hot weather or after you'd had your legal-maximum CW station running for a while :-)

There was a running gag over in rec.audio.high-end a few years ago, about the ultimate speaker cables: mercury-filled surgical rubber tubing.

Expensive, trouble-prone, toxic, and prone to cause unexpected visits from the hazmat team. Be the first on your block!

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

674. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 20:52:56 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <070m70pi35kguos3334u0kis3m6hcihfon@4ax.com>
Source record: 96725

On Mon, 12 Apr 2004 20:39:27 GMT, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Mon, 12 Apr 2004 20:33:40 GMT, Dave Shrader
><david.shrader@comcast.net> wrote:
>>> Could a column of mercury inside a tube of glass be used as an
>>> antenna?
>>
>>OK Cecil I'll bite. Yep! [I think there may be a Troll here :-)]
>Bite? SHF antenna arrays in a set of fillings?

Think of how easily the antenna length could be adjusted.

An intriguing idea, but the health hazards of working with Hg would be
significant.

Also, overheating the mercury column would be really bad, and with the
higher resistivity, and difficulties in cooling the mercury, much more
likely.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

675. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 21:47:52 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <c8Eec.15482$CW2.7558@newssvr22.news.prodigy.com>
Source record: 96726

When I was a dumb kid in the 50s we used to go into the garbage of those hard of hearing and get their discarded hearing aid batteries to salvage the mercury. We got quite a bit and used it to make dimes real shiny and let the little balls roll around in our palms.. Several years ago I started to wonder what this might have done to me and I did some checking. Several dentists and a PhD metallurgist all said that the metal mercury is not toxic and is not absorbed but the salts of it are. In dental fillings it's amalgamated with silver. Just think how many kids played witth the stuff and how may dentists have handled and spilled it. When it is improperly disposed it can react with other chemicals and result in toxic compounds or salts and when these get into the water system fish apparently eat whatever feeds on the salts and concentrate it.
From the antenna standpoint I can envision a tall thin tube where mercury is pushed up to the right level for resonance but it looks like I squared R losses will be counterproductive.
73
Hank WD5JFR
"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:407af777_3@corp.newsgroups.com...
> Forget about the feasibility of this question for the moment.
> Could a column of mercury inside a tube of glass be used as an
> antenna?
> --
> 73, Cecil, W5DXP
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

676. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 21:50:05 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c5f2v3$104d8$1@ID-225206.news.uni-berlin.de>
Source record: 96727

yes, but how do you make a dipole? or a yagi?
Also if it wiggles, is that modulating the RF?
But wait there's more..... and you could make a parabolic dish out of it by spinning a pool of it at just the right RMP (some optical telescopes exist like this)
You could coat a copper wire with it to give it support (well.....)
And how can it be that hazardous? The dentist uses it in the fillings in our teeth, (that's close to home!)

"Dave Shrader" <david.shrader@comcast.net> wrote in message news:E2Dec.24306$rg5.40991@attbi_s52...
> Cecil Moore wrote:
>
> > Forget about the feasibility of this question for the moment.
> > Could a column of mercury inside a tube of glass be used as an
> > antenna?
> > --
> > 73, Cecil, W5DXP
> >
>
> OK Cecil I'll bite. Yep! [I think there may be a Troll here :-)]
>
> Mercury is a metal, albeit a dangerous one. It has a resistivity about
> 55 times that of copper. To a first approximation it's thermal
> coefficients are within a factor of 2 or less. It's location in the
> electrochemical series indicates that the relative potential between
> copper and mercury of -0.4546 volts would be subject to corrosive
> effects. Coupling RF to the column would require indirect coupling such
> as inductive.
>
> Why in Heaven would you or anyone want to do it? [I think there may be a
> Troll here :-)]
>
> Deacon Dave
>
> Glass is an insulator and has dielectric properties.
>
> My conclusion: Yep! But it would have much higher losses than copper
>

677. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 22:01:42 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c5f3k9$10l5a$1@ID-225206.news.uni-berlin.de>
Source record: 96728

my teeth hurt, what about florescent lights?, they all have a little of mercury in them, they just get thrown in the dump. I won't bring up the 10 pounds of lead in the monitor you're looking at that lowers the amount of x-rays produced, and the first color TVs produced were xray hazards at 15 feet, now I'm getting a headache.

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message news:c8Eec.15482$CW2.7558@newssvr22.news.prodigy.com...
> When I was a dumb kid in the 50s we used to go into the garbage of those
> hard of hearing and get their discarded hearing aid batteries to salvage the
> mercury. We got quite a bit and used it to make dimes real shiny and let
> the little balls roll around in our palms.. Several years ago I started to
> wonder what this might have done to me and I did some checking. Several
> dentists and a PhD metallurgist all said that the metal mercury is not toxic
> and is not absorbed but the salts of it are. In dental fillings it's
> amalgamated with silver. Just think how many kids played witth the stuff
> and how may dentists have handled and spilled it. When it is improperly
> disposed it can react with other chemicals and result in toxic compounds or
> salts and when these get into the water system fish apparently eat whatever
> feeds on the salts and concentrate it.
> From the antenna standpoint I can envision a tall thin tube where mercury is
> pushed up to the right level for resonance but it looks like I squared R
> losses will be counterproductive.
> 73
> Hank WD5JFR
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> news:407af777_3@corp.newsgroups.com...
> > Forget about the feasibility of this question for the moment.
> > Could a column of mercury inside a tube of glass be used as an
> > antenna?
> > --
> > 73, Cecil, W5DXP
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

>
>

678. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 22:14:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407b1507$1_1@corp.newsgroups.com>
Source record: 96729

Dave Shrader wrote:
> Mercury is a metal, albeit a dangerous one. It has a resistivity about
> 55 times that of copper.
>
> Why in Heaven would you or anyone want to do it? [I think there may be a
> Troll here :-)]

No troll, just a wild hair. I got to thinking of using mercury as the conducting medium for an RF antenna switch and then wondered if mercury could replace the upper part of a whip where there is low current and high voltage. The mercury changing length in a thermometer triggered these unthinkable thoughts. Imagine changing the current through a resistor in order to tune an antenna by varying the mercury level.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

679. Re: moving two UHF TV antennas about the lawn till in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 22:27:20 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <HaSdncw_K7tViubdRVn-uA@comcast.com>
Source record: 96730

We used to fight ghosting in metro areas by using a high gain antenna, then a series of pads, sometimes as much as 50dB, then feeding the building's distribution amplifier.

680. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 23:45:11 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <407B2A0C.D3EC41AE@shaw.ca>
Source record: 96731

> Why in Heaven would you or anyone want to do it? [I think there may be a
> Troll here :-)]

Temperature compensating antenna length for those extra fussy antenna people?
--

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

681. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-12 23:56:34 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <S0Gec.13068$K_.414540@bgtnsc05-news.ops.worldnet.att.net>
Source record: 96732

Cecil,

No, it won't work.

Mercury, being a liquid at normal temperatures, is subject to hydrodynamic wave action. The RF couples into the hydrodynamic modes, and the resulting interference energy waves cause cancellation of the antiglare properties at the ends of the tube. The RF then leaks out and does not launch into the desired radio waves.

Of course the mercury has high local proton density, so it has been claimed that even small amounts of proton decay can negate the RF to hydrodynamic coupling, thereby allowing the essential glare properties to be maintained.

8-)

73,
Gene, W4SZ

Cecil Moore wrote:
> Forget about the feasibility of this question for the moment.
> Could a column of mercury inside a tube of glass be used as an
> antenna?
> --
> 73, Cecil, W5DXP
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

682. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 00:15:24 UTC
From: phoneguy99 <phoneguy99unspam@unspamsympatico.ca>
Message-ID: <OhGec.4428$vF3.680732@news20.bellglobal.com>
Source record: 96733

Cecil,

I asked this question about a year ago in some other group but the posting went unanswered. Here's (more or less) what happened about 4 years ago during a conversation I had with a fellow who emigrated from Russia many years ago. (It was a Sunday morning coffee shop ritual where my wife and I would walk to a nearby Starbucks and meet with a small group and discuss life, the universe, and everything as we overdosed on several venti lattes with two extra espresso shots...) He once mentioned a Russian text that detailed a mercury filled collinear antenna. It was not completely filled with HG but had electrodes at the ends that connected to cylinders of mercury. The article claimed wideband performance and low noise. I asked him to sketch out the illustration (bear in mind he's not a radio guy) and he sketched a collinear antenna.

```
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```

This is the best (crude) ascii rendition of the sketch on the napkin, but you get the picture.
He described the ends were electrodes protruding into a cylinder of HG. I have yet to build the thing, but I do have a source of HG if I need it. he claimed the book was a KGB cold war technical manual (obviously written in russian) that he happened upon. I cannot testify to the authenticity of the article nor its origin, but I reiterate, he was not a radio literate fellow, but very well read in a broad field of mainly business, economic and political topics. When he sketched the illustration from memory, he even said "I'm not even sure it this is right, but this is how I remember it..." and yet the scribble was accurate.

I still intend to try it out, but as usual, procrastination rules!!!

Pat

683. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 00:34:12 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <107mdco5fl8dadb@corp.supernews.com>
Source record: 96734

I have a clear recollection of using tubular twin lead for FM broadcast
dipoles in the early 1950s. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:3l5g70t7l8an9p5iorgretjouvbj9v3pg8@4ax.com...
> On 10 Apr 2004 14:59:24 GMT,

>
> This hard to accept given the timelines offered by those who have
> reported the references. For one, the antenna was invented in the
> late 40's and patented 26 Dec. 1950, and reported in 1960. ALL such
> dates precede the introduction of tubular Twin Lead in the mid 60s.
>
> 73's
> Richard Clark, KB7QHC

684. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 00:37:19 UTC
From: HUMBUG <humbug@bit.bucket>
Message-ID: <vaprk1-lrl.ln1@deep.bit.bucket>
Source record: 96737

On Mon, 12 Apr 2004 23:56:34 GMT, Gene Fuller <W4SZzzzzzz@att.net> Wrote :
> Cecil,
>
> No, it won't work.
>
> Mercury, being a liquid at normal temperatures, is subject to
> hydrodynamic wave action. The RF couples into the hydrodynamic modes,
> and the resulting interference energy waves cause cancellation of the
> antiglare properties at the ends of the tube. The RF then leaks out and
> does not launch into the desired radio waves.
>
> Of course the mercury has high local proton density, so it has been
> claimed that even small amounts of proton decay can negate the RF to
> hydrodynamic coupling, thereby allowing the essential glare properties
> to be maintained.

Thanks for that. I just knew someone here would know for sure why it
would, or would not, work. And a simple explanation...

--

Humbug

685. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 00:39:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <n7dm701f1sausvl2128daet8fl6vg0fv12@4ax.com>
Source record: 96735

On Mon, 12 Apr 2004 20:52:56 GMT, Gary S. <Idontwantspam@net> wrote:
>Think of how easily the antenna length could be adjusted.

Hi Gary,

I have four high accuracy laboratory thermometers one of which is 6"
from this keyboard (ambient 18.4ï¿½ C) with a range of -1ï¿½ to 51ï¿½ C over
a length of roughly 16 inches. I've built precision heaters and
designed using TEMs; nothing is easy about controlling heat.

- It's a stupid idea -

73's
Richard Clark, KB7QHC

686. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 00:46:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tpdm70do6f2tbim99eo18fnn6ad48d138b@4ax.com>
Source record: 96736

On Mon, 12 Apr 2004 21:47:52 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:
> Several
>dentists and a PhD metallurgist all said that the metal mercury is not toxic
>and is not absorbed but the salts of it are.

Hi Henry,

You may as well had said several fools - especially the metallurgist
passing as a toxicologist. The Dental practice is one of the single
highest pollution hot spots of industry and acids in saliva are known
to leach Mercury.

There is NO MINIMUM EXPOSURE LEVEL to Mercury. No matter how little,
it has some debilitating effect that is measurable.

73's
Richard Clark, KB7QHC

687. Re: long wires around the farm

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 01:24:50 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <JrednZ0ICoz83ObdRVn-uA@adelphia.com>
Source record: 96738

Richard Clark wrote:
> On Sun, 11 Apr 2004 11:53:49 +0800, Dan Jacobson <jidanni@jidanni.org>
> wrote:
>
>
>>http://www.hard-core-dx.com/nordicdx/antenna/wire/beverage/view1.html
>>got me thinking about all those long AC wires to the pumps on the
>>farm. When not in use they could instead be used as antennas, eh?
>>One would use a double knife switch of course to make sure AC would
>>supposedly never get to our transceiver.
>
>
> Hi Dan,
>
> As Dave says, "dangerous."
>
> Instead, loop couple to the run and take what you can get.
>
>
>>Say, would water in long plastic pipes count as an antenna? I suppose
>>it would have to be rather impure water.
>
>
> No. In spite of the supposed conductivity of salt water, it is not,
> and fresh water even less (even if impure). You would do better
> trying to load a coal seam.

I did see a website about a person making an antenna out of the very substance. The link referes to a loop antenna now, but IIRC, this person made a antenna out of water in a PVc pipe. It was mounted on his Jeep. A 40 meter antenna, I believe. Strange, very strange

The page which gave the old link was on the A6CV site:

http://www.ac6v.com/antprojects.htm#W

and ther it is. Sorry I can't be more specific, I am dealing from memory, and was very amused at the time.

- Mike KB3EIA -

688. Re: long wires around the farm

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 01:37:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <50hm70thaqdmusl12l81e7vt41d6uhb380@4ax.com>
Source record: 96739

On Mon, 12 Apr 2004 21:24:50 -0400, Mike Coslo <mcoslo@adelphia.net>
wrote:
>this person
>made a antenna out of water in a PVc pipe. It was mounted on his Jeep. A
>40 meter antenna, I believe. Strange, very strange

Hi Mike,

As we can all guess, the jeep was the radiator, and the pipe was for
show.

73's
Richard Clark, KB7QHC

689. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 01:41:05 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5fgfh$r7q$2@mail.specsol.com>
Source record: 96740

Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

> No troll, just a wild hair. I got to thinking of using mercury as the
> conducting medium for an RF antenna switch and then wondered if mercury
> could replace the upper part of a whip where there is low current and
> high voltage. The mercury changing length in a thermometer triggered
> these unthinkable thoughts. Imagine changing the current through a
> resistor in order to tune an antenna by varying the mercury level.
> --
> 73, Cecil, W5DXP

Had the same wild hair once.

One problem is that changing the length through temperature requires a
thin column of mercury in a stiff container; probably not ideal for
an antenna.

I came up with a bunch of other practical issues that I'm sure will all get
posted here in time.

The best use of mercury in antennas is to go down to the creek and
gather gold with it. Sell the gold and buy an antenna.

--
Jim Pennino

Remove -spam-sux to reply.

690. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 01:46:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7ehm70dn0gssep6lmntgj35n2c8e83vift@4ax.com>
Source record: 96741

On Mon, 12 Apr 2004 21:47:52 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>When I was a dumb kid in the 50s we used to go into the garbage of those
>hard of hearing and get their discarded hearing aid batteries to salvage the
>mercury.

Hi Henry,

Another point of toxicity. Because the nuclear "Boomers" contained a
closed loop environmental system, ALL such batteries were banned from
the boat irrespective of their need in ANY equipment. We had to make
do with substitutes and jury rig our own holders or means to provide a
voltage for key equipment that would work fine on surface craft.

73's
Richard Clark, KB7QHC

691. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 01:52:22 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5fh4m$2d9$1@mail.specsol.com>
Source record: 96742

Richard Clark <kb7qhc@comcast.net> wrote:
> On Mon, 12 Apr 2004 21:47:52 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
> > Several
> >dentists and a PhD metallurgist all said that the metal mercury is not toxic
> >and is not absorbed but the salts of it are.

> Hi Henry,

> You may as well had said several fools - especially the metallurgist
> passing as a toxicologist. The Dental practice is one of the single
> highest pollution hot spots of industry and acids in saliva are known
> to leach Mercury.

> There is NO MINIMUM EXPOSURE LEVEL to Mercury. No matter how little,
> it has some debilitating effect that is measurable.

> 73's
> Richard Clark, KB7QHC

Utter nonsense.

Ever hear "The poison is in the dose"?

There is some amount of every element in your body, including mercury,
plutonium, arsenic and anything else you care to name.

--
Jim Pennino

Remove -spam-sux to reply.

692. Re: Impressive Expertise Here, but What Antenna Should I Use???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 01:53:15 UTC
From: CentralNJBill <winelover08816@hotmail.com>
Message-ID: <iKGdnaiBVtaG1ebdRVn-uA@comcast.com>
Source record: 96743

Fantastic response, guys! I knew I came to the right place. It seems a longwire is the way to go, and I'll be using your advice to make a go of it. Thanks again!

693. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 02:03:02 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5fhom$2d9$2@mail.specsol.com>
Source record: 96744

Richard Clark <kb7qhc@comcast.net> wrote:
> On Mon, 12 Apr 2004 21:47:52 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:

> >When I was a dumb kid in the 50s we used to go into the garbage of those
> >hard of hearing and get their discarded hearing aid batteries to salvage the
> >mercury.

> Hi Henry,

> Another point of toxicity. Because the nuclear "Boomers" contained a
> closed loop environmental system, ALL such batteries were banned from
> the boat irrespective of their need in ANY equipment. We had to make
> do with substitutes and jury rig our own holders or means to provide a
> voltage for key equipment that would work fine on surface craft.

> 73's
> Richard Clark, KB7QHC

The key here is "closed environment", which means crap accumulates.

A lot of things are banned on subs because it is easier to ban them than
it is to monitor them for for safe levels and then clean the whole damn
sub when a level gets too high.

None of this means you should get your panties in a wad because there is
a mercury wetted relay in the house.

--
Jim Pennino

Remove -spam-sux to reply.

694. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 02:43:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <nqkm70pnm7pfvuqthua542q1g3dfhua3hk@4ax.com>
Source record: 96745

On Tue, 13 Apr 2004 01:52:22 +0000 (UTC), jimp@specsol-spam-sux.com
wrote:
>Utter nonsense.

Hi Jim,

I've performed work with Battelle Centers for Public Health Research &
Evaluation and this very matter has been studied to record and verify
every statement I've offered.

73's
Richard Clark, KB7QHC

695. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 02:45:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <e0lm705ca4gi9pmfqgmh16voh5dmifbaub@4ax.com>
Source record: 96746

On Tue, 13 Apr 2004 02:03:02 +0000 (UTC), jimp@specsol-spam-sux.com
wrote:
>A lot of things are banned on subs because

Hi Jim,

I've been in charge of EVERY piece of electronic equipment located on
a Boomer or Fast Attack - Mercury is not a "lot of things."

73's
Richard Clark, KB7QHC

696. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 03:08:27 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5fljb$dt5$1@mail.specsol.com>
Source record: 96747

Richard Clark <kb7qhc@comcast.net> wrote:
> On Tue, 13 Apr 2004 02:03:02 +0000 (UTC), jimp@specsol-spam-sux.com
> wrote:
> >A lot of things are banned on subs because

> Hi Jim,

> I've been in charge of EVERY piece of electronic equipment located on
> a Boomer or Fast Attack - Mercury is not a "lot of things."

> 73's
> Richard Clark, KB7QHC

Well, dooh...

So are you saying there are no restrictions on ANY materials used in or
brought aboard a sub other than those containing mercury?

--
Jim Pennino

Remove -spam-sux to reply.

697. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 03:24:58 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5fmia$i19$1@mail.specsol.com>
Source record: 96748

Richard Clark <kb7qhc@comcast.net> wrote:
> On Tue, 13 Apr 2004 01:52:22 +0000 (UTC), jimp@specsol-spam-sux.com
> wrote:
> >Utter nonsense.

> Hi Jim,

> I've performed work with Battelle Centers for Public Health Research &
> Evaluation and this very matter has been studied to record and verify
> every statement I've offered.

> 73's
> Richard Clark, KB7QHC

You said:

"There is NO MINIMUM EXPOSURE LEVEL to Mercury. No matter how little,
it has some debilitating effect that is measurable."

What is the "debilitating effect that is measurable" of exposure to 1 atom
of mercury? How about 2 atoms of mercury? Three?

According to the the ATSDR:

"The EPA has set a limit of 2 parts of mercury per billion parts of drinking
water (2 ppb).

The Food and Drug Administration (FDA) has set a maximum permissible level
of 1 part of methylmercury in a million parts of seafood (1 ppm).

The Occupational Safety and Health Administration (OSHA) has set limits of
0.1 milligram of organic mercury per cubic meter of workplace air (0.1 mg/m?)
and 0.05 mg/m? of metallic mercury vapor for 8-hour shifts and 40-hour work
weeks."

Looks to me like there are at least three entities other than Battelle
Centers for Public Health Research & Evaluation that found minimum levels.

--
Jim Pennino

Remove -spam-sux to reply.

698. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 03:56:46 UTC
From: JJ <radiobuff99@mailcity.moc>
Message-ID: <jIKdnQjwy_U65ebdRVn-hQ@gbronline.com>
Source record: 96750

Richard Clark wrote:

> On Tue, 13 Apr 2004 01:52:22 +0000 (UTC), jimp@specsol-spam-sux.com
> wrote:
>
>>Utter nonsense.
>
>
> Hi Jim,
>
> I've performed work with Battelle Centers for Public Health Research &
> Evaluation and this very matter has been studied to record and verify
> every statement I've offered.
>
> 73's
> Richard Clark, KB7QHC

Well, I used to play with blobs of mercury a lot when I was a kid and it has never eeeffffffecttted (snort)mmmmeee a (slobber) biiiittt.

699. Re: SEM QRM Eliminator... Help Required

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 04:43:08 UTC
From: Rob Frohne <frohro@wwc.edu>
Message-ID: <frohro-05C1B4.21430712042004@news.tamerica.net>
Source record: 96749

In article <20040411154939.19631.00000276@mb-m10.aol.com>,
johnandsimone@aol.comQRM (John - G0WPA) wrote:

>Hi there,
>
>Anyone have one of these? Ive just bought one with no manual. What aux antenna
>should I be using and where should the aux antenna be located in relation to my
>main antenna.
>
>Secondly, what is the procedure for tuning the gain,phase1 and phase2 controls.
>
>Mnay thanks, John G0WPA

I have one, and you need to get the aux antenna as close to the source
of the noise as you can. I could never really get good results, because
I was using a 4 element quad at 120 feet and it could hear noise sources
a long way from my QTH. My aux antenna couldn't, and there wasn't
enough adjustment in the gain control.

Rob

700. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 05:38:39 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407b7d1d$1_4@corp.newsgroups.com>
Source record: 96751

JJ wrote:
> Well, I used to play with blobs of mercury a lot when I was a kid and it
> has never eeeffffffecttted (snort)mmmmeee a (slobber) biiiittt.

When I was a kid, my denist used to squeeze the mercury out of the
fillings with a cloth, and just let the liquid mercury fall all over
everything. He said it had been "passivated" or something like that
and thus rendered inert and harmless.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

701. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 06:35:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hd1n70l9ki534eash0667ivq830nva7enp@4ax.com>
Source record: 96752

On Tue, 13 Apr 2004 03:24:58 +0000 (UTC), jimp@specsol-spam-sux.com
wrote:
>You said:
>
>"There is NO MINIMUM EXPOSURE LEVEL to Mercury. No matter how little,
>it has some debilitating effect that is measurable."

As the author of my own words, I am well aware of what I said.
>
>What is the "debilitating effect that is measurable" of exposure to 1 atom
>of mercury? How about 2 atoms of mercury? Three?
>
>According to the the ATSDR:
>
>"The EPA has set a limit of 2 parts of mercury per billion parts of drinking
>water (2 ppb).

Do you limit your glass of water to 2 billion atoms of H2O? Asking
about atoms in the face of living a real life is absurd and mocks the
real dangers.
>
>The Food and Drug Administration (FDA) has set a maximum permissible level
>of 1 part of methylmercury in a million parts of seafood (1 ppm).
>
>The Occupational Safety and Health Administration (OSHA) has set limits of
>0.1 milligram of organic mercury per cubic meter of workplace air (0.1 mg/m?)
>and 0.05 mg/m? of metallic mercury vapor for 8-hour shifts and 40-hour work
>weeks."
>
>Looks to me like there are at least three entities other than Battelle
>Centers for Public Health Research & Evaluation that found minimum levels.

The EPA has also allowed for risks that endanger life in Asbestos. It
is a ongoing tragedy in Idaho currently. Ask them if they believe in
the current administration's track record. Using watered down,
industry leveraged numbers to cross-correlate to safety is fine if you
want to die your life that way.

However, back to Mercury. The current science eclipses all these
"standards" you quote. It is a matter of degree. The standards offer
that your IQ may slip 10 points at their levels - the question is do
you shrug off better practices that merely reduce it 5 points, or is
below the "standard" threshold suddenly no loss whatever? Clue: it is
a continuum, there is no safe level of exposure. If you feel fine
shaving half a point, sobeit. If it amounts to 0.05 point, bake a

cake and have a party. Offer guarantees of no loss whatever below current "standards" and you will buy the farm in liability.

73's
Richard Clark, KB7QHC

702. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 06:37:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <vi2n70lst9f9bd92l0avqa8opq7knv74t6@4ax.com>
Source record: 96753

On Tue, 13 Apr 2004 03:08:27 +0000 (UTC), jimp@specsol-spam-sux.com
wrote:

>Well, dooh...
>
>So are you saying there are no restrictions on ANY materials used in or
>brought aboard a sub other than those containing mercury?

Hi Jim,

Name another. I can think of many, but they are trivial compared to
mercury which is toxic everywhere.

73's
Richard Clark, KB7QHC

703. Re: Have anyone the simulation of IMAX 2000 for the MMANA program?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 07:35:37 UTC
From: "Wolfgang K. Meister" <no.mail@please.com>
Message-ID: <oe5n709ca916lnksf0in673m06mlfu9470@4ax.com>
Source record: 96754

On Sat, 10 Apr 2004 17:04:10 GMT, "Marcello" <marcello110980@yahoo.it>
wrote:

>Have anyone the simulation of IMAX 2000 for the MMANA program?
>

Marcello,

all those CB antennas are JUNK. Their advertisement are non-technical
promises for people that don't understand HF-Radios at all.

3MHZ bandwith SWR < 1.2:1 and 5000 Watts are simply LIES!

In practice - an vertical antenna without counterpoise or grounding
will not work. So the result really depends WHERE you mount it and HOW
you mount it and HOW you GROUND it.

Take a 7,2 long rod and try to find out with MMANA what's about it.
You will be surprised. Maybe they have a L/C at the feedpoint to
compensate the SWR at the center of the CB frequencies.

73s
Wolfgang
OE1MWW

oe1mww (at) qsl.net

704. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 12:03:12 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <3FQec.30006$rg5.48488@attbi_s52>
Source record: 96755

Richard Clark wrote:

SNIP
>
> Another point of toxicity. Because the nuclear "Boomers" contained a
> closed loop environmental system, ALL such batteries were banned from
> the boat irrespective of their need in ANY equipment. We had to make
> do with substitutes and jury rig our own holders or means to provide a
> voltage for key equipment that would work fine on surface craft.
>

SNIP

As an Aerospace Design Engineer [1964 - 1986] and Major Military Systems Chief Engineer [1986 - 1992], MERCURY was/is a prohibited material in design. Any 'only solution' conditions had to be explicitly approved by higher authority than the PCO [Program Contracting Officer]. This generally was understood as SPO [Systems Program Officer ... Rank 2 stars or higher].

705. Re: quad question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 12:03:14 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <107nlo8b8a5gm03@corp.supernews.com>
Source record: 96756

Dale,

If you do not intend to perform front-to-back tuning, then the rule of thumb is to cut the reflector for a frequency that is 3% lower than the driven element design frequency.

For example: if your design frequency is 14.150, you divide by 995.2 for the driven element length of 70.3 feet. Then subtract 3% for a reflector frequency of 13.726 / 995.2 = length of 72.5.

--
-larry
K8UT
"Dale Parfitt" <par@parelectronics.com> wrote in message
news:qpbdc.17236$TS3.10798@nwrddc02.gnilink.net...
>
> "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET> wrote in message
> news:107aa9v2kp3vl2a@corp.supernews.com...
> > Paul,
> >
> > I just re-strung my quad last weekend. For measuring the wire, I used a
> > wooden dowel rod, stuck through the center of the wire spool, laid
across
> > the front/rear steps of a ladder. I connected a 100' measuring tape to
the
> > same point, and then pulled away for the ladder with wire and tape held
> > together. Worked fine. I generally add a couple of feet to each
> measurement,
> > just in case the formula and my design are in dis-agreement.
> >
> > How do you then determine the correct reflector length?
>
> Dale W4OP
>
>

706. Re: W5GI Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 12:44:47 UTC
From: Joe Smith <JoeSmith@usenetserver.com>
Message-ID: <mvnn70ti3mm91ju0uquqmooeasoo109692@4ax.com>
Source record: 96757

On Sun, 14 Dec 2003 05:43:41 -0600, "Jayne Medley" <kjm52@blomand.net>
wrote:

>Any one out ther built one that is using it ? What do you think about it ?
>

Yes, it works as described. I built a 20M version and have it mounted
at about 45 ft between two trees. I'm working anything I can hear
with 135 watts...it takes a few calls sometimes.

I use it with a tuner on 40 thru 10 with very good results. I highly
recommend it.

Steve, WA4ITA

707. Re: Stolen Tower and Antenna - Las Vegas, NV - April 10, 2004

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 13:12:03 UTC
From: googlepost@massageglove.com
Message-ID: <a3b36c48.0404130512.5124b071@posting.google.com>
Source record: 96758

googlepost@massageglove.com (Jason) wrote in message
news:<a3b36c48.0404111850.99e9559@posting.google.com>...

> I'm really hoping that this was an honest mistake and that someone
> picked up the gear from the hiding spot at the house to keep it from
> being accidentally thrown away.

Turns out that was the case. The missing equipment is now at its new QTH

708. Re: Earth loop somewhere- humming sound

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 14:47:37 UTC
From: Toni <ea3fya@hotmail.com>
Message-ID: <cavn70hjpbpst0vf4falf800ltn9v46rla@4ax.com>
Source record: 96759

En Gerhard Beulke va escriure en Sat, 10 Apr 2004 01:56:02 +1000:

>When I try to capture a video from a VCR (the VCR is connected to the
>antenna), I get a humming audio signal.
>When I unplug the aerial cable, it's gone.
>The antenna is installed on the roof and is proper earthed. In between
>is a booster. I don't know if the booster causes the trouble but it
>shouldn't.
>
>The humming sound is only there when the VCR is connected to the PC (via
>firewire) and the aerial cable is plugged into the VCR.
>
>Any tips how to solve the problem would be greatly appreciated.

Hi,

In this page:

http://www.jensentransformers.com/apps_wp.html

Look at this document:

http://www.jensentransformers.com/an/ts_guide.pdf

Of course they try to sell you their solutions, but the problem-
finding methodology and some solving tips are very good.

Toni

709. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:17:13 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h0di$46g$1@newshost.mot.com>
Source record: 96760

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:n7dm701f1sausvl2128daet8fl6vg0fv12@4ax.com...
> On Mon, 12 Apr 2004 20:52:56 GMT, Gary S. <Idontwantspam@net> wrote:
> >Think of how easily the antenna length could be adjusted.
>
> Hi Gary,
>
> I have four high accuracy laboratory thermometers one of which is 6"
> from this keyboard (ambient 18.4° C) with a range of -1° to 51° C over
> a length of roughly 16 inches. I've built precision heaters and
> designed using TEMs; nothing is easy about controlling heat.
>
> - It's a stupid idea -

True, but he didn't specify just how...You assumed... Maybe he ment by a pump. That's what I thought of.

--
Steve N, K,9;d, c. i My email has no u's.

710. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:19:48 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h0ic$49r$1@newshost.mot.com>
Source record: 96765

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:407b1507$1_1@corp.newsgroups.com...
> Dave Shrader wrote:
> > Mercury is a metal, albeit a dangerous one. It has a resistivity about
> > 55 times that of copper.
> >
> > Why in Heaven would you or anyone want to do it? [I think there may be a
> > Troll here :-)]
>
> No troll, just a wild hair. I got to thinking of using mercury as the
> conducting medium for an RF antenna switch and then wondered if mercury
> could replace the upper part of a whip where there is low current and
> high voltage. The mercury changing length in a thermometer triggered
> these unthinkable thoughts. Imagine changing the current through a
> resistor in order to tune an antenna by varying the mercury level.

No assumption here. I agree that this would be VERY difficult, although the
"upper part" sounds feasable. Just replace the screwdriver motor &
mechanism with a pump...

--
Steve N, K,9;d, c. i My email has no u's.
- 19 Different Servers! =-----

711. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:22:21 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h0n4$4ai$1@newshost.mot.com>
Source record: 96764

"Dave Platt" <dplatt@radagast.org> wrote in message
news:107m09g3um2jg26@corp.supernews.com...
> >...a bunch of stuff, including this:

, toxic,

I resent this. I played with the stuff as a kid and there is absolutely no
adverse side eff..ffe..ffe..ffe ects at..t..t.. all.
--
Steve N, K,9;d, c. i My email has no u's.

712. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:24:20 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h0qr$4b6$1@newshost.mot.com>
Source record: 96767

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:c8Eec.15482$CW2.7558@newssvr22.news.prodigy.com...
> When I was a dumb kid in the 50s we used to go into the garbage of those
> hard of hearing and get their discarded hearing aid batteries to salvage
the
> mercury. We got quite a bit and used it to make dimes real shiny and let
> the little balls roll around in our palms.. Several years ago I started
to
> wonder what this might have done to me and I did some checking. Several
> dentists and a PhD metallurgist all said that the metal mercury is not
toxic
> and is not absorbed but the salts of it are.

It's my understanding it is the vapor which is a problem...inhale.

--
Steve N, K,9;d, c. i My email has no u's.

713. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:26:19 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h0uh$4bm$1@newshost.mot.com>
Source record: 96766

"John Smith" <pani@yahoo.com> wrote in message
news:c5f3k9$10l5a$1@ID-225206.news.uni-berlin.de...
> my teeth hurt, what about florescent lights?, they all have a little of
> mercury in them, they just get thrown in the dump.

If the guy sees them around here, you get it back. Some areas are
already savvy.

> I won't bring up the 10
> pounds of lead in the monitor you're looking at

There is a major push to eliminate lead in electronics. The solder
is 20-30 degrees hotter.

--
Steve N, K,9;d, c. i My email has no u's.

714. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:29:46 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h14v$4ga$1@newshost.mot.com>
Source record: 96768

HEY! S..s..s..sombody else d.d.d.does this t.t.t.too! ! !
--
Steve N, K,9;d, c. i My email has no u's.

"JJ" <radiobuff99@mailcity.moc> wrote in message
news:jIKdnQjwy_U65ebdRVn-hQ@gbronline.com...
> Richard Clark wrote:
>
> > On Tue, 13 Apr 2004 01:52:22 +0000 (UTC), jimp@specsol-spam-sux.com
> > wrote:
> >
> >>Utter nonsense.
> >
> >
> > Hi Jim,
> >
> > I've performed work with Battelle Centers for Public Health Research &
> > Evaluation and this very matter has been studied to record and verify
> > every statement I've offered.
> >
> > 73's
> > Richard Clark, KB7QHC
>
> Well, I used to play with blobs of mercury a lot when I was a kid and it
> has never eeeffffffecttted (snort)mmmmeee a (slobber) biiiittt.
>

715. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:32:00 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h195$4gr$1@newshost.mot.com>
Source record: 96669

<jimp@specsol-spam-sux.com> wrote in message
news:c5fhom$2d9$2@mail.specsol.com...
> Richard Clark <kb7qhc@comcast.net> wrote:
> > ....
>
>
> mercury wetted (reed) relay in the house.

Can you say that five times FAST?

716. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:33:06 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h1b6$4hs$1@newshost.mot.com>
Source record: 96763

<jimp@specsol-spam-sux.com> wrote in message
news:c5fhom$2d9$2@mail.specsol.com...
> Richard Clark <kb7qhc@comcast.net> wrote:
> > ....
> >
> >
> > ...mercury wetted (reed) relay ...

Can you say that five times FAST ?

717. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:34:53 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h1eh$4i7$1@newshost.mot.com>
Source record: 96762

Yikes !!

--
Steve N, K,9;d, c. i My email has no u's.
"Gene Fuller" <W4SZzzzzzz@att.net> wrote in message
news:S0Gec.13068$K_.414540@bgtnsc05-news.ops.worldnet.att.net...
> Cecil,
>
> No, it won't work.
>
> Mercury, being a liquid at normal temperatures, is subject to
> hydrodynamic wave action. The RF couples into the hydrodynamic modes,
> and the resulting interference energy waves cause cancellation of the
> antiglare properties at the ends of the tube. The RF then leaks out and
> does not launch into the desired radio waves.
>
> Of course the mercury has high local proton density, so it has been
> claimed that even small amounts of proton decay can negate the RF to
> hydrodynamic coupling, thereby allowing the essential glare properties
> to be maintained.
>
> 8-)
>
> 73,
> Gene, W4SZ
>
>
>
> Cecil Moore wrote:
> > Forget about the feasibility of this question for the moment.
> > Could a column of mercury inside a tube of glass be used as an
> > antenna?
> > --
> > 73, Cecil, W5DXP
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 100,000 Newsgroups - 19 Different Servers! =-----
>

718. Re: Earth loop somewhere- humming sound

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:42:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o32o70pbddbk1shrc86s2dndv02so5i76h@4ax.com>
Source record: 96761

On Tue, 13 Apr 2004 16:47:37 +0200, Toni <ea3fya@hotmail.com> wrote:
>
>Hi,
>
>In this page:
>
>http://www.jensentransformers.com/apps_wp.html
>
>Look at this document:
>
>http://www.jensentransformers.com/an/ts_guide.pdf
>
>Of course they try to sell you their solutions, but the problem-
>finding methodology and some solving tips are very good.
>
>Toni

Hi Toni,

Good references. The products they would sell would be very useful as some problems fail other resolutions (Gerhard was lucky). Myself, I have a Mains isolation transformer for my floating battery charger (and batteries) which powers my equipment. For me, Ground is at the Antenna connector output (actually a threaded stub nearby) and not both there and through the third wire. I also have isolation transformers for the audio signal that goes off to my 'puter.

73's
Richard Clark, KB7QHC

719. Re: Stolen Tower and Antenna - Las Vegas, NV - April 10, 2004

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:46:24 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <407c0af4.67190781@news.galilei.com>
Source record: 96670

googlepost@massageglove.com (Jason) verbositized:

>googlepost@massageglove.com (Jason) wrote in message
news:<a3b36c48.0404111850.99e9559@posting.google.com>...
>
>> I'm really hoping that this was an honest mistake and that someone
>> picked up the gear from the hiding spot at the house to keep it from
>> being accidentally thrown away.
>
>Turns out that was the case. The missing equipment is now at its new QTH

Glad you found it Jason!

TTUL
Gary

720. Re: SEM QRM Eliminator... Help Required

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 15:55:15 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h2kq$523$1@newshost.mot.com>
Source record: 96671

"John - G0WPA" <johnandsimone@aol.comQRM> wrote in message
news:20040411154939.19631.00000276@mb-m10.aol.com...
> Hi there,
>
> Anyone have one of these? Ive just bought one with no manual. What aux
antenna
> should I be using and where should the aux antenna be located in relation
to my
> main antenna.
> Secondly, what is the procedure for tuning the gain,phase1 and phase2
controls.
> Mnay thanks, John G0WPA

A Scanning Electron Microscope to eliminate QRM ???

Seriously, this must be something like the MFJ 1026, no?

I suspect it is.
With the common canceller:
The thing to keep in mind is that what you are doing is creating a null in the antenna pattern. Therefore, your "sense" antenna must pick up enough of the unwanted signal to do this given the gain and noise limitations of the box. Also, one null is a minimum. There could be more since you have an indeterminate phased array. Also, if you are trying to receive from the same direction as the unwanted signal, you could have trouble as well.
--
Steve N, K,9;d, c. i My email has no u's.

721. Re: UHF Load Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 16:05:52 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5h38k$5b1$1@newshost.mot.com>
Source record: 96672

"George" <look@signature_to.reply> wrote in message
news:%ylec.6222$A_4.422@newsread1.news.pas.earthlink.net...
> Yep, there is. I'm designing a very small hand-held antenna for direction
> finding. The smaller the better. On paper so far I have shortened
> "half-wave" dipole elements to 0.32 lambda and am giving up 1 dB of gain
in
> the process, assuming the coils I mentioned in each side of the dipoles.
>
> Now the question becomes, is it practical and buildable?...
>
> George K6GW

Keep in mind, George, that it is generally the PHYSICAL antenna that creates the pattern, so there can be degradation in directivity with shortened elements. Depends on just what you are doing.
For a small Yagi, a 1 dB reduction in gain can mean considerable widening of the lobe. If you are depending on a narrow lobe, this may reduce the effectiveness. I carry a three element tape measure beam in my trunk. It has a pretty wide main lobe as it is, but a null to the rear for directivity... but I have a substantial 8" cardboard tube, mounted so I slip it in and out easily... makes deployment a snap. Just watch the wind direction.

P.S. I don't use any hose clamps..cheaper that way.

722. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 16:52:02 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <SUUec.26691$i74.528595@bgtnsc04-news.ops.worldnet.att.net>
Source record: 96673

[snip]

>
> Looks to me like there are at least three entities other than Battelle
> Centers for Public Health Research & Evaluation that found minimum levels.
>
> --
> Jim Pennino
>
Mercury is used in several drugs and biologic products, including over the
counter nasal sprays.

http://www.fda.gov/cder/fdama/mercury300.htm

Frank Dresser

723. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 17:05:14 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c5h6k9$a1t$1@titan.btinternet.com>
Source record: 96674

Why not use salt water. Anything will work.

Loss resistance would not be too bad because skin depth increases with
conductor resistivity relative to copper.

724. antenna books

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 17:06:25 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c5h6m6$1lm49$1@ID-225206.news.uni-berlin.de>
Source record: 96675

one place http://www.cebik.com/abook.html

725. Re: SEM QRM Eliminator... Help Required

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 18:02:48 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c5ha08$4qt$1@hercules.btinternet.com>
Source record: 96676

The two antennas behave as one, a director with a reflector, with a null in the radiation pattern. Varying the phase and magnitude controls have the effect of rotating the antenna pattern and varying the spacing between the two elements.

Orientate the noise antenna in a different direction to the main antenna and if you know where the noise source is located then maximise noise pickup from the noise source. There will be one null only if there is one noise source. And usually you can consider yourself lucky if you can find it.

Another tactic is to arrange for the noise antenna to pick up a minimum of the wanted signal if you know from where it is coming. If the main antenna is outdoors and high in the sky and the noise source is very local, ie., you are in the noise near-field, then install the noise antenna indoors at ground level.

A null is impossible if signal and noise arrive from exactly the same direction. If from nearly the same direction then the wanted signal will decrease almost as much as the noise. But the situation can usually be improved yet again by changing orientations of one or both antennas.

If the main antenna picks up stronger noise than the noise antenna then a null can be obtained only by increasing gain in the noise receiver.

Its all a matter of phase and magnitude.

Reg, G4FGQ

726. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 18:04:51 UTC
From: Me <Me@shadow.orgs>
Message-ID: <Me-5D78A0.10044913042004@netnews.worldnet.att.net>
Source record: 96677

In article <S0Gec.13068$K_.414540@bgtnsc05-news.ops.worldnet.att.net>,
Gene Fuller <W4SZzzzzzz@att.net> wrote:

> Cecil,
>
> No, it won't work.
>
> Mercury, being a liquid at normal temperatures, is subject to
> hydrodynamic wave action. The RF couples into the hydrodynamic modes,
> and the resulting interference energy waves cause cancellation of the
> antiglare properties at the ends of the tube. The RF then leaks out and
> does not launch into the desired radio waves.
>
> Of course the mercury has high local proton density, so it has been
> claimed that even small amounts of proton decay can negate the RF to
> hydrodynamic coupling, thereby allowing the essential glare properties
> to be maintained.
>
> 8-)
>
> 73,
> Gene, W4SZ
>
>
>
> Cecil Moore wrote:
> > Forget about the feasibility of this question for the moment.
> > Could a column of mercury inside a tube of glass be used as an
> > antenna?
> > --
> > 73, Cecil, W5DXP
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 100,000 Newsgroups - 19 Different Servers! =-----
>

And if you believe that, I got some Desert Land in Aridzonia, and
a Bridge in Brookland, I'll sell you very cheap.

me

727. Re: SEM QRM Eliminator... Help Required

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 18:15:38 UTC
From: Jan Simons PA0SIM <PA0SIMdeletespam@amsat.org>
Message-ID: <1081880069.418270@SLIPstream>
Source record: 96678

"John - G0WPA" <johnandsimone@aol.comQRM> schreef in bericht
news:20040411154939.19631.00000276@mb-m10.aol.com...
> Hi there,
>
> Anyone have one of these? Ive just bought one with no manual. What aux
antenna
> should I be using and where should the aux antenna be located in relation
to my
> main antenna.
>
> Secondly, what is the procedure for tuning the gain,phase1 and phase2
controls.
>
> Mnay thanks, John G0WPA

Hi John,

I live on a small city lot and my main problem is the ever
increasing level of local QRM and the number of QRM
sources. The limited space for antennas makes is difficult
to find a way reducing this local QRM. Large directional
antennas are not possible.

My current project is summarised on:
http://home.plex.nl/~jmsi
It uses two active broadband small magnetic Alford loops.
Both loops can be rotated.
Addressed are distance to qrm sources, antenna balancing,
nulling, noise cancelling, diversity reception and directivity
using both loops in an array.
At the moment I still use the MFJ-1025 noise canceller.

May be it helps you reducing the QRM.

73 es gl de Jan PA0SIM

728. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 19:22:27 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <407C3DF3.5000109@psu.edu>
Source record: 96679

jimp@specsol-spam-sux.com wrote:
> Richard Clark <kb7qhc@comcast.net> wrote:
>
>>On Mon, 12 Apr 2004 21:47:52 GMT, "Henry Kolesnik"
>><kolesnik@sbcglobal.net> wrote:
>>
>>>Several
>>>dentists and a PhD metallurgist all said that the metal mercury is not toxic
>>>and is not absorbed but the salts of it are.
>>
>>
>>Hi Henry,
>>
>>
>>You may as well had said several fools - especially the metallurgist
>>passing as a toxicologist. The Dental practice is one of the single
>>highest pollution hot spots of industry and acids in saliva are known
>>to leach Mercury.
>>
>>
>>There is NO MINIMUM EXPOSURE LEVEL to Mercury. No matter how little,
>>it has some debilitating effect that is measurable.
>>
>>
>>73's
>>Richard Clark, KB7QHC
>>
>>
> Utter nonsense.
>
> Ever hear "The poison is in the dose"?
>
> There is some amount of every element in your body, including mercury,
> plutonium, arsenic and anything else you care to name.

Hmmm, number 2 element shouldn't be in anyone's body. It is an artificially produced element, and if it does enter the body, it's characteristics make the consequences are particularly nasty. And it doesn't take much at all to produce that nastiness.

- Mike KB3EIA -

729. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 19:34:36 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <407C40CC.4010800@psu.edu>
Source record: 96680

JJ wrote:
> Richard Clark wrote:
>
>> On Tue, 13 Apr 2004 01:52:22 +0000 (UTC), jimp@specsol-spam-sux.com
>> wrote:
>>
>>> Utter nonsense.
>>
>>
>>
>> Hi Jim,
>>
>> I've performed work with Battelle Centers for Public Health Research &
>> Evaluation and this very matter has been studied to record and verify
>> every statement I've offered.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
> Well, I used to play with blobs of mercury a lot when I was a kid and it
> has never eeeffffffecttted (snort)mmmmeee a (slobber) biiiittt.
>

Good one, JJ! 8^)

Mercury isn't very harmful by that route of exposure. You could polish quite a few dimes if you like, and not suffer much if any damage through skin absorption.

But!

Inhaling the fumes is another thing entirely. Mercurey poisoning has been known about for a long time now. Daggureotypists in the early 1800's often suffered from mercury poisoning as they purposely fumed the image plates to develop the images, producing a silver amalgam on the surface in accordance with how much it had been exposed to light. A beautiful but deadly process.

The feltmaking process used to use mercury as a preservative, and the saying "mad as a hatter" was coined for a reason.

And yet we still have people today that think that caution in handling mercury is some kind of "liberal" plot or something.

- Mike KB3EIA -

730. Help Getting a PK-232 to Key a TS-570 in CW

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 20:27:32 UTC
From: "Dick, AA5VU" <aa5vuNOSPAM@arrl.net>
Message-ID: <aa5vuNOSPAM-1DB0ED.15273113042004@newssvr22-ext.news.prodigy.com>
Source record: 96681

Yes, I know this is an antenna newsgroup but the people who read this traffic may be able to help me.

I have always used the PK-232 for RTTY and Packet and never really messed with the putting it into the keyboard mode for CW transmission. For grins I decided to try this morning and ran into all kinds of problems and could use some help.

First the TS-570 was designed for the operator to use his personal keyer with the 570's internal keyer. The internal keyer is activated by plugging in a Stereo Phone plug. If you want to use and external keyer (like a PK-232), you have to use a Mono (tip and Sleeve) Phone plug.

The PK-232 has a Plus (+) and Minus (-) RCA jacks on the rear. I cannot find anything at Radio Shack that goes from two RCA's to one Mono Phone. Really weird setup. I found a RCA to Mono Phone plug and and it causes the 570 to send a stream of dits when plugged into the (+) output on the PK-232. If I plug the same cable into the (-) RCA jack on the PK-232, it causes the 570 to send a stream of dah's.

Looks like I may have to rig up some special non standard cable taking the center of the (+) RCA plug to the Tip of the Phone Plug and the center of the other (-) RCA jack to the sleeve of the Phone Plug and let the grounds float.

Do I had to dummy down the TS-570 buy turning some menu functions off?

Anybody out their CW keying a TS-570 with a PK-232?

Dick, AA5VU

ps: Just made up the cable mentioned above and when I turn on the power, the TS-570 starts sending a constant string of dit to the side tone oscillator... like someone duck taped a Bencher.

I must be doing something pretty dumb. Page 3-6 Section 3.3.5 of the PK-232 manual is really confusing with a totally useless Direct CW Keying Cable diagram.

Again, anybody been able to key the TS-570D(G) using a PK-232. I need help.

Dick, AA5VU

731. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 21:24:26 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <6nlo705g23a4iu33hueml7fpsdbqso439e@4ax.com>
Source record: 96682

On Tue, 13 Apr 2004 15:34:36 -0400, Mike Coslo <mjc5@psu.edu> wrote:

> Inhaling the fumes is another thing entirely. Mercurey poisoning has
>been known about for a long time now. Daggureotypists in the early
>1800's often suffered from mercury poisoning as they purposely fumed the
>image plates to develop the images, producing a silver amalgam on the
>surface in accordance with how much it had been exposed to light. A
>beautiful but deadly process.
>
> The feltmaking process used to use mercury as a preservative, and the
>saying "mad as a hatter" was coined for a reason.
>
> And yet we still have people today that think that caution in handling
>mercury is some kind of "liberal" plot or something.
>
Over time, it is a self-correcting problem.

Holding it in your hands is more of an issue if
A) you have some sort of wound, and some could contact your
bloodstream, or more likely
B) if you do not _thoroughly_ clean it off your hands before touching
food, rubbing your eyes, smoking a ciggie, etc.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

732. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 22:08:39 UTC
From: jgboyles@aol.com
Message-ID: <20040413180839.04056.00000311@mb-m01.aol.com>
Source record: 96683

>None of this means you should get your panties in a wad because there is
>a mercury wetted relay in the house.

In the mid 80s I was involved in the start up of a 100KW photovoltaic demonstration project. I worked for an electric utility, and they wanted to show how great amorphous silicon solar cells were, so they could manufacture and sell them.
The PV array was capable of 300VDC at around 350 amps at high noon on the 4th of July in the deep south. The array fed 4 25KW inverters which converted all that DC into 480 VAC 60HZ which was put on the power grid.
The interrupters, or circuit breakers to the inverters were Mercury wetted contactors. The guy that designed the inverters used the AC interrupting rating of the contactors. The PV array was capable of more than double the DC interrupting rating of the contactors resulting in 4 exploded Mercury wetted contactors. The inverters had problems which resulted in full load rejection during start up.
Well, the exploded contactors produced an abundance of mercury vapor as well as little blobs of the stuff all over the floor in the inverter building. This just about closed down the whole 1.4 million project, because a lot of folks got their panties in a wad. As for me, I went around sucking it up with a suction tube, putting it in a bottle for future use in antenna projects.
73 Gary N4AST

733. Re: SEM QRM Eliminator... Help Required

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 22:27:02 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5hpjcdfu1@newshost.mot.com>
Source record: 96684

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c5ha08$4qt$1@hercules.btinternet.com...
> The two antennas behave as one, [...snip...]

How come no one told me what an SEM is??

> There will be one null only if there is one noise
> source.

Reg explains well, but I don't believe this item is, in general, true.
One example case could be two identical verticals where you wind up with
them fed 180 degrees out from each other. There will be two nulls broadside
to the antenna and 180 out, in direction, from each other (an Adcock).
Change the phase and both nulls tilt toward the direction of one antenna or
the other...untill they coencide and you have the cardioid.
With at least one directional antenna, the "other null" may be where
there is little pickup from the directional antenna and therefore non equal
signals and the "noise sense" antenna signal would dominate, in essence
hurting the directivity of the "main" antenna. (Because there isn't enough
from the main antenna to cancel what comes from the noise antenna.) Ya
gotta have both to cancel.
Therefore, it's a bit more complex as well, but killing the noise may
far outweigh other problems. But as Reg says, you want to maximize the
niose pickup in the noise antenna and minimize the desired signal in the
noise antenna.

Automatic systems like this are used on "radio gun ships" Lotsa radios
trying to interfere with each other. Sample the offending transmitter at
its output and cancel it at the problem receiver.

--
Steve N, K,9;d, c. i My email has no u's.

734. Re: Help Getting a PK-232 to Key a TS-570 in CW

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 22:56:04 UTC
From: Dev Null <bit-bucket@config.com>
Message-ID: <slrnc7os04.sb7.bit-bucket@localhost.config.com>
Source record: 96685

On Tue, 13 Apr 2004 20:27:32 GMT, Dick, AA5VU hath writ:
> Yes, I know this is an antenna newsgroup but the people who read this
> traffic may be able to help me.

" I know this is an xxxx-yyy-zzz newsgroup but but the "
" people who read this traffic may be able to help me. "

The preamble of 53.7% of the off-topic crap on usenet.

Yup, there's no chance that the folks in rec.radio.amateur.equipment
would have any clue v-a-v your query.

I suppose you'll be posting your hemmroid questions here next.
After all, "...the people who read this traffic may be able to help me."

735. Re: FS: Larsen KD14 half-wave coils (140 - 173 MHz) with BNC connector

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 22:57:05 UTC
From: glapierre@REMOVEeastlink.ca
Message-ID: <407c7035.9567289@news.eastlink.ca>
Source record: 96686

I have 3 left

glapierre@REMOVEeastlink.ca (Homer) wrote:

>
> I have 4 of these coils, which are part of the Larsen KD 14
>150 HW telescoping antenna. I do not have the telescoping antennna
>part just the coils. Add up to 44" rod and make your own half wave
>antenna between 140 and 173 MHz.
>I use one on my 2 meter hand-held and one on my scanner.
>I have 4 left over.
>
>Only $10.00 each or $35.00 for the lot plus shipping.
>
>Pic avaliable.
>
>glapierre@REMOVEeastlink.ca

736. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 23:32:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9cto705ol0lrr6f3fv03bh7uk4th383vdv@4ax.com>
Source record: 96687

On Tue, 13 Apr 2004 21:24:26 GMT, Gary S. <Idontwantspam@net> wrote:

>Holding it in your hands is more of an issue if
>A) you have some sort of wound, and some could contact your
>bloodstream, or more likely

Mercury can be forced through a solid plate of steel. Such is its
ability to migrate through barriers.

>B) if you do not _thoroughly_ clean it off your hands before touching
>food, rubbing your eyes, smoking a ciggie, etc.

Hi Gary,

I just attended a Nanotech seminar presentation 4 hours ago on "The
Collapse of Langmuir Monolayers" that showed the human body has
roughly 2Mï¿½ of skin surface area, OR 100Mï¿½ of Lung surface area, OR
300Mï¿½ of Gastro Intestinal surface area. The later two have a
monomolecular air/water interface - the Langmuir layer.

The decay products of nuclear breakdown (the electron emission) is no
hazard due to its inability to puncture the dermal layer - inside the
body it leads to chromosomal breakdowns that gives rise to cancerous
growths. Same vector, two different paths separated by lack of
caution in the errant belief about exposure levels leads to grief.
[Another lesson learned in close proximity to the Boomers, and 24
Nuclear warheads stored within 10 feet of my workbench aboard ship.]

73's
Richard Clark, KB7QHC

737. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-13 23:58:17 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <u8%ec.2115$fq4.364@lakeread05>
Source record: 96688

"Richard Clark" <kb7qhc@comcast.net> wrote
> Another point of toxicity. Because the nuclear "Boomers" contained a
> closed loop environmental system, ALL such batteries were banned from
> the boat irrespective of their need in ANY equipment. We had to make
> do with substitutes and jury rig our own holders or means to provide a
> voltage for key equipment that would work fine on surface craft.

What are you talking about Richard? Just what kind of "jury rigging" did you
do on "your" boomer?

Jack
Launch Operations Supervisior, Weapons Power PO, QA Inspector
USS Andrew Jackson
SSBN 619 (Gold) 1983-1987

738. Re: 6m vert dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 00:00:50 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <407c7f3c$1@news.vallnet.com>
Source record: 96689

--

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0404091935.a825fa7@posting.google.com...
> "Tyas_MT" <tyas_mt@hotplonkmail.com> wrote in message
news:<4076f5cd$1@news.vallnet.com>...
>
> Dunno.. I doubt it...
> The website I read
> > this from didn't mention that, though they did say you may want to coil
the
> > feedline about 4-6 turns about another quarter wavelength from the end
of
> > the antenna.
>
> Yep, that antenna will need feedline decoupling. A 2nd lower 1/4 wave
> copper tube, closed at the top and grounded to the shield, and open at
> the bottom like a bell, would be even better. I'd at least use a coax
> choke. MK

I am considering trying to make a feed point balun at the center insulator,
but I won't have much room. I've got it laid out horizontally and it tunes
up pretty good as is, but I have not gotten with the guy to make my little
center insulator.

I'm mounting this above my 6m quad as an omni-vertical... I figure I can
stick it on top of a PVC pipe and it will interfere less with the quad than
a 1/4 ground plane would (and it looks better).

Thanks for the responses... I don't think heating the whip will be a
problem, though loss might... I'm only running 5 watts key down.

I'm really shooting for the occasional cross polarized weak signal
contact... though I think that the difference in gain between the dipole and
the (horizontal polarized) quad will end up meaning that vertical signals
are about the same... but it's worth a shot.

73
KD4COX
Eric

739. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 00:42:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <et0p705oh3qk8dh4gqn185n21dnasqlmj5@4ax.com>
Source record: 96690

On Tue, 13 Apr 2004 19:58:17 -0400, "Jack Painter" <223bthp@cox.net>
wrote:

>"Richard Clark" <kb7qhc@comcast.net> wrote
>> Another point of toxicity. Because the nuclear "Boomers" contained a
>> closed loop environmental system, ALL such batteries were banned from
>> the boat irrespective of their need in ANY equipment. We had to make
>> do with substitutes and jury rig our own holders or means to provide a
>> voltage for key equipment that would work fine on surface craft.
>
>What are you talking about Richard? Just what kind of "jury rigging" did you
>do on "your" boomer?
>
>Jack
>Launch Operations Supervisior, Weapons Power PO, QA Inspector
>USS Andrew Jackson
>SSBN 619 (Gold) 1983-1987
>

Hi Jack,

They were ALL my Boomers (COMSUBLANT Charleston). USS Holland AS-32
Fleet Electronics Calibration Laboratory (Repair Services division).

Battery holders for test equipment that took only one particular
shaped coin cell (the mercury cells in commercial gear). They were
usually bias voltages for specialized test equipment (maybe torpedo
sonar test sets, but recollection is hazy in the particulars; coulda
been crypto gear with RAM). I am well aware that mods were frowned
on, but our shop had special dispensations from the Pope. No one
argued authority with us who wanted to ship out (and we did get our
quota of those who "just had to" lose a fight).

I do know it wasn't for the nuclear pile sensor. They hauled me outa
the rack at midnight to take over measuring at least 10 GigOhms
because all they could muster up was a reading of 20X10^9 Ohms. I was
puzzled why they needed less and they explained "their" dictionary
described Billion as a million, million. I told them that was the
british Billion but only after proving it to their Captain - the sub
wasn't going to cast off without that check item and there was a lot
of brass looking over our shoulders as I balanced the bridge. As it
was in the common passage way to Sherwood Forest, someone invariable
had to clamber past and would peg the meter for a minute or two.
After about an hour I got back to my rack. I really did like the
Diesel Boats better.

73's
Richard Clark, KB7QHC,
ET1, HMFIC, Uncle Sam's Canoe Club, 1968-1975

740. Re: Earth loop somewhere- humming sound

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 01:17:36 UTC
From: WB2JKX <mycall-N0SPAM@arrl.net>
Message-ID: <Qi0fc.27975$i74.570636@bgtnsc04-news.ops.worldnet.att.net>
Source record: 96691

Richard Clark <kb7qhc@comcast.net> wrote in message
news:o32o70pbddbk1shrc86s2dndv02so5i76h@4ax.com...
> On Tue, 13 Apr 2004 16:47:37 +0200, Toni <ea3fya@hotmail.com> wrote:
> >
> >Hi,
> >
> >In this page:
> >
> >http://www.jensentransformers.com/apps_wp.html
> >
> >Look at this document:
> >
> >http://www.jensentransformers.com/an/ts_guide.pdf
> >
> >Of course they try to sell you their solutions, but the problem-
> >finding methodology and some solving tips are very good.
> >
> >Toni
>
> Hi Toni,
>
> Good references. The products they would sell would be very useful as
> some problems fail other resolutions (Gerhard was lucky). Myself, I
> have a Mains isolation transformer for my floating battery charger
> (and batteries) which powers my equipment. For me, Ground is at the
> Antenna connector output (actually a threaded stub nearby) and not
> both there and through the third wire. I also have isolation
> transformers for the audio signal that goes off to my 'puter.
>
> 73's
> Richard Clark, KB7QHC

Isolating the equipment from normal power ground and establishing a new common ground point was a common practice in the computer industry some years ago. The high end stuff had triple shielded iso-transformers. The first shield was connected to the AC neutral. A sort-of ground, but probably useful in allowing shield capacitive current to be returned to the neutral and avoid tripping GFI protected circuits. The second shield was connected to building power ground (the "green wire") and only needed to deal with potentials between neutral and ground, hopefully fairly low The third shield was the "isolated ground" common point, connected to the equipment ground, secondary neutral, and a local "earth" ground (building steel, etc.)

741. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 01:30:24 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c5i46s$1mhhr$1@ID-225206.news.uni-berlin.de>
Source record: 96692

Salt water is a better idea,
not near as harmful,
still a liquid,
easy to mix one up at Home
and extremely low cost, (at least the salt water)
more transparent

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c5h6k9$a1t$1@titan.btinternet.com...
> Why not use salt water. Anything will work.
>
> Loss resistance would not be too bad because skin depth increases with
> conductor resistivity relative to copper.
>
>

742. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 02:00:23 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <YW0fc.2622$fq4.1994@lakeread05>
Source record: 96693

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:et0p705oh3qk8dh4gqn185n21dnasqlmj5@4ax.com...
> On Tue, 13 Apr 2004 19:58:17 -0400, "Jack Painter" <223bthp@cox.net>
> wrote:
>
> >"Richard Clark" <kb7qhc@comcast.net> wrote
> >> Another point of toxicity. Because the nuclear "Boomers" contained a
> >> closed loop environmental system, ALL such batteries were banned from
> >> the boat irrespective of their need in ANY equipment. We had to make
> >> do with substitutes and jury rig our own holders or means to provide a
> >> voltage for key equipment that would work fine on surface craft.
> >
> >What are you talking about Richard? Just what kind of "jury rigging" did
you
> >do on "your" boomer?
> >
> >Jack
> >Launch Operations Supervisior, Weapons Power PO, QA Inspector
> >USS Andrew Jackson
> >SSBN 619 (Gold) 1983-1987
> >
>
> Hi Jack,
>
> They were ALL my Boomers (COMSUBLANT Charleston). USS Holland AS-32
> Fleet Electronics Calibration Laboratory (Repair Services division).
>
> Battery holders for test equipment that took only one particular
> shaped coin cell (the mercury cells in commercial gear). They were
> usually bias voltages for specialized test equipment (maybe torpedo
> sonar test sets, but recollection is hazy in the particulars; coulda
> been crypto gear with RAM). I am well aware that mods were frowned
> on, but our shop had special dispensations from the Pope. No one
> argued authority with us who wanted to ship out (and we did get our
> quota of those who "just had to" lose a fight).
>
> I do know it wasn't for the nuclear pile sensor. They hauled me outa
> the rack at midnight to take over measuring at least 10 GigOhms
> because all they could muster up was a reading of 20X10^9 Ohms. I was
> puzzled why they needed less and they explained "their" dictionary
> described Billion as a million, million. I told them that was the
> british Billion but only after proving it to their Captain - the sub
> wasn't going to cast off without that check item and there was a lot
> of brass looking over our shoulders as I balanced the bridge. As it

> was in the common passage way to Sherwood Forest, someone invariable
> had to clamber past and would peg the meter for a minute or two.
> After about an hour I got back to my rack. I really did like the
> Diesel Boats better.
>
> 73's
> Richard Clark, KB7QHC,
> ET1, HMFIC, Uncle Sam's Canoe Club, 1968-1975

Richard,

The Tender crews in Scotland hated all submariners, no exceptions. We thought they especially hated us but I think it was universal. Maybe because when it was time to get underway we used questionable tactics to separate the materials we needed from the Tender's inventory w/o always using the proper channels, shall we say. If they could've put mercury in our coffee they would've.

73's

Jack
'slept three feet from a loaded bird and 30 feet from the teakettle.

743. Re: Help Getting a PK-232 to Key a TS-570 in CW

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 02:37:11 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <vs8p709gbtoegsmcgbta4ln43ohm1abctt@4ax.com>
Source record: 96694

On 13 Apr 2004 22:56:04 GMT, Dev Null <bit-bucket@config.com> wrote:

>On Tue, 13 Apr 2004 20:27:32 GMT, Dick, AA5VU hath writ:
>> Yes, I know this is an antenna newsgroup but the people who read this
>> traffic may be able to help me.
>
> " I know this is an xxxx-yyy-zzz newsgroup but but the "
> " people who read this traffic may be able to help me. "
>
>The preamble of 53.7% of the off-topic crap on usenet.
>
>Yup, there's no chance that the folks in rec.radio.amateur.equipment
>would have any clue v-a-v your query.
>
>I suppose you'll be posting your hemmroid questions here next.
>After all, "...the people who read this traffic may be able to help me."
>

That was helpful. Why did you bother to waste the bandwidth.

dev kmem

744. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 03:57:47 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5icrr$s7$1@mail.specsol.com>
Source record: 96695

Mike Coslo <mjc5@psu.edu> wrote:

> Good one, JJ! 8^)

> Mercury isn't very harmful by that route of exposure. You could polish
> quite a few dimes if you like, and not suffer much if any damage through
> skin absorption.

> But!

> Inhaling the fumes is another thing entirely. Mercurey poisoning has
> been known about for a long time now. Daggureotypists in the early
> 1800's often suffered from mercury poisoning as they purposely fumed the
> image plates to develop the images, producing a silver amalgam on the
> surface in accordance with how much it had been exposed to light. A
> beautiful but deadly process.

> The feltmaking process used to use mercury as a preservative, and the
> saying "mad as a hatter" was coined for a reason.

> And yet we still have people today that think that caution in handling
> mercury is some kind of "liberal" plot or something.

> - Mike KB3EIA -

Umm, no, most people today think standing over a vat of heated murcury or
chewing on something impregnated with mercury is not a very good idea.

That doesn't mean you ignore the hazards or go screaming in terror just
because you see mercury.

--
Jim Pennino

Remove -spam-sux to reply.

745. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 04:01:58 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5id3m$s7$2@mail.specsol.com>
Source record: 96696

Mike Coslo <mjc5@psu.edu> wrote:
> jimp@specsol-spam-sux.com wrote:
> >
> > Utter nonsense.
> >
> > Ever hear "The poison is in the dose"?
> >
> > There is some amount of every element in your body, including mercury,
> > plutonium, arsenic and anything else you care to name.

> Hmmm, number 2 element shouldn't be in anyone's body. It is an
> artificially produced element, and if it does enter the body, it's
> characteristics make the consequences are particularly nasty. And it
> doesn't take much at all to produce that nastiness.

> - Mike KB3EIA -

Want to bet if you can find an instrument that can see a single atom in
a body you won't find at least one atom of every element in most people's
bodies?

--
Jim Pennino

Remove -spam-sux to reply.

746. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 04:05:26 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407CB885.775EC8E1@sonic.net>
Source record: 96697

'Doc wrote:

PS - The real 'trick' is to keep the line from 'swarming' on

> you when you finish.

What does this mean? I am unfamiliar with the term.

Zeno

747. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 04:08:11 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407CB929.69F04029@sonic.net>
Source record: 96698

What is a good type of wire to use? Stranded ok? Insuluated ok? what is best?

Zeno

KA9CAR wrote:

> I made some ladder line last year. It works well, but was very time
> consuming. I now buy it.
>
> I purchased wire "staples" These are plastic bridges with holes for nails.
> You pull out the nails and install your feed line.
>
> There is a photo of a 1/2 inch section at this URL.
>
> http://user.mc.net/~jdewey/Ham_radio/grounding_relay.jpg
>
> I used larger staples for my main feed line.
>
> http://user.mc.net/~jdewey/Ham_radio/doublet.jpg
>
> John
> KA9CAR
>
> "Bob Miller" <bxmiller@texas.netNOSPAM> wrote in message
> news:drdk60ptd7ulaumdt41j9a85at1776fmnc@4ax.com...
> > On Tue, 30 Mar 2004 19:52:50 -0000, Larry Gagnon
> > <lagagnon@fakeuniserve.com> wrote:
> >
> > >Hello to all. I intend to erect an 80 meter full size dipole and feed
> > >it with homebrew open ladder line. Would anyone care to reply as to how
> > >to construct ladder line easily and effectively? How does one determine
> > >spacing to get X ohms impedance line?
> > >
> > >Also any ideas on how such line can easily be fed in through a window
> > >with a wood frame would be greatly appreciated.
> > >
> > >Larry Gagnon VE7EA
> >
> > As an alternative, you can try the website for w7fg. He makes and
> > sells open ladder line, as well as dipoles with the ladder line
> > attached.
> >
> > bob
> > k5qwg
> >

> >

748. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 04:14:57 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407CBABF.AA1C625A@sonic.net>
Source record: 96699

Any reason not to feed each wire through the wall using those old time ceramic insulators with the hole down the middle, you know, those 4 or 5" long while tubes that were used in the knob&tube era of electrical wiring. Since I would be making my own feed line here, I could rejoing the pair on the other side of the wall and continue with my spacers until I reached the ceiling, and then to the process again, eg. putting each wire thru its own tube and then continuing with the spacers on the other side.

It is either this or using that idea of double coax feed with the coax grounds connected to each other at one end and grounded to the tuner (?), anyone have sucess with this method of coming into the shack via balanced lines?

Zeno

'Doc wrote:

> Larry,
> Boy, are you gonna have fun! As Cecil said, spacing isn't
> all that critical. Use whatever you can find enough of, to make
> the 'spreaders', as long as it's not conductive it should work.
> The simplest way to feed ladder line through a window is to
> make a 'spacer' board to fit in the window. Drill a couple of
> holes in the board, the correct distance apart, feed the line
> through the holes, 'hot glue' in place (or however you can get
> it to stay put. Have to remove the screen...
> 'Doc
>
> PS - The real 'trick' is to keep the line from 'swarming' on
> you when you finish.

749. DC shorting a Screwdriver antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 04:15:54 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c5idv1$21pao$1@ID-225834.news.uni-berlin.de>
Source record: 96700

Has anyone ever seen or tryed DC shorting a screwdriver type antenna?

--
Registered Linux User #346565
http://www.tblx.net
WA5K

750. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 06:43:35 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407CDD96.DCA38E69@sonic.net>
Source record: 96701

If one is constructing ladder line, is the point to design the ladder line so its impedance matches the characteristic impedance of the antenna itself at its feed point?

The theoretical feed point impedance for a full wave loop antenna is approximately 100 ohms, (but this does change, and is dependent upon antenna height above ground, near-by structures, and ground conductivity.) Should I try to make my ladder line to get as close as possible to this 100 ohm? In other words, does it make any difference reallly if my (12 guage insulated) ladder line uses 4" spacers (550 ohm) or 2" spacers (468 ohm) or 1" spacers (385 ohm) in the final analysis? Should I just go with the 4" spacing because it looks cool?

Anyone think that maybe non-insulated would be a better way to go?

Zeno

Larry Gagnon wrote:

> Hello to all. I intend to erect an 80 meter full size dipole and feed
> it with homebrew open ladder line. Would anyone care to reply as to how
> to construct ladder line easily and effectively? How does one determine
> spacing to get X ohms impedance line?
>
> Also any ideas on how such line can easily be fed in through a window
> with a wood frame would be greatly appreciated.
>
> Larry Gagnon VE7EA
>
> --
> **********
> to reply via email remove "fake"

751. Using a metal roof as a ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 07:24:35 UTC
From: Rick Frazier <rick@rickfrazier.com>
Message-ID: <407CE747.6B6E5531@rickfrazier.com>
Source record: 96702

Hello:

I've just received a 5BTV, 5 band trap vertical (75-10M), and as with most of them, I would suppose the instructions suggest that ground mounted is ok, but elevated it would be better to use radials.

I am planning on mounting it on the peak, near the center of a rather large metal roof. The roof is approximately 58x38 feet and has a pitch of 4" per foot down from the peak. The roof is composed of 39" strips of metal roofing, and isn't quite solid metal, but has three sections three feet wide that use fiberglas panels for the top 35 feet of each section on each side. (These perform the function of skylights). The only "bonding" of the roof panels to one another are the stainless steel screws that hold the panels to the roof substructure, which are placed about every two feet along each edge, and in three or four places at the top of each strip of metal roofing where they connect to the ridge. Each run (except for the fiberglas panels) is a single section approximately 3ft wide and 19+ feet long. There is a connector panel about 3 feet long at the bottom of each of the fiberglass strips, so the bottom edge of the roof is continuous along the 58 foot length. (Think of it as a nearly solid roof with three strips missing on each side, making a 3 foot by 16 foot slot in each of the three skylight locations on each half of the roof.)

After this description, if you're not completely confused, what I'm wondering is whether the roof will provide a decent ground plane for the vertical antenna, or whether I should add specific ground radials....

Of course, I'll have to figure out a decent mount so it actually stays on the roof with our winds (which are typically not that bad, even here in Hawaii where I live.) It's a rare occurrence when we have 50mph winds, but 20-30mph "trades" are more normal.

Anything I should be looking out for?

Thanks
--Rick

752. Re: Have anyone the simulation of IMAX 2000 for the MMANA program?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 08:39:20 UTC
From: Eric Oyen - N7ZZT <n7zzt@127.0.0.1>
Message-ID: <pan.2004.04.14.08.39.19.951861@127.0.0.1>
Source record: 96703

On Tue, 13 Apr 2004 07:35:37 +0000, Wolfgang K. Meister wrote:

> On Sat, 10 Apr 2004 17:04:10 GMT, "Marcello" <marcello110980@yahoo.it>
> wrote:
>
>>Have anyone the simulation of IMAX 2000 for the MMANA program?
>>
>>
> Marcello,
>
> all those CB antennas are JUNK. Their advertisement are non-technical
> promises for people that don't understand HF-Radios at all.
well it is true that marketing writes the adds, sometimes, there is a
"little" truth in there, if you are willing to dig for it.

>
> 3MHZ bandwith SWR < 1.2:1 and 5000 Watts are simply LIES!
actually, that can be done with a 1 inch copper pipe cut to the
appropriate length and fed using Heiax 1-5/8" hardline.

>
> In practice - an vertical antenna without counterpoise or grounding will
> not work. So the result really depends WHERE you mount it and HOW you
> mount it and HOW you GROUND it.
an impeadance transformer at the end of a 1/2 wave of wire actually does
work. The transformer though needs to be of specified values for L and C
to properly match the line to the 1/2 wave radiator. I should know, I have
built more than one using the Radio Amateurs handbook and the ARRL antenna
compendium for references.

>
> Take a 7,2 long rod and try to find out with MMANA what's about it. You
> will be surprised. Maybe they have a L/C at the feedpoint to compensate
> the SWR at the center of the CB frequencies.
>
well, thats probably for grounding (thats about all I use a copper rod
for). However, the shortest low impeadance path to that rod is the key
(again, there are references to it in the Amateur radio handbook).

DE N7ZZT
Phoenix, Arizona

--
the difference between intelligence and stupidity is that intelligence
has its limits.

753. Re: Using a metal roof as a ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 11:41:32 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <107q91padjadc11@corp.supernews.com>
Source record: 96705

"Rick Frazier" <rick@rickfrazier.com> wrote in message
news:407CE747.6B6E5531@rickfrazier.com...
> Hello:
>
> I've just received a 5BTV, 5 band trap vertical (75-10M), and as with
> most of them, I would suppose the instructions suggest that ground
> mounted is ok, but elevated it would be better to use radials.
>
> I am planning on mounting it on the peak, near the center of a rather
> large metal roof. The roof is approximately 58x38 feet and has a pitch
> of 4" per foot down from the peak. The roof is composed of 39" strips
> of metal roofing, and isn't quite solid metal, but has three sections
> three feet wide that use fiberglas panels for the top 35 feet of each
> section on each side. (These perform the function of skylights). The
> only "bonding" of the roof panels to one another are the stainless steel
> screws that hold the panels to the roof substructure, which are placed
> about every two feet along each edge, and in three or four places at the
> top of each strip of metal roofing where they connect to the ridge.
> Each run (except for the fiberglas panels) is a single section
> approximately 3ft wide and 19+ feet long. There is a connector panel
> about 3 feet long at the bottom of each of the fiberglass strips, so the
> bottom edge of the roof is continuous along the 58 foot length. (Think
> of it as a nearly solid roof with three strips missing on each side,
> making a 3 foot by 16 foot slot in each of the three skylight locations
> on each half of the roof.)
>
> After this description, if you're not completely confused, what I'm
> wondering is whether the roof will provide a decent ground plane for the
> vertical antenna, or whether I should add specific ground radials....
>
> Of course, I'll have to figure out a decent mount so it actually stays
> on the roof with our winds (which are typically not that bad, even here
> in Hawaii where I live.) It's a rare occurrence when we have 50mph
> winds, but 20-30mph "trades" are more normal.
>
> Anything I should be looking out for?
>
> Thanks
> --Rick
>
>

Hi Rick
One advantage of a vertical on a peaked metal roof as opposed to one on a

flat ground plane is that the feed point impedance at resonance is very close to 50 ohms, depending on the pitch of the roof..
I have a Fluidmotion BiggIR vertical on the peak of a 3500 square foot aluminum roof and I must say it's the best vertical installation I've ever used.
Some scheme to limit common mode current on the feed line is in order; In my case I just looped the coax and control cable seven turns. Other schemes work too.

How close are you to the water? Or are you up high?
You didn't say if you're in the Hawaiian islands generally or on the Big Island.
The reason I asked is that I once (1970) operated from St Johns in the Virgin islands. Some of the operation was from a habitat under water (Tektite II). We used a HiGain 14AVQ trap vertical on a barge above the habitat with a big piece of cable splayed out in the salt water. That antenna worked quite well as I recall.

73
H.
NQ5H

754. Re: Help Getting a PK-232 to Key a TS-570 in CW

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 11:44:51 UTC
From: "Dick, AA5VU" <aa5vuNOSPAM@arrl.net>
Message-ID: <aa5vuNOSPAM-29AE50.06445214042004@newssvr23-ext.news.prodigy.com>
Source record: 96704

In article <e7no701479o1c7aikq0qmr9epp930beenh@4ax.com>,
Jim Higgins <me7@privacy.net> wrote:

> You need to read your manuals vs just plugging stuff up
> willy-nilly and then asking for help in an antenna group!
>
> Open your manuals, run your eye down the indexes, look for CW
> operation, and read just one page in each manual before you
> damage something.

Jim,

Thank you for taking the time to respond. I read and referred to both manuals before posting the request for help. Ny first reaction to your message was to be pissed at someone telling me to RTFM. Guess what? You were right!!!

The problem has been found and fixed. I misunderstood the manual and was using a Mono Phone plug in the "PADDLE" jack. On second reading (at your suggestion) I noted the "KEY" jack uses a 3.5 mm (1/8") Mono plug.

Like I said in the posting "... I must be doing something pretty dumb." Everything is now working absolutely perfect and I am a little red-faced.

Thank you for the help!

73 de Dick AA5VU

755. Re: Help Getting a PK-232 to Key a TS-570 in CW

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 12:13:56 UTC
From: "Dick, AA5VU" <aa5vuNOSPAM@arrl.net>
Message-ID: <aa5vuNOSPAM-2A53AB.07135614042004@newssvr23-ext.news.prodigy.com>
Source record: 96706

In article
<aa5vuNOSPAM-1DB0ED.15273113042004@newssvr22-ext.news.prodigy.com>,
"Dick, AA5VU" <aa5vuNOSPAM@arrl.net> wrote:

> I must be doing something pretty dumb

I was doing something pretty dumb and the problem is fixed.

Dick, AA5VU

756. Re: Have anyone the simulation of IMAX 2000 for the MMANA program?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 13:47:38 UTC
From: Marcello <marcello110980@yahoo.it>
Message-ID: <_hbfc.125346$Kc3.4175541@twister2.libero.it>
Source record: 96707

Thanks to all, I know that marketing write sometimes false advertisement.
It was only to compare my vertical 5/8 ground plane antenna, with 8
alluminum radials at 90° degree, with the I-max 2000 antenna that in Iternet
it is know like "miraculous antenna" for the 11 meter band.
Here in Italy this antenna is not to be found, than I can't do the
simulation, becouse I don't know the fisical carateristics.
Thanks for the answers, excuse my grammar or my syntax errors.

73
Marcello
IW9XXX I'm waiting the call sign from the Telecomunication Ministery.

"Eric Oyen - N7ZZT" <n7zzt@127.0.0.1> ha scritto nel messaggio
news:pan.2004.04.14.08.39.19.951861@127.0.0.1...
> On Tue, 13 Apr 2004 07:35:37 +0000, Wolfgang K. Meister wrote:
>
> > On Sat, 10 Apr 2004 17:04:10 GMT, "Marcello" <marcello110980@yahoo.it>
> > wrote:
> >
> >>Have anyone the simulation of IMAX 2000 for the MMANA program?
> >>
> >>
> > Marcello,
> >
> > all those CB antennas are JUNK. Their advertisement are non-technical
> > promises for people that don't understand HF-Radios at all.
> well it is true that marketing writes the adds, sometimes, there is a
> "little" truth in there, if you are willing to dig for it.
>
> >
> > 3MHZ bandwith SWR < 1.2:1 and 5000 Watts are simply LIES!
> actually, that can be done with a 1 inch copper pipe cut to the
> appropriate length and fed using Heiax 1-5/8" hardline.
>
> >
> > In practice - an vertical antenna without counterpoise or grounding will
> > not work. So the result really depends WHERE you mount it and HOW you
> > mount it and HOW you GROUND it.
> an impeadance transformer at the end of a 1/2 wave of wire actually does
> work. The transformer though needs to be of specified values for L and C
> to properly match the line to the 1/2 wave radiator. I should know, I have
> built more than one using the Radio Amateurs handbook and the ARRL antenna
> compendium for references.
>
> >

> > Take a 7,2 long rod and try to find out with MMANA what's about it. You
> > will be surprised. Maybe they have a L/C at the feedpoint to compensate
> > the SWR at the center of the CB frequencies.
> >
> well, thats probably for grounding (thats about all I use a copper rod
> for). However, the shortest low impeadance path to that rod is the key
> (again, there are references to it in the Amateur radio handbook).
>
> DE N7ZZT
> Phoenix, Arizona
>
> --
> the difference between intelligence and stupidity is that intelligence
> has its limits.
>

757. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 14:37:13 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407d4cd9_4@corp.newsgroups.com>
Source record: 96708

zeno wrote:
> What is a good type of wire to use? Stranded ok? Insuluated ok? what is best?

I made mine cheap out of #16 stranded insulated house wire available at
Home Depot.
--
73, Cecil, http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

758. Re: DC shorting a Screwdriver antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 14:41:21 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407d4dd1$1_4@corp.newsgroups.com>
Source record: 96709

Jeremy Salch wrote:
> Has anyone ever seen or tryed DC shorting a screwdriver type antenna?

The parallel coil at the base, active on the lower bands to raise
the feedpoint resistance, provides a DC short automatically.
--
73, Cecil, http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

759. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 14:55:36 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407d5128$1_4@corp.newsgroups.com>
Source record: 96710

zeno wrote:
> If one is constructing ladder line, is the point to design the ladder line
> so its impedance matches the characteristic impedance of the antenna
> itself at its feed point?

The point of using ladder-line is so the antenna impedance doesn't
matter (within reason). SWRs on the ladder-line range up to 30+:1
with small ill effects. A 30:1 SWR on ordinary coax is a signal
killer.

Consider that the feedpoint impedance of an all-HF-band antenna
might range from 60 ohms to 3000+/-j3000 to 6000 ohms. The SWR on
Z0=600 ohm line would be around 10:1. The SWR on Z0=50 ohms would
range up to 100+:1.

> The theoretical feed point impedance for a full wave loop antenna is
> approximately 100 ohms, (but this does change, and is dependent upon
> antenna height above ground, near-by structures, and ground conductivity.)
> Should I try to make my ladder line to get as close as possible to this
> 100 ohm?

Nope, go for simplicity. There's not much practical difference between
Z0=400 ohms and Z0=600 ohms. And you may be able to use the impedance
transforming properties (on a line with reflections) to your advantage.

> Anyone think that maybe non-insulated would be a better way to go?

Non-insulated wire allows one to hang parallel stubs up and down the
line, useful for matching purposes. It also allows one to measure
actual feedline voltages.
--
73, Cecil, http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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760. Re: Radio Wave strength

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 15:00:59 UTC
From: meeker_boy@lycos.com
Message-ID: <d20d5525.0404140700.75b3a908@posting.google.com>
Source record: 96711

Many thanks for your help folks. I will have a look.

I am checking out the following one:

http://www.altered-state.com/cgi-local/reload.cgi?//www.ask.co.uk/ix.asp?q=how+do+I+measure+the+strength+of+a+rf&ac=none&xx=0&qid=E4DECE19AE4A2943B1E53A6D9AF1B77F&p=0&s=1&sp=ix&fn=t&b=0&fo=2&r=10&io=4&fp=4&fr=1&url=http%3A%2F%2Fwww%2Ealtered%2Dstate%2Ecom%2Ftrifield%2Frf%5Ffieldstrengh%2Ehtm&adurl=^/trifield/rf_fieldstrengh.htm

Cheers, Meeker

761. Re: Using a metal roof as a ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 15:04:41 UTC
From: Larry Gagnon <lagagnon@fakeuniserve.com>
Message-ID: <107qko9ns1390ff@corp.supernews.com>
Source record: 96712

On Wed, 14 Apr 2004 06:41:32 -0500, H. Adam Stevens, NQ5H <NQ5H@ARRL.net> wrote:
>
> "Rick Frazier" <rick@rickfrazier.com> wrote in message
> news:407CE747.6B6E5531@rickfrazier.com...
>> Hello:
>>
>> I've just received a 5BTV, 5 band trap vertical (75-10M), and as with
>> most of them, I would suppose the instructions suggest that ground
>> mounted is ok, but elevated it would be better to use radials.
>>
>> I am planning on mounting it on the peak, near the center of a rather
>> large metal roof. The roof is approximately 58x38 feet and has a pitch
>> of 4" per foot down from the peak. The roof is composed of 39" strips
>> of metal roofing, and isn't quite solid metal, but has three sections
>> three feet wide that use fiberglas panels for the top 35 feet of each
>> section on each side. (These perform the function of skylights). The
>> only "bonding" of the roof panels to one another are the stainless steel
>> screws that hold the panels to the roof substructure, which are placed
>> about every two feet along each edge, and in three or four places at the
>> top of each strip of metal roofing where they connect to the ridge.
>> Each run (except for the fiberglas panels) is a single section
>> approximately 3ft wide and 19+ feet long. There is a connector panel
>> about 3 feet long at the bottom of each of the fiberglass strips, so the
>> bottom edge of the roof is continuous along the 58 foot length. (Think
>> of it as a nearly solid roof with three strips missing on each side,
>> making a 3 foot by 16 foot slot in each of the three skylight locations
>> on each half of the roof.)
>>
>> After this description, if you're not completely confused, what I'm
>> wondering is whether the roof will provide a decent ground plane for the
>> vertical antenna, or whether I should add specific ground radials....

Yes, it should, even with the fact that it is not continuous sheet metal
it will probably still have a LOT more surface area than a few radials.
I would ground the vertical well to the roof, test the sheet panels are
electrically connected and go for it. If the antenna doesn't seem to
perform well you can always add radials later. I used a metal roof once
with a vertical and it worked very well indeed.

Larry VE7EA

--
****
to reply via email remove "fake"

762. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 15:12:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tfkq70h2r6e6eect8vj9n1rej510t6vlgt@4ax.com>
Source record: 96713

On Wed, 14 Apr 2004 06:43:35 GMT, zeno <zeno@sonic.net> wrote:
>Should I just go with the 4" spacing because it looks cool?

Fer Sure, Dude!

The choice is simply one of maximizing copper to minimize loss. If you expect a wide variation of Z through using the radiator across a larger variation of frequency, it is hard to choose one single determiner of line Z outside of this consideration. You could use the same logic to select 50 Ohm line (there is absolutely nothing magical about the value); however, cost becomes prohibitive due to a larger conductor for the inside lead driving the size of everything else to obtain the same loss figure as the cheaper, simple twin lead construction.

So, there you have it, cool and cheap (true to only the frugal Amateurs's perception of reality).

As for another question about coming in through the wall. You idea would work suitably. The only problem is in having it penetrate house insulation that is foil-backed (without you being aware of that being so). Some would offer the penetration presents no problem as it is for a very small interval. In the large scheme of things, quite true; and yet as a site dislocality (humorously called a bump in Z) this is where additional SWR will be present with a corresponding magnification of V and the possibility of breakdown. This is unlikely, but this would be where it happens if "likely" occurs. As things go, it is all a probabilistic issue - the insurers have tables for this.

73's
Richard Clark, KB7QHC

763. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 15:39:36 UTC
From: tdonaly@aol.com
Message-ID: <20040414113936.00534.00000362@mb-m29.aol.com>
Source record: 96714

```
>
Jim wrote,
>Mike Coslo <mjc5@psu.edu> wrote:
>> jimp@specsol-spam-sux.com wrote:
>> >
>> > Utter nonsense.
>> >
>> > Ever hear "The poison is in the dose"?
>> >
>> > There is some amount of every element in your body, including mercury,
>> > plutonium, arsenic and anything else you care to name.
>
>> Hmmm, number 2 element shouldn't be in anyone's body. It is an
>> artificially produced element, and if it does enter the body, it's
>> characteristics make the consequences are particularly nasty. And it
>> doesn't take much at all to produce that nastiness.
>
>> - Mike KB3EIA -
>
>Want to bet if you can find an instrument that can see a single atom in
>a body you won't find at least one atom of every element in most people's
>bodies?
>
>--
>Jim Pennino
>

It's a mistake to conclude there is at least one atom of every element in
most people's bodies without experimental proof. This is getting
dangerously close to a you-cain't-prove-it-ain't type of argument.
73,
Tom Donaly, KA6RUH
```

764. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 15:52:10 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <Hw642y.HuL@bath.ac.uk>
Source record: 96716

Cecil Moore wrote:

> Larry Gagnon wrote:
>
>> Hello to all. I intend to erect an 80 meter full size dipole and feed
>> it with homebrew open ladder line. Would anyone care to reply as to how
>> to construct ladder line easily and effectively? How does one determine
>> spacing to get X ohms impedance line?
>
>

1/4" / 6 mm PTFE rod. From Radiospares in the U.K.
but there must be suppliers in the States. Cut into
suitable lengths with a hobby knife - I used 125 mm
but not critical. Drill holes 5 mm from each end,
making sure they are parallel. Holes should be about
1/2 mm smaller than the wire you are going to use. I
used 19/0.2 silver plated copper with a PTFE jacket.

PTFE is fairly soft and easy to work with hand tools.
The stuff available here is white and surprisingly
very unobtrusive visually, certainly a lot better
than black windowed 450 ohm twin.

Slit from the holes to the ends of the rod with a
hobby knife. Ease open with finger and push the wire
in. I used an aluminium ruler to push with. It will
'click' into place. You can adjust the spacer positions
easily but the grip is enough, even with PTFE, to keep
the spacers in place. Space the rods 12" to 18".
This will also work FB with bare copper conductors.

Apart from its excellent electrical characteristics
the PTFE is very good at shedding rainwater, which
can be a problem if you use other plastics, especially
tubes.

You now have some very posh mil-spec ladder line. I
can easily make 30' an hour with hand tools.

vy 73

Andy, M1EBV

765. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 15:58:51 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5jn3r$63o$1@mail.specsol.com>
Source record: 96715

Tdonaly <tdonaly@aol.com> wrote:
> >
> Jim wrote,
> >
> >Want to bet if you can find an instrument that can see a single atom in
> >a body you won't find at least one atom of every element in most people's
> >bodies?
> >
> >--
> >Jim Pennino
> >

> It's a mistake to conclude there is at least one atom of every element in
> most people's bodies without experimental proof. This is getting
> dangerously close to a you-cain't-prove-it-ain't type of argument.
> 73,
> Tom Donaly, KA6RUH

Since there 59 of the elements measurable with current (as of 1998)
technology, I think this would be a pretty sure bet.

See http://web2.iadfw.net/uthman/elements_of_body.html for a pretty good
list.

--
Jim Pennino

Remove -spam-sux to reply.

766. Re: Using a metal roof as a ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 16:10:21 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407D626D.58E79FFC@cwis.net>
Source record: 96717

Rick,
It ought to 'work fine 'n last a long time'! Well,
maybe not a real long time, but a couple of years or
so (don't tempt Moma Nature LOL).
Your metal roof should make as good a ground as any
dirt/radial system, especially where you live, with the
volcanic 'stuff'. Just how 'good' will depend on the
mounting location, the pitch of the roof, and so on.
There's no way of predicting exactly what your results
will be as far as the input impedance since it will
depend a lot on how well you tune the antenna.
'Doc

PS - If it doesn't work well, send me a bus ticket and
I'll help you 'fix' it???

767. Re: Using a metal roof as a ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 17:26:41 UTC
From: Bruce in Alaska <bruceg@btpost.net>
Message-ID: <bruceg-C3E396.09264014042004@netnews.worldnet.att.net>
Source record: 96718

In article <407CE747.6B6E5531@rickfrazier.com>,
Rick Frazier <rick@rickfrazier.com> wrote:

> Hello:
>
> I've just received a 5BTV, 5 band trap vertical (75-10M), and as with
> most of them, I would suppose the instructions suggest that ground
> mounted is ok, but elevated it would be better to use radials.
>

snipped for brevity

>
> Anything I should be looking out for?
>
> Thanks
> --Rick
>
>

Hi Rick,

I live far out in the alaskan bush, and use a very similar antenna system. I have a 5BTV mounted at the center of my peak ridge, and grounded to the Galvinized sheet Metal Roofing. The only thing I did different than you have suggested, is to run a Cooper Braid along the ridgecap that connected to each of the sheets of Roofing. This vertical Antenna System loads really well, and has provided good serviceablity for me.

Bruce in alaska AL7AQ
--
add a <2> before @

768. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 17:33:42 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407D75F3.F537B79@sonic.net>
Source record: 96619

Tnx to both Richard and Cecil et al, I think I am good to go. I will most likely use the uninsulated wire for the diy ladder line. Although I do not quite understand the thing about stubs and am not sure how I would be able to measure anything along the ladder line since it is actually high up in the air for the most part (I might be able to measure something at its ends tho....what exactly does one need to be measuring up there?). Sorry to be so Elmer-needy....

I just happen to have a bunch of that black poly 1/2" irrigation tubing, which cuts up easily, and is apparently a good choice for diy ladder line because of its UV tolerance.

There is no foil-backed insulation to worry about coming into the house peak or ceiling. I have a bucket of those old porcelin knob&tube feed thru dealies out in the barn.

I am making some masts out of whatever I can recycle, mostly old metal tv telescoping masts. I will have to guy them if I get them up as high as I possibly can for the four corners of the loop. I was thinking of using pulleys and dacron for the guys, pulleys so I can redo the guys after years...and they look like they are about to fall apart etc. without having to take down the poles.....or should I use wire for guys? The masts are metal anyway, maybe wire guys are ok, what do you think?

-Zeno (although I probably will be "Bill" when I finally get on the air again)

They just gave me KG6UHM, but I think I either want my old expired call back or concoct something new....with good cw rhythm....and "phonetics" which reads like a novel......

Richard Clark wrote:

> On Wed, 14 Apr 2004 06:43:35 GMT, zeno <zeno@sonic.net> wrote:
> >Should I just go with the 4" spacing because it looks cool?
>
> Fer Sure, Dude!
>
> The choice is simply one of maximizing copper to minimize loss. If
> you expect a wide variation of Z through using the radiator across a
> larger variation of frequency, it is hard to choose one single
> determiner of line Z outside of this consideration. You could use the
> same logic to select 50 Ohm line (there is absolutely nothing magical
> about the value); however, cost becomes prohibitive due to a larger
> conductor for the inside lead driving the size of everything else to
> obtain the same loss figure as the cheaper, simple twin lead

> construction.
>
> So, there you have it, cool and cheap (true to only the frugal
> Amateurs's perception of reality).
>
> As for another question about coming in through the wall. You idea
> would work suitably. The only problem is in having it penetrate house
> insulation that is foil-backed (without you being aware of that being
> so). Some would offer the penetration presents no problem as it is
> for a very small interval. In the large scheme of things, quite true;
> and yet as a site dislocality (humorously called a bump in Z) this is
> where additional SWR will be present with a corresponding
> magnification of V and the possibility of breakdown. This is
> unlikely, but this would be where it happens if "likely" occurs. As
> things go, it is all a probabilistic issue - the insurers have tables
> for this.
>
> 73's
> Richard Clark, KB7QHC

769. Re: DC shorting a Screwdriver antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 18:12:25 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c5juvh$21pao$3@ID-225834.news.uni-berlin.de>
Source record: 96620

Cecil Moore wrote:

> Jeremy Salch wrote:
>> Has anyone ever seen or tryed DC shorting a screwdriver type antenna?
>
> The parallel coil at the base, active on the lower bands to raise
> the feedpoint resistance, provides a DC short automatically.
> --

Hmm, Ok then maybe i'm not asking the correct question. I was thinking if there is a way to make a screwdriver antenna appear or act like a "loop" style antenna in which the radiator is connected to ground creating a "dc short"

At my previous residense I had a large loop antenna and i was always impressed with how low of noise level it had in comparison to other antennas.

--
Registered Linux User #346565
http://www.tblx.net
WA5K

770. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 19:42:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r94r70hrbhbvc1ii3lugfrh82s77vnpbou@4ax.com>
Source record: 96621

On Wed, 14 Apr 2004 17:33:42 GMT, zeno <zeno@sonic.net> wrote:
>I just happen to have a bunch of that black poly 1/2" irrigation tubing,
>which cuts up easily, and is apparently a good choice for diy ladder line
>because of its UV tolerance.

Hi Bill,

Black is usually indicative of carbon content; but I wouldn't let that stop me the first time around if it was handy (pop it into the microwave and nuke it to see if it gets hot - this is not about microwave frequencies, merely tendency to conduct and to dissipate).

>There is no foil-backed insulation to worry about coming into the house
>peak or ceiling. I have a bucket of those old porcelin knob&tube feed
>thru dealies out in the barn.

Sounds like a done deal.
>
>I am making some masts out of whatever I can recycle, mostly old metal tv
>telescoping masts. I will have to guy them if I get them up as high as I
>possibly can for the four corners of the loop. I was thinking of using
>pulleys and dacron for the guys, pulleys so I can redo the guys after
>years...and they look like they are about to fall apart etc. without
>having to take down the poles.....or should I use wire for guys? The
>masts are metal anyway, maybe wire guys are ok, what do you think?

Dacron, I think, is the more long-lived, goferit. Use wire, don't use wire; it won't matter much.

As for measuring stubs. Not sure how that appeared as a concern, but as to measuring in general, attach a known mismatch at the far end and measure the SWR across frequency. If the readings look better than you would have reckoned, then you have something wrong along the way (loss tends to sweeten the appearance of problems). The known mismatch could be as simple as a direct short at even multiple of quarterwaves away (or open on odds - whichever). Make sure to account for velocity factor, or simply compare the physical length to the measured electrical length of the short/open. This, too, will give you an indication of line health. You can go farther and calculate the actual line Z, but who cares? Only guys like me (and that hardly counts for much).

73's
Richard Clark, KB7QHC

771. Re: DC shorting a Screwdriver antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 19:48:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <m25r709ms4r62nuvq8s7funufoahmtbdv0@4ax.com>
Source record: 96622

On Wed, 14 Apr 2004 13:12:25 -0500, Jeremy Salch
<salchNOSPAM@tblx.net> wrote:

> Hmm, Ok then maybe i'm not asking the correct question. I was thinking if
>there is a way to make a screwdriver antenna appear or act like a "loop"
>style antenna in which the radiator is connected to ground creating a "dc
>short"
>
>At my previous residense I had a large loop antenna and i was always
>impressed with how low of noise level it had in comparison to other
>antennas.

Hi Jeremy,

A large loop? From the radiator out and back to the ground mount?
Most short loops need capacitance (kinda the inverse of short
monopoles need inductance - hence the utility of screwdrivers). For a
larger loop, you may need additional components (dare I suggest
capacitors again?); but if you didn't give it a try, then you might
lose your amateur status; any way, you can attach a cap anywhere for
a quick-see.

73's
Richard Clark, KB7QHC

772. Re: DC shorting a Screwdriver antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 19:57:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407d97f2_8@corp.newsgroups.com>
Source record: 96623

Jeremy Salch wrote:
> Hmm, Ok then maybe i'm not asking the correct question. I was thinking if
> there is a way to make a screwdriver antenna appear or act like a "loop"
> style antenna in which the radiator is connected to ground creating a "dc
> short"

Assuming the screwdriver antenna is mobile, a full-wave loop
is hard to come by. I have heard of such being attempted using
gigantic capacity hats but I haven't seen any in action.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

773. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 20:28:24 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407D9EE8.D1549E3B@cwis.net>
Source record: 96624

Zeno,
"Swarming" means that because of the 'memory' of the wire
used to make the 'twin lead', when it's turned loose from
whatever you fixed it to to build it, it tries to assume it's
former shape. Usually results in a 'rat's nest' of wire in
a not so compact ball, LOL! Not really something to waste a
lot of worry on, just be aware that it can happen.
'Doc

774. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 20:34:36 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407DA05C.2C08E87D@cwis.net>
Source record: 96625

Zeno,
No reason why it wouldn't work, just use the normal care
in selecting a 'spot' in the wall that doesn't hold any
other wiring, etc. Using feed-throughs like that is sort of
'permanent', can't remove it without repairing the holes.
The board in the window thingy isn't 'permanent', just take
it out of the window and replace the screen (if any). The
choice is your's and your 'significant other's (probably more
her's, than your's, right?)...
'Doc

775. Re: Have anyone the simulation of IMAX 2000 for the MMANA program?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 20:38:37 UTC
From: DeG <kg4fbg@onemain.com>
Message-ID: <hjhfc.7955$zj3.586@newsread3.news.atl.earthlink.net>
Source record: 96626

Hello Marcello,
There was a posting on the net about the I-Max.. He was a fellow ham that
took 1 apart in detail.. The best I remember (He) said it was more a 3/4
wave than a 5/8 and was a promising antenna.. 10 - 12m ?
Just now reading your post I have not done a search to see if I can find
it.. Seems like it may have been on eHam? It's been 1- 2 years ago..
If I find it I will post the link....
"Marcello" <marcello110980@yahoo.it> wrote in message
news:_hbfc.125346$Kc3.4175541@twister2.libero.it...
> Thanks to all, I know that marketing write sometimes false advertisement.
> It was only to compare my vertical 5/8 ground plane antenna, with 8
> alluminum radials at 90° degree, with the I-max 2000 antenna that in
Iternet
> it is know like "miraculous antenna" for the 11 meter band.
> Here in Italy this antenna is not to be found, than I can't do the
> simulation, becouse I don't know the fisical carateristics.
> Thanks for the answers, excuse my grammar or my syntax errors.
>
> 73
> Marcello
> IW9XXX I'm waiting the call sign from the Telecomunication Ministery.
>
>
>
>
> "Eric Oyen - N7ZZT" <n7zzt@127.0.0.1> ha scritto nel messaggio
> news:pan.2004.04.14.08.39.19.951861@127.0.0.1...
> > On Tue, 13 Apr 2004 07:35:37 +0000, Wolfgang K. Meister wrote:
> >
> > > On Sat, 10 Apr 2004 17:04:10 GMT, "Marcello" <marcello110980@yahoo.it>
> > > wrote:
> > >
> > >>Have anyone the simulation of IMAX 2000 for the MMANA program?
> > >>
> > >>
> > > Marcello,
> > >
> > > all those CB antennas are JUNK. Their advertisement are non-technical
> > > promises for people that don't understand HF-Radios at all.
> > well it is true that marketing writes the adds, sometimes, there is a
> > "little" truth in there, if you are willing to dig for it.
> >
> > >

> > > 3MHZ bandwith SWR < 1.2:1 and 5000 Watts are simply LIES!
> > actually, that can be done with a 1 inch copper pipe cut to the
> > appropriate length and fed using Heiax 1-5/8" hardline.
> >
> > >
> > > In practice - an vertical antenna without counterpoise or grounding
will
> > > not work. So the result really depends WHERE you mount it and HOW you
> > > mount it and HOW you GROUND it.
> > an impeadance transformer at the end of a 1/2 wave of wire actually does
> > work. The transformer though needs to be of specified values for L and C
> > to properly match the line to the 1/2 wave radiator. I should know, I
have
> > built more than one using the Radio Amateurs handbook and the ARRL
antenna
> > compendium for references.
> >
> > >
> > > Take a 7,2 long rod and try to find out with MMANA what's about it.
You
> > > will be surprised. Maybe they have a L/C at the feedpoint to
compensate
> > > the SWR at the center of the CB frequencies.
> > >
> > well, thats probably for grounding (thats about all I use a copper rod
> > for). However, the shortest low impeadance path to that rod is the key
> > (again, there are references to it in the Amateur radio handbook).
> >
> > DE N7ZZT
> > Phoenix, Arizona
> >
> > --
> > the difference between intelligence and stupidity is that intelligence
> > has its limits.
> >
>
>

776. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 21:23:03 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407dabf7$1_3@corp.newsgroups.com>
Source record: 96627

'Doc wrote:
> "Swarming" means that because of the 'memory' of the wire
> used to make the 'twin lead', when it's turned loose from
> whatever you fixed it to to build it, it tries to assume it's
> former shape. Usually results in a 'rat's nest' of wire in
> a not so compact ball, LOL! Not really something to waste a
> lot of worry on, just be aware that it can happen.

Tying the ladder-line to the trailer hitch of my GMC pickup and
stretching it a bit solved all those problems.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

777. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 22:58:28 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <407DC21D.B1111C70@shaw.ca>
Source record: 96628

'Doc wrote:
>
> Zeno,
> "Swarming" means that because of the 'memory' of the wire
> used to make the 'twin lead', when it's turned loose from
> whatever you fixed it to to build it, it tries to assume it's
> former shape. Usually results in a 'rat's nest' of wire in
> a not so compact ball, LOL! Not really something to waste a
> lot of worry on, just be aware that it can happen.
> 'Doc

Perhaps the term 'Sproinging' might be better. You take it out in a
neat roll, let go, it goes 'Sproing!' and you have a rats nest. When
you get ready to put it up, call a couple of chums over for an
antenna raising party and let them loose the coil -- then let them clean
up the ball of wire! :-)

Irv VE6BP

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

778. Re: Help Getting a PK-232 to Key a TS-570 in CW

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-14 23:06:21 UTC
From: "Dick, AA5VU" <aa5vuNOSPAM@arrl.net>
Message-ID: <aa5vuNOSPAM-77D8CC.18062114042004@newssvr22-ext.news.prodigy.com>
Source record: 96629

In article
<aa5vuNOSPAM-1DB0ED.15273113042004@newssvr22-ext.news.prodigy.com>,
"Dick, AA5VU" <aa5vuNOSPAM@arrl.net> wrote:

> I must be doing something pretty dumb

I was doing something pretty dumb and the problem is fixed.

Dick, AA5VU

779. Re: Using a metal roof as a ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 00:21:08 UTC
From: Stephen Cowell <scowell@sbcglobal.net>
Message-ID: <Uzkfc.9220$kj5.460@newssvr23.news.prodigy.com>
Source record: 96630

"Rick Frazier" <rick@rickfrazier.com> wrote in message
news:407CE747.6B6E5531@rickfrazier.com...
> Hello:
>
> I've just received a 5BTV, 5 band trap vertical (75-10M), and as with
> most of them, I would suppose the instructions suggest that ground
> mounted is ok, but elevated it would be better to use radials.
>
> I am planning on mounting it on the peak, near the center of a rather
> large metal roof.

As others have mentioned, check the continuity
between the panels... some metal roofing comes
coated with plastic or paint (even if it looks galvanized).

If the skylights you mentioned interfere with
the ground connection along the peak of the
roof, I'd go ahead and run a strap down the
center of the roof peak line, bonding it to all
metal panels along the way.

Metal roofs can help, or hurt! If the connections
are bad between panels then you'll get loss and
noise. Otherwise, it's the best of both worlds, a
long-lasting roof that makes an excellent ground
plane.

--
Steve
KI5YG
.

780. 2 meter 5/8 wave mobile

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 00:48:06 UTC
From: Pat Cox <peacox@gloryroad.net>
Message-ID: <407DDBC6.D75F798B@gloryroad.net>
Source record: 96631

Looking for old New-tronics Hustler HT-144, trunk lip mount with coax
and PL-259 attached. Whip would be nice but not absolutely necessary.
Thank you. Pat, K4AVO

781. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 00:52:04 UTC
From: AK <k4ykz@mchsi.com>
Message-ID: <U0lfc.38416$xn4.98931@attbi_s51>
Source record: 96632

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:4071b68d$1_5@corp.newsgroups.com...
. . . The 'K' calls always seemed kind of sissy to me.
> --
> 73, Cecil, W5DXP

Shades of "Old Yellow" -
"CQ CQ CQ no kids, no lids, no K's and NO WA's"
Maybe OY is why I went back to my original K call.
HI HI
K4YKZ (ex-W7BZO, ex-W1EFG, ex-WZ8A)

782. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 01:10:43 UTC
From: Incognito <BLB@sero.net>
Message-ID: <oilfc.3663$432.3379@fed1read01>
Source record: 96633

Oh gee Dub Oh You as opposed to Kay with sharp high tones.
Which is better for phone DXing I ask ?

--
Incognito By Necessity (:-(

If you can't convince them, confuse them.
- - -Harry S Truman

"AK" <k4ykz@mchsi.com> wrote in message
news:U0lfc.38416$xn4.98931@attbi_s51...
>
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> news:4071b68d$1_5@corp.newsgroups.com...
> . . . The 'K' calls always seemed kind of sissy to me.
> > --
> > 73, Cecil, W5DXP
>
> Shades of "Old Yellow" -
> "CQ CQ CQ no kids, no lids, no K's and NO WA's"
> Maybe OY is why I went back to my original K call.
> HI HI
> K4YKZ (ex-W7BZO, ex-W1EFG, ex-WZ8A)
>
>
>

783. Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 01:11:15 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040414211115.14008.00000316@mb-m05.aol.com>
Source record: 96634

Markland Awarded Patent for New Gas Plasma Antenna Technology Designed for Homeland Security and Military Applications
Wednesday April 14, 7:00 am ET

Plasma Antenna has potential to Revolutionalize Antenna Technology

RIDGEFIELD, Conn.--(BUSINESS WIRE)--April 14, 2004-- Markland Technologies, Inc. (OTCBB: MRKL- http://www.marklandtech.com), an integrated homeland security company, announced today that its gas plasma research team has been awarded US patent # 6,710,746 for a gas plasma antenna element demonstrating re-configurable length. A gas-plasma antenna could revolutionize antenna technology due to its unique benefits over traditional antennas. A plasma antenna operates with greater stealth, has the ability to dynamically transmit/receive multiple frequencies, and is extremely portable.

The company intends to direct its research toward applications for Military and Homeland Security. This includes applications such as secure broadband wireless communications and stealth radar. The development of this technology has been funded to date through Small Business Innovative Research grants from the US Navy and Army.

The US patent awarded to Markland relates to plasma antennas having re-configurable length, beamwidth, and bandwidth. Traditionally, antennas have been defined as metallic devices for radiating or receiving radio waves, or as a conducting wire, which is sized to emit radiation at one or more selected frequencies. As a result, the paradigm for antenna design has heretofore been focused on antenna geometry and physical dimensions. Markland's innovative gas plasma antenna patent portfolio changes the paradigm, as it is now possible to design antennas which have greater flexibility and security than conventional antennas.

Markland CEO Robert Tarini stated, "We anticipate that our Gas Plasma Antenna (GPA) intellectual property portfolio will provide a revolutionary new set of advanced capabilities to the Department of Defense and Department of Homeland Security as they endeavor to deal with an ever changing landscape of challenges. Our plan for the GPA technology is to transition it from its present stage of development, where we have multiple active government funded contracts for advanced research programs, to the next stage, where we hope to be awarded product development contracts to commercialize the technology."

784. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 01:19:58 UTC
From: Andy <k4ykz@mchsi.com>
Message-ID: <2rlfc.38561$xn4.99915@attbi_s51>
Source record: 96635

"Incognito" <BLB@sero.net> wrote in message
news:oilfc.3663$432.3379@fed1read01...
> Dub Oh You as opposed to Kay
> Which is better for phone DXing I ask ?

For contests, the shorter the better.

Of course, the Y K and Z are not much help.

785. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 01:28:07 UTC
From: John DeGood <nu3e@arrl.net>
Message-ID: <vaudnRwoCMy_eODdRVn-uQ@comcast.com>
Source record: 96636

Dave Platt wrote:
> There was a running gag over in rec.audio.high-end a few years ago,
> about the ultimate speaker cables: mercury-filled surgical rubber
> tubing.

That's exactly what I thought of when I saw this subject line. For
those who missed it in 1987:

http://tinyurl.com/ywjd8

My favorite response in that 17-year-old thread:

> I can see the review by Anthony Cordesman now:
>
> "This wire lends a liquid transparency to strings. The fluid quality
> of horns has to be heard to be believed. There is a silvery
> quality to the brass, with no sign of the hard-edged, coppery
> sound normally associated with speaker cable...

73,

John NU3E

786. Re: W5GI Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 02:10:48 UTC
From: JJ <radiobuff99@mailcity.moc>
Message-ID: <m4WdnWQfgM8DY-DdRVn-iQ@gbronline.com>
Source record: 96638

Joe Smith wrote:

> On Sun, 14 Dec 2003 05:43:41 -0600, "Jayne Medley" <kjm52@blomand.net>
> wrote:
>
>
>>Any one out ther built one that is using it ? What do you think about it ?
>>
>
>
> Yes, it works as described. I built a 20M version and have it mounted
> at about 45 ft between two trees. I'm working anything I can hear
> with 135 watts...it takes a few calls sometimes.
>
> I use it with a tuner on 40 thru 10 with very good results. I highly
> recommend it.
>
> Steve, WA4ITA
>
>

What is the W5GI antenna?

787. Re: Have anyone the simulation of IMAX 2000 for the MMANA program?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 02:55:41 UTC
From: Andy in NJ <"SHORECOGS at COMCAST DOT NET">
Message-ID: <f5CdnY3eifcoZODdRVn-vg@comcast.com>
Source record: 96637

"DeG" <kg4fbg@onemain.com> wrote in message
news:hjhfc.7955$zj3.586@newsread3.news.atl.earthlink.net...
> Hello Marcello,
> There was a posting on the net about the I-Max.. He was a fellow ham
that
> took 1 apart in detail.. The best I remember (He) said it was more a 3/4
> wave than a 5/8 and was a promising antenna.. 10 - 12m ?
> Just now reading your post I have not done a search to see if I can find
> it.. Seems like it may have been on eHam? It's been 1- 2 years ago..
> If I find it I will post the link....

Here it is... http://www.qsl.net/kg6aoh/imax2000/

--
73! de Andy KC2SSB
http://shorecogs.tripod.com
AIM: shorecogs

788. Re: Have anyone the simulation of IMAX 2000 for the MMANA program?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 03:33:15 UTC
From: Stephen Cowell <scowell@sbcglobal.net>
Message-ID: <%nnfc.9265$jU.608@newssvr23.news.prodigy.com>
Source record: 96639

"Andy in NJ" <SHORECOGS at COMCAST DOT NET> wrote in message
news:f5CdnY3eifcoZODdRVn-vg@comcast.com...
> "DeG" <kg4fbg@onemain.com> wrote in message
> news:hjhfc.7955$zj3.586@newsread3.news.atl.earthlink.net...
> > Hello Marcello,
> > There was a posting on the net about the I-Max.. He was a fellow ham
> that
> > took 1 apart in detail.. The best I remember (He) said it was more a
3/4
> > wave than a 5/8 and was a promising antenna.. 10 - 12m ?
> > Just now reading your post I have not done a search to see if I can
find
> > it.. Seems like it may have been on eHam? It's been 1- 2 years ago..
> > If I find it I will post the link....
>
> Here it is... http://www.qsl.net/kg6aoh/imax2000/

Nope, sorry, thanks for playing. Broken link, pointing at annoying portal.

Here's a relevant link:

http://www.eham.net/reviews/detail/1376

Basically, the antenna is cheaply made, and
there's a lot of returns. It definitely is a hot vertical
for the bands of design... some owners ended up
wishing they'd bought the Shakespeare:

http://www.shakespeare-marine.com/antennas/specs/176-1ant.htm

--
Steve
KI5YG
.

disclaimer: I don't own any of these antennas.

789. Re: W5GI Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 03:49:11 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <5b1s70p1dkdblb9h7ikme6c5dh1snduk0q@4ax.com>
Source record: 96640

On Wed, 14 Apr 2004 20:10:48 -0600, JJ <radiobuff99@mailcity.moc>
wrote:

>Joe Smith wrote:
>
>> On Sun, 14 Dec 2003 05:43:41 -0600, "Jayne Medley" <kjm52@blomand.net>
>> wrote:
>>
>>
>>>Any one out ther built one that is using it ? What do you think about it ?
>>>
>>
>>
>> Yes, it works as described. I built a 20M version and have it mounted
>> at about 45 ft between two trees. I'm working anything I can hear
>> with 135 watts...it takes a few calls sometimes.
>>
>> I use it with a tuner on 40 thru 10 with very good results. I highly
>> recommend it.
>>
>> Steve, WA4ITA
>>
>>
>
>What is the W5GI antenna?

Check it out here http://www.w2fla.com/w5gi.htm

Howard KE6MAK

790. Re: W5GI Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 03:59:50 UTC
From: JJ <radiobuff99@mailcity.moc>
Message-ID: <n8-dnR1ie8Ilh-PdRVn-iQ@gbronline.com>
Source record: 96641

Howard wrote:
> On Wed, 14 Apr 2004 20:10:48 -0600, JJ <radiobuff99@mailcity.moc>
> wrote:
>
>
>>Joe Smith wrote:
>>
>>
>>>On Sun, 14 Dec 2003 05:43:41 -0600, "Jayne Medley" <kjm52@blomand.net>
>>>wrote:
>>>
>>>
>>>
>>>>Any one out ther built one that is using it ? What do you think about it ?
>>>>
>>>
>>>
>>>Yes, it works as described. I built a 20M version and have it mounted
>>>at about 45 ft between two trees. I'm working anything I can hear
>>>with 135 watts...it takes a few calls sometimes.
>>>
>>>I use it with a tuner on 40 thru 10 with very good results. I highly
>>>recommend it.
>>>
>>>Steve, WA4ITA
>>>
>>>
>>
>>What is the W5GI antenna?
>
>
> Check it out here http://www.w2fla.com/w5gi.htm
>
> Howard KE6MAK

Thanks, I did a google search but that site did not come up.

791. Element Design with Loading Coils

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 05:53:49 UTC
From: George <look@signature_to.reply>
Message-ID: <Nrpfc.11267$A_4.9729@newsread1.news.pas.earthlink.net>
Source record: 96642

I have a question that's probably easy for anyone with practical experience building UHF antennas. I need to make a shortened dipole (from tubing) at 450 MHz without sacrificing too much gain compared to full-size.

I have a design based on EZNEC. Total shortened "half-wave" dipole length is 0.32 lambda. Half of that of course is in each of the two elements. There is a loading coil in the middle of each element. EZNEC assumes zero length, non-radiating coils. In reality, the coil length is significant compared to the element length.

So, how do I build this thing considering the real coil length? Can the coil be inserted in the middle of each element without reducing the element length by the length of the coil? In other words, would final element length be 0.32 lambda plus coil length? Or, should the elements be shortened to maintain overall 0.32 lambda end-to-end length?

Thanks.

George K6GW

792. Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 06:42:59 UTC
From: Uwe <outhouse@midcoast.com>
Message-ID: <BCA3A735.46CB%outhouse@midcoast.com>
Source record: 96643

I am trying to put up a dipole for 40 m. The formula calls for about 65 feet.

Between my tress I easily have space for twice that.

That would still resonate, would it not.

Tell me that longer is better, at least when it comes in multiples.

73 Uwe

793. Maldol HVU-8 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 07:58:00 UTC
From: tsmithers@cix.co.uk
Message-ID: <memo.20040415085851.2960M@Jodan.cix.co.uk>
Source record: 96644

Just been reading the Radcom review (Jan 2004) and QST (Sept 2003) on the Maldol HVU-8 antenna and
wondered if anyone here is using one - looks quite good on the face of it. Any comments on overall performance would be appreciated
especially as a restricted space antenna.

Trevor G0KTN

794. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 10:27:23 UTC
From: simplesimon@hotmail.com
Message-ID: <c5lo2q$ae3$1@newsg2.svr.pol.co.uk>
Source record: 96645

66 feet 4 inches drops you in the middle of 40 metre band.

33 feet 2 inch a leg.

Between trees is better than through them.
Re check everything, when the leaves are on the trees.

QRP HomeBuilder web site is at

http://qrp.pops.net/qrp/default.htm

They have dipole antenna software for free.

Best of luck

795. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 11:31:41 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407E729D.B4F746DD@cwis.net>
Source record: 96646

Uwe,
'Bigger/longer' isn't necessarily 'better'! A longer
dipole -may- resonante on the desired frequency, but the
65 feet (approximate) is really all you need. Twice that
length would probably work for you, but feeding it in the
center would also be a very bad impedance match for 50 ohm
coax. Not to mention will produce a radiation pattern
different from what you might expect. A full wave, instead
of a 1/2 wave, dipole can be made to work, but all things
considered, why bother?
'Doc

796. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 11:44:14 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407E758E.19D27AEC@cwis.net>
Source record: 96647

Yuri,
I wonder if it comes in various colors? Put one
under my ride, get rid of the 'bugcatcher'! Style'n
and profile'n in neon color! I need one'a them...
'Doc

797. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 12:55:12 UTC
From: "Dan Richardson"
Message-ID: <qf1t70ldjhqgv4i9k0bggv0t67gjr5o2lt@4ax.com>
Source record: 96650

On Thu, 15 Apr 2004 06:31:41 -0500, 'Doc <w5lz@cwis.net> wrote:

>Not to mention will produce a radiation pattern
>different from what you might expect.

Oh, and just how different would the pattern be?

Danny, K6MHE

798. Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 13:08:30 UTC
From: Ken <cprstn54zz@att.net>
Message-ID: <lo1t70pcciqkkrm2hr7q2s83kst3h6jn92@4ax.com>
Source record: 96648

Joe Cro N3IBX says his "big antenna" is resonant from 1500 kHz to 46 mHz.

It is a military inverted-V, 110 ft. long total, with each end terminated in a 150 ohm resistor driven into the ground, center fed through a 9:1 balun.

Assuming this is not an April 1 joke:

(1) What are the drawbacks to this antenna?

(2) What is the feedline?

(3) Is there any more information about this type of antenna?

(4) What is the point of burying the resistor, rather than one lead?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

799. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 13:14:45 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <107t2mhef3rk5a8@corp.supernews.com>
Source record: 96649

Have used "plasma" as a noise source to measure RF systems. Use as, or
even near, a receiving antenna is problematic.
"One is born every minute."
73 Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

800. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 13:54:38 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040415095438.16282.00000371@mb-m03.aol.com>
Source record: 96651

W5LZ:
>I wonder if it comes in various colors?

Yea, that will make it really invisible :-)

I am not sure how real this is. Have not played with plasma, besides generating it from the tip of the mobile whip.

Looks like another freaky scientwific scheme to suck the taxpayer money for "research" to replace $0.05 worth of wire with heated air?

Yuri

801. Re: Element Design with Loading Coils

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 13:58:23 UTC
From: pw342@hotmail.com
Message-ID: <5f7b361.0404150558.4810ced4@posting.google.com>
Source record: 96652

George. You can describe your loading coils to Nec by taking the
physical length of the coil, say, 1", and creating a number of wires
that divide into 1", say 5.
THen put a load on all 5 wires, the total load amount would be the sum
of the 5 loads.

This technique is used in one of my sample antenna files,
'mobile.ant' at:
www.nec2go.com

Regards Pat W0OPW

802. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 13:58:33 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <dywfc.138044$gA5.1659528@attbi_s03>
Source record: 96653

I haven't read the article, but I expect the word 'resonant' is
incorrectly used.

Any antenna terminated with real resistors into the ground is generally
a traveling wave non resonant antenna.

In addition to radiating some of the RF it also wastes some of the RF in
the two load resistors.

It should work but not as well as a 110 foot inverted vee, open wire
feeders and a tuner.

Deacon Dave, W1MCE

Ken wrote:

> Joe Cro N3IBX says his "big antenna" is resonant from 1500 kHz to 46
> mHz.
>
> It is a military inverted-V, 110 ft. long total, with each end
> terminated in a 150 ohm resistor driven into the ground, center fed
> through a 9:1 balun.
>
> Assuming this is not an April 1 joke:
>
> (1) What are the drawbacks to this antenna?
>
> (2) What is the feedline?
>
> (3) Is there any more information about this type of antenna?
>
> (4) What is the point of burying the resistor, rather than one lead?
>
> Ken KC2JDY
>
> Ken
> (to reply via email
> remove "zz" from address)

803. Re: Element Design with Loading Coils

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 14:04:09 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040415100409.16282.00000373@mb-m03.aol.com>
Source record: 96654

>
>I have a design based on EZNEC. Total shortened "half-wave" dipole length
>is 0.32 lambda. Half of that of course is in each of the two elements.
>There is a loading coil in the middle of each element. EZNEC assumes zero
>length, non-radiating coils. In reality, the coil length is significant
>compared to the element length.

Welcome to real world. If you want to read more about the loading coil controversy, go to my web page www.K3BU.us and snoop around ARTICLES, you will get the picture. Eznec doesn't understand real coils, you can try to substitute the coil with hairpin stub of the same inductance for modeling.

With 450 MHz dipole you will "research" this subject faster by taking piece of wire or tubing, make about 3 turns in the middle, put the dipole up, measure the resonant frequency and then snip the ends untill you get it where you want it. Fine tuning can be done by squeezing or expanding the coil turns.

To make it more efficient, you can just bend the ends 90 deg. in L or T shape, instead of using coils.

Yuri, K3BU.us

804. Re: W5GI Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 14:04:47 UTC
From: pw342@hotmail.com
Message-ID: <5f7b361.0404150604.1e008dcd@posting.google.com>
Source record: 96655

Note:
"I use it with a tuner on 40 thru 10 with very good results. I highly recommend it."

This is no indication of performance. As Cebik says: " Swr does not indicate what the antenna is doing, only what the feedline is doing".

High losses will show up as low SWR!. This gimmik antenna is not worth putting up.

Pat W0OPW

805. Re: Element Design with Loading Coils

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 14:45:09 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c5m75lhfn1@hercules.btinternet.com>
Source record: 96656

The only critical length of a dipole is the end-to-end length. The length
of the loading coil when inserted in the antenna should not affect this.

Locate the centre of the loading coil at the point where it is supposed to
be along the antenna and reduce the lengths of the antenna elements on
either side of it by half of the length of the coil.

In other words, the total reduction in length of the antenna elements is
equal to the coil length, leaving the original dipole end-to-end length
unchanged.

Reg, G4FGQ

==========

"George" <look@signature_to.reply> wrote in message
news:Nrpfc.11267$A_4.9729@newsread1.news.pas.earthlink.net...
> I have a question that's probably easy for anyone with practical
experience
> building UHF antennas. I need to make a shortened dipole (from tubing) at
> 450 MHz without sacrificing too much gain compared to full-size.
>
> I have a design based on EZNEC. Total shortened "half-wave" dipole length
> is 0.32 lambda. Half of that of course is in each of the two elements.
> There is a loading coil in the middle of each element. EZNEC assumes zero
> length, non-radiating coils. In reality, the coil length is significant
> compared to the element length.
>
> So, how do I build this thing considering the real coil length? Can the
> coil be inserted in the middle of each element without reducing the
element
> length by the length of the coil? In other words, would final element
> length be 0.32 lambda plus coil length? Or, should the elements be
> shortened to maintain overall 0.32 lambda end-to-end length?
>
> Thanks.
>
> George K6GW
>
>
>

806. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 14:49:05 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407ea125$1_3@corp.newsgroups.com>
Source record: 96657

Uwe wrote:
> I am trying to put up a dipole for 40 m. The formula calls for about 65
> feet.
>
> Between my tress I easily have space for twice that.
>
> That would still resonate, would it not.

If you say a 6000 ohm feedpoint is resonant. I personally call that
the (anti)resonant point.

> Tell me that longer is better, at least when it comes in multiples.

You will be able to use the longer dipole on 75m. It will be about
one-wavelength long on 40m which gives some broadside gain over a
1/2WL dipole. But the feedpoint impedance on 40m will be so high
you will need to avoid coax and feed it with some variation of
ladder-line.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

807. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 14:52:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407ea207_3@corp.newsgroups.com>
Source record: 96658

Dan Richardson < wrote:

> On Thu, 15 Apr 2004 06:31:41 -0500, 'Doc <w5lz@cwis.net> wrote:
>>Not to mention will produce a radiation pattern
>>different from what you might expect.
>
> Oh, and just how different would the pattern be?

A one-wavelength dipole has about 2 dB gain over a 1/2WL
dipole at the expense of other directions assuming a
height of 1/2WL+.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

808. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 15:01:02 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407ea3f2_3@corp.newsgroups.com>
Source record: 96659

Ken wrote:

> Joe Cro N3IBX says his "big antenna" is resonant from 1500 kHz to 46
> mHz.

He's defining "resonant" as no reflections. Instead of a
standing-wave antenna, he is sacrificing half his power
(or more) in the resistors to avoid reflections and turning
the antenna into a traveling-wave antenna.

> It is a military inverted-V, 110 ft. long total, with each end
> terminated in a 150 ohm resistor driven into the ground, center fed
> through a 9:1 balun.
>
> Assuming this is not an April 1 joke:

It's somewhat like a terminated-V antenna, described in the
ARRL Antenna Book.

> (1) What are the drawbacks to this antenna?

He is losing at least half his power in the resistors.
Wouldn't you rather radiate that power? I go to great
lengths to obtain an extra 1 dB.

> (2) What is the feedline?

With a 9:1 balun, it can be coax since there are so few
reflections.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

809. Re: Have anyone the simulation of IMAX 2000 for the MMANA program?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 15:11:54 UTC
From: Andy in NJ <"SHORECOGS at COMCAST DOT NET">
Message-ID: <58adnWVpKaLbO-Pd4p2dnA@comcast.com>
Source record: 96660

" Stephen Cowell" <scowell@sbcglobal.net> wrote in message
news:%nnfc.9265$jU.608@newssvr23.news.prodigy.com...
> Nope, sorry, thanks for playing. Broken link, pointing at annoying
portal.
>
> Here's a relevant link:
>
> http://www.eham.net/reviews/detail/1376
>
> Basically, the antenna is cheaply made, and
> there's a lot of returns. It definitely is a hot vertical
> for the bands of design... some owners ended up
> wishing they'd bought the Shakespeare:
>
> http://www.shakespeare-marine.com/antennas/specs/176-1ant.htm

After I posted that, I found out that the link was no longer any good. I have the Imax 2000 and have used it on the band it was designed for (CB) an it works great. It's withstood many strong storms when I lived in RI and here on the coast of NJ. I've tested it with my MFJ antenna analyzer and it shows an SWR of less than 2.0 from 10 to 12 meters. When hooking it up to my FT-100D, I could pull in a lot of DX stations on 10m with it. One day I might actually have a chance to transmit with it on 10m! :)

--
73! de Andy KC2SSB
http://shorecogs.tripod.com
AIM: shorecogs

810. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 15:34:21 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <0Yxfc.7081$pk5.1953@fe03.usenetserver.com>
Source record: 96661

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:407ea3f2_3@corp.newsgroups.com...

> He is losing at least half his power in the resistors.
> Wouldn't you rather radiate that power? I go to great
> lengths to obtain an extra 1 dB.
>

If I remember my traveling wave antenna theory, he wouldn't necessarily be loosing 3 dB in the resistors. At higher frequencies more of the power radiates before it gets to the loads, does it not?

Jim
N8EE

811. Re: Element Design with Loading Coils

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 16:13:49 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404150813.770b578e@posting.google.com>
Source record: 96662

Though I haven't actually done this, the way I'd approach it is to determine the desired resonant frequency of that element, standing alone. It's not so much the length of the element as the element's reactance at the operating frequency that's important, and if you make an element the same diameter and length as in the simulation, and trim the coil so that your physical element resonates at the same frequency as the one in the model, you should be OK. That's my reasoned approach, but for sure listen to those with experience before taking my advice on it. You should be able to determine the resonant frequency by modelling just that element separately, with a source somewhere near the center.

When you posted earlier about your shrunken design, I had the mental image of a loading coil in each side of the element, and the other poster's comment about using a shorted stub shorter than 1/4 wave to get the same inductive reactance gave me the idea for what should be a pretty rugged, and easy to build, way of doing it...the center of the element would be tubing, and the ends would be rod. The rod would go into the tubing, forming the coax stub on each side. They could screw in, so you could store the antenna in a very small space. I don't recall ever seeing such a design, but it should work, and avoids the trouble of coming up with a good mechanical arrangement for the loading coils. Same thing could be done for shortened-element HF beams, too.

Cheers,
Tom

"George" <look@signature_to.reply> wrote in message
news:<Nrpfc.11267$A_4.9729@newsread1.news.pas.earthlink.net>...
> I have a question that's probably easy for anyone with practical experience
> building UHF antennas. I need to make a shortened dipole (from tubing) at
> 450 MHz without sacrificing too much gain compared to full-size.
>
> I have a design based on EZNEC. Total shortened "half-wave" dipole length
> is 0.32 lambda. Half of that of course is in each of the two elements.
> There is a loading coil in the middle of each element. EZNEC assumes zero
> length, non-radiating coils. In reality, the coil length is significant
> compared to the element length.
>
> So, how do I build this thing considering the real coil length? Can the
> coil be inserted in the middle of each element without reducing the element
> length by the length of the coil? In other words, would final element
> length be 0.32 lambda plus coil length? Or, should the elements be
> shortened to maintain overall 0.32 lambda end-to-end length?

>
> Thanks.
>
> George K6GW

812. What is a traveling-wave antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 16:20:59 UTC
From: jopl <hl@vn.com>
Message-ID: <c5mebs01od2@enews4.newsguy.com>
Source record: 96664

.

813. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 16:21:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ooct70ho9pkkoha140m3ah3th82pm8q0l0@4ax.com>
Source record: 96663

On Thu, 15 Apr 2004 11:34:21 -0400, "JLB" <IHateSpam@nospam.net>
wrote:
>If I remember my traveling wave antenna theory, he wouldn't necessarily be
>loosing 3 dB in the resistors. At higher frequencies more of the power
>radiates before it gets to the loads, does it not?
>
>Jim
>N8EE

Hi Jim,

You are right (losing - unless it has diarrhea). What is described is a vertical, half Rhombic, a Military application for many years. This report appears to be about a design from yet another "inventor" who has "discovered" something that confounds the experts.

The original poster asked for comments, especially about the resistor (the difference between shorting it and loading it) however, nothing is said about ground. Both of the resistors will require radials, however, there seem to be more specifics missing than that.

In other words, what is the leg angle subtended at the fed point? Why not simply feed one end and terminate the other? Seems like a pain to elevate the feed point without some analysis showing why - but then it appears the column was painfully shy of anything technical beyond carpenter scaling.

73's
Richard Clark, KB7QHC

814. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 17:58:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <407ecd3f_2@127.0.0.1>
Source record: 96665

JLB wrote:
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>>He is losing at least half his power in the resistors.
>>Wouldn't you rather radiate that power? I go to great
>>lengths to obtain an extra 1 dB.
>>
> If I remember my traveling wave antenna theory, he wouldn't necessarily be
> loosing 3 dB in the resistors. At higher frequencies more of the power
> radiates before it gets to the loads, does it not?

Yes, "more" but not near 100%. A multi-wavelength terminated rhombic
loses its reverse radiated lobes and along with them, quite a bit
of power. Even on 10m, 110 ft. is only 3 wavelengths long. Averaged
over all of HF, I'll bet that antenna loses close to half of its power
in the resistors, assuming all reflections have been eliminated by
the resistors.
--
73, Cecil http://www.qsl.net/w5dxp

815. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 18:07:56 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <407ECF7C.D2A51B55@uci.edu>
Source record: 96666

Yuri Blanarovich wrote:
>
>
> Markland Awarded Patent for New Gas Plasma Antenna Technology Designed for
> Homeland Security and Military Applications
> Wednesday April 14, 7:00 am ET
>
> Plasma Antenna has potential to Revolutionalize Antenna Technology
>
> RIDGEFIELD, Conn.--(BUSINESS WIRE)--April 14, 2004-- Markland Technologies,
> Inc. (OTCBB: MRKL- http://www.marklandtech.com), an integrated homeland
> security company, announced today that its gas plasma research team has been
> awarded US patent # 6,710,746 for a gas plasma antenna element demonstrating
> re-configurable length. A gas-plasma antenna could revolutionize antenna
> technology due to its unique benefits over traditional antennas. A plasma
> antenna operates with greater stealth, has the ability to dynamically
> transmit/receive multiple frequencies, and is extremely portable.
>
> The company intends to direct its research toward applications for Military and
> Homeland Security. This includes applications such as secure broadband wireless
> communications and stealth radar. The development of this technology has been
> funded to date through Small Business Innovative Research grants from the US
> Navy and Army.
>
> The US patent awarded to Markland relates to plasma antennas having
> re-configurable length, beamwidth, and bandwidth. Traditionally, antennas have
> been defined as metallic devices for radiating or receiving radio waves, or as
> a conducting wire, which is sized to emit radiation at one or more selected
> frequencies. As a result, the paradigm for antenna design has heretofore been
> focused on antenna geometry and physical dimensions. Markland's innovative gas
> plasma antenna patent portfolio changes the paradigm, as it is now possible to
> design antennas which have greater flexibility and security than conventional
> antennas.
>
> Markland CEO Robert Tarini stated, "We anticipate that our Gas Plasma Antenna
> (GPA) intellectual property portfolio will provide a revolutionary new set of
> advanced capabilities to the Department of Defense and Department of Homeland
> Security as they endeavor to deal with an ever changing landscape of
> challenges. Our plan for the GPA technology is to transition it from its
> present stage of development, where we have multiple active government funded
> contracts for advanced research programs, to the next stage, where we hope to
> be awarded product development contracts to commercialize the technology."

Apparently, most of the initial experimental data was collected during many long hours of testing at the Murphy's Tavern field laboratory using Murphy's "Ice Cold Beer" sign.

:-)

ac6xg

816. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 18:30:34 UTC
From: "H. Adam Stevens" <mayaone@earthlink.net>
Message-ID: <exAfc.11778$A_4.8646@newsread1.news.pas.earthlink.net>
Source record: 96667

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:407ECF7C.D2A51B55@uci.edu...
> Yuri Blanarovich wrote:
> >
> >
> > Markland Awarded Patent for New Gas Plasma Antenna Technology Designed
for
> > Homeland Security and Military Applications
> > Wednesday April 14, 7:00 am ET
> >
> > Plasma Antenna has potential to Revolutionalize Antenna Technology
> >
> > RIDGEFIELD, Conn.--(BUSINESS WIRE)--April 14, 2004-- Markland
Technologies,
> > Inc. (OTCBB: MRKL- http://www.marklandtech.com), an integrated homeland
> > security company, announced today that its gas plasma research team has
been
> > awarded US patent # 6,710,746 for a gas plasma antenna element
demonstrating
> > re-configurable length. A gas-plasma antenna could revolutionize antenna
> > technology due to its unique benefits over traditional antennas. A
plasma
> > antenna operates with greater stealth, has the ability to dynamically
> > transmit/receive multiple frequencies, and is extremely portable.
> >
> > The company intends to direct its research toward applications for
Military and
> > Homeland Security. This includes applications such as secure broadband
wireless
> > communications and stealth radar. The development of this technology has
been
> > funded to date through Small Business Innovative Research grants from
the US
> > Navy and Army.
> >
> > The US patent awarded to Markland relates to plasma antennas having
> > re-configurable length, beamwidth, and bandwidth. Traditionally,
antennas have
> > been defined as metallic devices for radiating or receiving radio waves,
or as
> > a conducting wire, which is sized to emit radiation at one or more
selected
> > frequencies. As a result, the paradigm for antenna design has heretofore
been

> > focused on antenna geometry and physical dimensions. Markland's
innovative gas
> > plasma antenna patent portfolio changes the paradigm, as it is now
possible to
> > design antennas which have greater flexibility and security than
conventional
> > antennas.
> >
> > Markland CEO Robert Tarini stated, "We anticipate that our Gas Plasma
Antenna
> > (GPA) intellectual property portfolio will provide a revolutionary new
set of
> > advanced capabilities to the Department of Defense and Department of
Homeland
> > Security as they endeavor to deal with an ever changing landscape of
> > challenges. Our plan for the GPA technology is to transition it from its
> > present stage of development, where we have multiple active government
funded
> > contracts for advanced research programs, to the next stage, where we
hope to
> > be awarded product development contracts to commercialize the
technology."
>
> Apparently, most of the initial experimental data was collected during
> many long hours of testing at the Murphy's Tavern field laboratory using
> Murphy's "Ice Cold Beer" sign.
>
> :-)
>
> ac6xg

Ahhh yas!
The old "beer can vertical"!
The drunker you get, the lower the resonant frequency!
73
H.
NQ5H

817. Re: What is a traveling-wave antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 18:58:41 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <407edb52_2@127.0.0.1>
Source record: 96668

jopl wrote: ???

In a standing wave antenna, like a dipole, the power wave hits
the end of the antenna and voltage and current are reflected.
The standing wave pattern on 1/2 of a dipole looks somewhat
like the standing wave pattern for a lossy 1/4WL open stub.
In the case of a traveling wave antenna, the power wave hits
a resistor with close to the same value as the Z0 of the
antenna and is dissipated in the resistor.

So, a traveling-wave antenna is essentially one without
reflections.
--
73, Cecil http://www.qsl.net/w5dxp

818. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 19:04:45 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407EDCC8.94D638EE@sonic.net>
Source record: 96569

So "Swarming" is really the term for that? I could use that.
Sometimes that phenomenon is real comedy material. I can just
see Laurel and Hardy putting up a short wave antenna......

"swarming" hmmmmm, like you disturbed a hornets nest eh?

Now that I think of it, the actual physics behind "swarming"
would be pretty darn sophisticated stuff.....

Bill (aka Zeno, aka, etc...)

'Doc wrote:

> Zeno,
> "Swarming" means that because of the 'memory' of the wire
> used to make the 'twin lead', when it's turned loose from
> whatever you fixed it to to build it, it tries to assume it's
> former shape. Usually results in a 'rat's nest' of wire in
> a not so compact ball, LOL! Not really something to waste a
> lot of worry on, just be aware that it can happen.
> 'Doc

819. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 19:10:39 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407EDE2A.31F09FEC@sonic.net>
Source record: 96570

What is need is some kind of "brain washing" technique for wire....

Either that or they should sell wire in straight lengths.....
One of my favorite (and boring) routines at the Home Depot, while awkwardly tooling around with 20 Foot pipes in the shopping cart nearly causing bodily harm when negotiating a turn down an isle, is to ask one of the managers, "where do you keep the 1000 footers?"

Getting home with a 500 foot straight length of wire would require a few red flags in back.....

-Zeno

Irv Finkleman wrote:

> 'Doc wrote:
> >
> > Zeno,
> > "Swarming" means that because of the 'memory' of the wire
> > used to make the 'twin lead', when it's turned loose from
> > whatever you fixed it to to build it, it tries to assume it's
> > former shape. Usually results in a 'rat's nest' of wire in
> > a not so compact ball, LOL! Not really something to waste a
> > lot of worry on, just be aware that it can happen.
> > 'Doc
> >
> Perhaps the term 'Sproinging' might be better. You take it out in a
> neat roll, let go, it goes 'Sproing!' and you have a rats nest. When
> you get ready to put it up, call a couple of chums over for an
> antenna raising party and let them loose the coil -- then let them clean
> up the ball of wire! :-)
>
> Irv VE6BP
>
> --
> ---------------------------------------
> Diagnosed Type II Diabetes March 5 2001
> Beating it with diet and exercise!
> 297/215/210 (to be revised lower)
> 58"/43"(!)/44" (already lower too!)
> ---------------------------------------
> Visit my HomePage at http://members.shaw.ca/finkirv/
> Visit my very special website at http://members.shaw.ca/finkirv4/
> Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at http://members.shaw.ca/finkirv5/
> --------------------
> Irv Finkleman,

> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

820. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 19:25:22 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407EE19D.5DF2BF8@sonic.net>
Source record: 96571

Doc,

Would this be a good reason to use solid core copper wire?

After tying one end of my ladder line to a short (PVC) pole at the house roof peak (this is to keep it high and away from some other lines), I need to carefully arch (arc) it around and into the side of the house (or into a modified "window" that ventillates the attic space up there. I might use a "stick" or something to make sure the ladder line stays where I want it here. The ladder line at this point has to go through a space between a cable tv and a telephone line. If the ladder line is kept in place, it will be 2-3 feet away from the other lines which are perpendicular (and thus only in proximity at a one point).

It is because of these other lines that I perhaps might have to consider other alternatives, but I thought I would first try the idea of running the ladder line all the way into the station in the house. If there is a problem with interference, then I might have to consider the system, I have seen mentioned, where you run double coax lines into the house for the last section with the shields tied together (anyone actually tried that, does that work well, any problems, etc.?)

My point being that solid core wire is easier to "mold" into shape. My only concern is that sometimes solid core could break if there is a repetitive friction type bending stress along the way (wind, or who knows).

Zeno

'Doc wrote:

> Zeno,
> "Swarming" means that because of the 'memory' of the wire
> used to make the 'twin lead', when it's turned loose from
> whatever you fixed it to to build it, it tries to assume it's
> former shape. Usually results in a 'rat's nest' of wire in
> a not so compact ball, LOL! Not really something to waste a
> lot of worry on, just be aware that it can happen.
> 'Doc

821. Re: What is a traveling-wave antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 20:00:40 UTC
From: warren <juny57@rcn.com>
Message-ID: <mmpt701bea5qcu0selejf7eioe2986q66d@4ax.com>
Source record: 96572

On Thu, 15 Apr 2004 09:20:59 -0700, jopl <hl@vn.com> wrote:

>.
A Traveling-wave antenna is used for satellite up-link communication. The signal is a microwave frequency up into the (multi) GHz region of radio waves. The transmitting tube is a traveling-wave tube, which is powered by a special pulsed amplifier.

A familiar use for this set-up is to relay telephone signals (from U S Sprint, etc.) up to the satellite and then down load to another ground station where the signal is converted back into a telephone signal and sent (over land line) to the person you called. This eliminates the use of land-lines most of the way for your long-distance telephone calls.

There are also many military uses for this type of technology.

By the way, the signals are fed from the amplifier through Wave-guides (a hollow rectangular cross-section sections that are held together by flanges), rather than by wires. It would be similar to a squared-off hose section, connected to other hose sections, if this makes the concept easier to understand.

Waveguides have much less loss than wire or cable and because of the ultra-high frequencies involved, are much more efficient.

Hopes this gives you some idea of this type of communication.

Regards

warren

822. Re: What is a traveling-wave antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 20:16:20 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <407EED94.9B860171@uci.edu>
Source record: 96573

warren wrote:
>
> On Thu, 15 Apr 2004 09:20:59 -0700, jopl <hl@vn.com> wrote:
>
> >.
> A Traveling-wave antenna is used for satellite up-link communication.
> The signal is a microwave frequency up into the (multi) GHz region of
> radio waves. The transmitting tube is a traveling-wave tube, which is
> powered by a special pulsed amplifier.
>
> A familiar use for this set-up is to relay telephone signals (from U S
> Sprint, etc.) up to the satellite and then down load to another ground
> station where the signal is converted back into a telephone signal and
> sent (over land line) to the person you called. This eliminates the
> use of land-lines most of the way for your long-distance telephone
> calls.
>
> There are also many military uses for this type of technology.
>
> By the way, the signals are fed from the amplifier through Wave-guides
> (a hollow rectangular cross-section sections that are held together by
> flanges), rather than by wires. It would be similar to a squared-off
> hose section, connected to other hose sections, if this makes the
> concept easier to understand.
>
> Waveguides have much less loss than wire or cable and because of the
> ultra-high frequencies involved, are much more efficient.
>
> Hopes this gives you some idea of this type of communication.
>
> Regards
>
> warren

And here's a site that talks about power waves:

http://www.thepowerwave.com/

:-)

ac6xg

823. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 20:29:20 UTC
From: kashe@sonic.net
Message-ID: <42st7054l7eoqm46eabfd3n6bu1rr26pj2@4ax.com>
Source record: 96574

On Wed, 14 Apr 2004 21:28:07 -0400, John DeGood <nu3e@arrl.net> wrote:

>Dave Platt wrote:
>> There was a running gag over in rec.audio.high-end a few years ago,
>> about the ultimate speaker cables: mercury-filled surgical rubber
>> tubing.
>
>That's exactly what I thought of when I saw this subject line. For
>those who missed it in 1987:
>
> http://tinyurl.com/ywjd8
>
>My favorite response in that 17-year-old thread:
>
>> I can see the review by Anthony Cordesman now:
>>
>> "This wire lends a liquid transparency to strings. The fluid quality
>> of horns has to be heard to be believed. There is a silvery
>> quality to the brass, with no sign of the hard-edged, coppery
>> sound normally associated with speaker cable...

A fine example of what Herb Caen, in the SF Chronicle, used to
refer to as "the prismatic luminescence school of wine critics".

824. Re: What is a traveling-wave antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 20:33:53 UTC
From: richardharrison@webtv.net
Message-ID: <23391-407EF1B1-20@storefull-3255.bay.webtv.net>
Source record: 96575

Jopl wrote:
"What is a traveling-wave antenna?"

A traveling-wave antenna has only weak if any reflections. So, it is defined.

A traveling-wave antenna is the opposite of a standing-wave antenna. In a standing-wave antenna, the wave reaches the tip end to find an impedance significantly different from the characteristic impedance of the wire or wires carrying the wave.

In the standing-wave antenna, the wave often encounters a short-circuit or an open-circuit at the antenna tip which reflects 100% of the energy remaining in the wave after its trip from the feedpoint. This produces a standing wave pattern on the anternna wire just as a short or open would cause on a lossy trannsmission line. In the standing-wave antenna case, most of the energy escaping from a good antenna is radiated as r-f in place of being converted to heat at the wire.

A traveling-wave antenna is usually equipped with a resistor or resistors to absorb energy which is not radiated on its trip to the end or ends of the wire or wires (if it is a balanced antenna). To absorb 100% of the remaining energy and to produce no reflection requires the chosen load resistance to match the charcateristic impedance of the wire, or wires in a balanced configuration, of the antenna.

The ideal horizontal rhombic antenna, for example, is a balanced traveling-wave antenna which is terminated at its far end with a resistor equal to the characteristic resistance of the antenna at its far end so that no energy will be reflected at the far end to travel back toward te feedpoint and produce radiation toward the feedpoint end of the antenna. Well constructed and with the proper termination resistor, the rhombic is unidirectional. Without the resistor, the rhombic is bidirectional and its front to back ratio depends on how many wavelengths are in a side of the antenna.

The ideal dipole antenna, for example, is a balanced standing-wave antenna which is terminated at its far end in an open-circuit in the usual case, or it is terminated in a short-circuit if the dipole is the "folded-dipole" type. Both types radiate identically. Only the drivepoint resistance is different between the two types of dipoles. Both dipoles have energy left over from the first trip between feedpoint and antenna tip and this is nearly 100% reflected at the tip. If the dipole has a 1/4-wave length between drivepoint and tip, the open or short is inverted and at the feedpoint the open-circuit tip appears a low impedance. On the contrary, the short-circuit at the tips of the

folded dipole appear as a high impedance back at the feedpoint when the elements are 1/4-wavelength.

The usual horizontal balanced rhombic looks like a transmission line of 600-900-ohm Zo. It is pulled apart for extremely wide-spacing which allows radiation. This widening as distance from the drivepoint increases also raises the Zo to a high value but this is symmetrically reduced back to the drivepoint impedance by the reduction in spacing between the rhombic wires toward the far end. Ideally the whole assembly just looks like a transmission line terminated in its Zo, which happens to have a wide spot within which allows radiation in and out. At high frequencies where the rhombic has many wavelengths per side, much of energy fed a rhombic will be radiated before reaching the termination, often a dissipation line made from stainless steel resistance wire.

Best regards, Richard Harrison, KB5WZI

825. Experience with Cushcraft R7 vertical HF antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 21:26:04 UTC
From: f=lbo=rn <" f=lbo=rn"@sw=iss=onli=ne.=ch>
Message-ID: <c5mulbcbb1@newshispeed.ch>
Source record: 96576

Hi,

I'm wondering if anybody else made some experiences (good or bad) with
the R7 cushcraft vertical antenna. I bought such an antenna second-hand
some days ago, but never used a vertical antenna for HF before.

vy 73 de Lorenz
--
Fritz Lorenz Born, HB9DTN
E-Mail: f=lbo=rn@sw=iss=onli=ne.=ch
--> sed 2,4s/=//g signature "I hate spam!!"

826. Re: Experience with Cushcraft R7 vertical HF antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 22:00:56 UTC
From: jgboyles@aol.com
Message-ID: <20040415180056.00710.00000402@mb-m07.aol.com>
Source record: 96577

>I'm wondering if anybody else made some experiences (good or bad) with
>the R7 cushcraft vertical antenna

Hi Lorenz. The R7 will work, needs a ground radial system to work well, and will be difficult to get a good match on multibands. Never used one myself, just commenting on multiband verticals in general that I have used.
73 Gary N4AST

827. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 22:21:47 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <ZPKdna70cLBsl-LdRVn-uw@comcast.com>
Source record: 96578

> Ahhh yas!
> The old "beer can vertical"!
> The drunker you get, the lower the resonant frequency!
> 73
> H.
> NQ5H

Maybe that explains what I hear on the lower bands these days...

828. Re: Experience with Cushcraft R7 vertical HF antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 22:37:35 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407F0EAF.52A518DA@cwis.net>
Source record: 96579

Fritz,
I have an R-7 currently laying in the yard. I'm not
a big vertical fan, but have to say that it did work as
advertised. Unfortunately, the fibreglass insulator used
to hold the antenna on the 'base' doesn't last forever if
it's in the sun very much (mine was).
It wasn't really all that hard to tune, just follow the
recomendations. Don't expect much bandwidth on 40 meters!
It's also fairly sensitive to 'where/how' you mount it.
I tuned mine on a fence post, then tried to move it to the
top of my house. Worked great on the post, terrible on the
roof. Too lazy to re-tune, so just mounted it on the post.
Still not a vertical fan, but I think I got my money's
worth out of the R-7 (10-15 years?).
'Doc

829. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 22:39:32 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407F0F24.549871CF@cwis.net>
Source record: 96580

Dan,
It's green instead of the 'normal' blue...
'Doc

830. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 22:40:57 UTC
From: Dave <noone@nowhere.com>
Message-ID: <HtidnWH52dDjkuLdRVn-sw@crocker.com>
Source record: 96581

i just wonder how they got a patent on that with all the previous published information on making one. heck that was even published in qst some years ago, i believe it was an april issue...

"Dave VanHorn" <dvanhorn@cedar.net> wrote in message news:ZPKdna70cLBsl-LdRVn-uw@comcast.com...
>
> > Ahhh yas!
> > The old "beer can vertical"!
> > The drunker you get, the lower the resonant frequency!
> > 73
> > H.
> > NQ5H
>
> Maybe that explains what I hear on the lower bands these days...
>
>

831. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 22:41:47 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407F0FAB.53FE8317@cwis.net>
Source record: 96582

Yuri,
Aah, politicians have been replacing things with hot
air for years! Wonder it that will affect the patent?
'Doc

832. Re: Experience with Cushcraft R7 vertical HF antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 23:03:45 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <407F14DB.A0242856@shaw.ca>
Source record: 96583

f=lbo=rn wrote:
>
> Hi,
>
> I'm wondering if anybody else made some experiences (good or bad) with
> the R7 cushcraft vertical antenna. I bought such an antenna second-hand
> some days ago, but never used a vertical antenna for HF before.
>
> vy 73 de Lorenz
> --
> Fritz Lorenz Born, HB9DTN
> E-Mail: f=lbo=rn@sw=iss=onli=ne.=ch
> --> sed 2,4s/=//g signature "I hate spam!!"

I picked one up used. I checked out all the mechanical
connections in the traps, then set it up according to instructions manual
and am terribly pleased with it. I did arrange for the 40 meters to
be set to the low end where I operate, other than that, I get great
results with it using QRP. If you do a Google search you will find that
some people have experienced problems, but nothing that can't be fixed
using the information available on the net. I have mine sitting on a
12 foot piece of pipe just to lift the radials over the garage roof.

Irv VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

833. Re: Experience with Cushcraft R7 vertical HF antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 23:22:39 UTC
From: Incognito <BLB@sero.net>
Message-ID: <3PEfc.8101$432.7574@fed1read01>
Source record: 96584

Well the R7 Cushcraft antenna is NOT your Fathers quarter wave vertical --
it is a half wave end fed antenna thus it needs no radials. It is fed at a
high impedance point by virtue of the matching black box at the antenna
feedpoint.

In fact the addition of radials will really screw it up --- read the manual
see URL:
http://www.cushcraft.com/support/pdf/r7.pdf
"THE R7 SHOULD NOT BE CONNECTED TO A GROUND RADIAL SYSTEM".
I ignored this (as an experiment) and found Cushcraft knew what they were
talking about.

The four 49 inch rods at the antenna bottom are counterpoises designed to
isolate the antenna from ground and not long enough to be resonant on any
band.

The bandwidth and efficiency on 40M, I found to be poor. But it works well
enough on the other bands, covering full bandwidth on all bands except 40M
and 20M. You will have to choose the portion of the band you want to operate
on for these two bands.

Tuning the R7 was easy, following the manual instructions.

Be careful of running high power into this antenna for an extended length of
time -- particularly if you horse it beyond resonance with a tuner --
several here have frazzled the traps when doing this.

Using an R7 I was able to work a lot of DX, it does seem to have a low angle
of radiation -- Cushcraft claims 16 degrees.

For more opinions --see url:
http://www.eham.net/reviews/detail/518

This opinion is not to engage in a debate of 1/4 wave vs 1/2 wave verticals
save that for another thread.
--
Incognito By Necessity (:-(

If you can't convince them, confuse them.
- - -Harry S Truman

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20040415180056.00710.00000402@mb-m07.aol.com...
> >I'm wondering if anybody else made some experiences (good or bad) with
> >the R7 cushcraft vertical antenna
>
> Hi Lorenz. The R7 will work, needs a ground radial system to work well,

and
> will be difficult to get a good match on multibands. Never used one
myself,
> just commenting on multiband verticals in general that I have used.
> 73 Gary N4AST

834. Re: Experience with Cushcraft R7 vertical HF antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 23:22:49 UTC
From: Incognito <BLB@sero.net>
Message-ID: <dPEfc.8102$432.881@fed1read01>
Source record: 96585

Well the R7 Cushcraft antenna is NOT your Fathers quarter wave vertical --
it is a half wave end fed antenna thus it needs no radials. It is fed at a
high impedance point by virtue of the matching black box at the antenna
feedpoint.

In fact the addition of radials will really screw it up --- read the manual
see URL:
http://www.cushcraft.com/support/pdf/r7.pdf
"THE R7 SHOULD NOT BE CONNECTED TO A GROUND RADIAL SYSTEM".
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isolate the antenna from ground and not long enough to be resonant on any
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Be careful of running high power into this antenna for an extended length of
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several here have frazzled the traps when doing this.

Using an R7 I was able to work a lot of DX, it does seem to have a low angle
of radiation -- Cushcraft claims 16 degrees.

For more opinions --see url:
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This opinion is not to engage in a debate of 1/4 wave vs 1/2 wave verticals
save that for another thread.
--
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news:20040415180056.00710.00000402@mb-m07.aol.com...
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> >the R7 cushcraft vertical antenna
>
> Hi Lorenz. The R7 will work, needs a ground radial system to work well,

and
> will be difficult to get a good match on multibands. Never used one
myself,
> just commenting on multiband verticals in general that I have used.
> 73 Gary N4AST

835. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 23:33:11 UTC
From: "Dan Richardson"
Message-ID: <fc6u701v6kvfqg5c5dsn32pcso2gp9e3qb@4ax.com>
Source record: 96588

On Thu, 15 Apr 2004 17:39:32 -0500, 'Doc <w5lz@cwis.net> wrote:

>
>
>Dan,
> It's green instead of the 'normal' blue...
> 'Doc

I fail to see that answers my question. Which was and is just how is
the pattern of a ï¿½-wave dipole different than a full-wave dipole?

I know the answer, base upon you response to the original question I
wonder if you do.

However, because of you refusal to include the portion of the previous
message that you responding too in your postings (normal N/G
etiquette) it is difficult to be sure what you are talking about.

Danny

836. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-15 23:56:00 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <hiFfc.7363$pk5.694@fe03.usenetserver.com>
Source record: 96586

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ooct70ho9pkkoha140m3ah3th82pm8q0l0@4ax.com...

> You are right (losing - unless it has diarrhea). What is described is
> a vertical, half Rhombic, a Military application for many years. This
> report appears to be about a design from yet another "inventor" who
> has "discovered" something that confounds the experts.
>

Dick,

I challenge any antenna 'inventor' to invent an antenna that is not described in Kraus' book, at least at the fundamental theory level! Haven't seen one yet and I've been reading QST for over 30 years (not to mention my dad's collection that goes back to 1942).

By the way, I 'invented' an interesting antenna several years ago, which I call the half-quad. The best way to describe it is dto picture a diamond shape quad, fed at the side corner, half buried in the ground. Shows some interesting patterns on the good ol' AO program. I came up with a three element version with one feed point (center element). You can change directions by switching a capacitor or inductor in and out of the two 'outside' elements. It didn't use terminating resistors. I couldn't get a multiband version to work. (and, no, I haven't built it yet)

Jim
N8EE
(and yes, I qualify for the OT club but don't want to admit it quite yet).

837. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 00:33:25 UTC
From: King Zulu <k4ykz@mchsi.com>
Message-ID: <pRFfc.46370$xn4.200158@attbi_s51>
Source record: 96587

"'Doc" <w5lz@cwis.net> wrote in message news:407E729D.B4F746DD@cwis.net...
>
>
> Uwe,
> 'Bigger/longer' isn't necessarily 'better'! A longer
> dipole -may- resonante on the desired frequency, but the
> 65 feet (approximate) is really all you need. Twice that
> length would probably work for you, but feeding it in the
> center would also be a very bad impedance match for 50 ohm
> coax.

The impedance will still be 50-to-70 ohms if you add the extra
half-wavelength to just one end of the antenna.
i.e. The wire on one side of the antenna feed point (coax connection) is
still 32.5 feet, and the wire on the other side would be 65' + 32.5' plus
another 3.3', since there is no end-effect on the extra half-wavelength of
wire you are adding. So actually, one side is 32.5 feet and the other side
is 100.8 feet. You should get almost 2 db of gain in four directions (a
"cloverleaf") by doing that. You will also get a significant reduction in
signal strength (a "null") broadside to the antenna and off the ends. I used
a dipole like that for years in Florida where one of the gain lobes was NE
and the nulls cut out a lot of the stateside QRM for me during European
contests. The full-wave dipole was up about a half-wavelength (65 feet), so
I used RG59 (75 ohm) coax instead of RG58 (50 ohm) coax, and had a good
match. No balun was needed.

Andy

838. Re: Mercury as an antenna... test trials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 00:42:02 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <IYFfc.28687$vF3.1717981@news20.bellglobal.com>
Source record: 96589

Has anyone actually tried it yet?

Considering only a drop in a neon sign or vapor lamp makes the
difference between not working at radiating a tremendous amount of
energy, it's worth a few careful experiments.

839. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 01:14:55 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <6oqdndf9_qoSruLdRVn-ug@comcast.com>
Source record: 96590

"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
news:fc6u701v6kvfqg5c5dsn32pcso2gp9e3qb@4ax.com...
> On Thu, 15 Apr 2004 17:39:32 -0500, 'Doc <w5lz@cwis.net> wrote:
>
> However, because of you refusal to include the portion of the previous
> message that you responding too in your postings (normal N/G
> etiquette) it is difficult to be sure what you are talking about.
>
He claims he doesn't know how to quote. I plonked him some time ago. Got
tired of trying to figure out what he was responding to. Would rather have
not done that as he does have useful information but his posting method is
just to cryptic.

840. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 01:15:17 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407f33eb$1_5@corp.newsgroups.com>
Source record: 96591

King Zulu wrote:
> The impedance will still be 50-to-70 ohms if you add the extra
> half-wavelength to just one end of the antenna.

Actually, it may be closer to 100 ohms. It's an OCF somewhat like
a "Windom" fed with two-conductor transmission line. The "Windom"
is supposed to have a feedpoint around 300 ohms.

> i.e. The wire on one side of the antenna feed point (coax connection) is
> still 32.5 feet, and the wire on the other side would be 65' + 32.5' plus
> another 3.3', since there is no end-effect on the extra half-wavelength of
> wire you are adding.

It's an interesting OCF antenna but probably subject to common
mode currents unless an excellent choke is used at the feedpoint.

> You should get almost 2 db of gain in four directions (a
> "cloverleaf") by doing that.

Since it's a one-wavelength antenna, it won't quite achieve a
cloverleaf pattern. It's about the same gain as a 1/2WL dipole
(6 dBi) but with a much wider horizontal beamwidth. For a 130
ft. long antenna, the cloverleaf pattern develops around 10 MHz.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

841. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 01:53:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <107uf5hot7o4n86@corp.supernews.com>
Source record: 96592

If I understand your description correctly, I'd be highly suspicious of the results from AO or any other MININEC-based program because of the antenna's relatively low height. I recommend that you model the antenna with an NEC-2 based program using the Sommerfeld ground model (called "high-accuracy" ground in EZNEC) -- otherwise you might be pretty disappointed when you actually build it. Be sure to make note of the strength of the pattern as well as the shape of the NEC-2 program results, unless you're using the antenna only for receiving.

Roy Lewallen, W7EL

JLB wrote:
> . . .
> By the way, I 'invented' an interesting antenna several years ago, which I
> call the half-quad. The best way to describe it is dto picture a diamond
> shape quad, fed at the side corner, half buried in the ground. Shows some
> interesting patterns on the good ol' AO program. I came up with a three
> element version with one feed point (center element). You can change
> directions by switching a capacitor or inductor in and out of the two
> 'outside' elements. It didn't use terminating resistors. I couldn't get a
> multiband version to work. (and, no, I haven't built it yet)
>
> Jim
> N8EE
> (and yes, I qualify for the OT club but don't want to admit it quite yet).
>
>
>

842. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 02:13:45 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <107ugb52pg7trf1@corp.supernews.com>
Source record: 96593

After investigating a large set of traveling wave antennas (not Beverage) I think that the smallest amount of power dissipated in the terminating resistance was about 2 db. Mind, these were antennas with useful lengths and angles. It is likely that a rhombic with very long leg lengths would dissipate even less in its termination resistance. For amusement, I will have a look some time. One needs a lot of segments to simulate a three wire, ten wavelength rhombic!
The antenna in question can be a useful expedient in exigent circumstances.
Nice to hear from N8EE, another of Kraus' boys. 73 Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"JLB" <IHateSpam@nospam.net> wrote in message news:0Yxfc.7081$pk5.1953@fe03.usenetserver.com...
>

>
>
> If I remember my traveling wave antenna theory, he wouldn't necessarily be
> loosing 3 dB in the resistors. At higher frequencies more of the power
> radiates before it gets to the loads, does it not?
>
> Jim
> N8EE
>
>
>

843. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 03:26:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407f52a2$1_1@corp.newsgroups.com>
Source record: 96594

J. McLaughlin wrote:
> After investigating a large set of traveling wave antennas (not
> Beverage) I think that the smallest amount of power dissipated in the
> terminating resistance was about 2 db. Mind, these were antennas with
> useful lengths and angles. It is likely that a rhombic with very long
> leg lengths would dissipate even less in its termination resistance.

Well, remember the posting that kicked off this discussion was about
the following very short traveling-wave antenna:

"It is a military inverted-V, 110 ft. long total, with each end
terminated in a 150 ohm resistor driven into the ground, center fed
through a 9:1 balun."

A 110 ft. center-fed inverted-V is certainly going to have extensive
losses in the resistors on most HF bands. After all, it is less than
1/2WL long on 75m and only 3 wavelengths long on 10m.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

844. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 03:28:07 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <9plfc.8443$pk5.8058@fe03.usenetserver.com>
Source record: 96595

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:107ugb52pg7trf1@corp.supernews.com...
> Nice to hear from N8EE, another of Kraus' boys. 73 Mac N8TT

Please explain. Do you mean that I have read Kraus' book, or that I was one of his students? (Which would be correct on both counts.)

Nice to hear from another N by 2 callsign. Not very many of us around, it seems.

Jim
N8EE

845. Folded Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 04:15:57 UTC
From: zeno <zeno@sonic.net>
Message-ID: <407F5DF5.217C3C85@sonic.net>
Source record: 96596

I have a spool of 300 ohm antenna feed line out in the barn, never been used. Probably enough there for some kind of antenna, I will have to unspool it and see how much is there. Anyone have anything good to say about those folded dipoles that use this 300 ohm line for both the antenna and the feed line? I have seen illustrations of folded dipoles using this, but in actual practice this line will naturally have some twising when it is suspended. I cannot imagine how you would keep it from doing this to some extent. What effect would this twisting have on the effectiveness of the antenna. The illustrations always show them geometrically perfect and straight and parallel.

Bill

846. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 06:00:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mjtu709qtkuso9jvltrir0llk3vk2inbud@4ax.com>
Source record: 96597

On Thu, 15 Apr 2004 20:29:20 GMT, kashe@sonic.net wrote:
> A fine example of what Herb Caen, in the SF Chronicle, used to
>refer to as "the prismatic luminescence school of wine critics".
A wonderful columnist.

847. Re: What is a traveling-wave antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 06:24:30 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <SLmdnaGFvPOC4eLdRVn-gg@comcast.com>
Source record: 96598

I think my beverage, a traveling wave antenna, would be rather poor for satellite use.

"warren" <juny57@rcn.com> wrote in message news:mmpt701bea5qcu0selejf7eioe2986q66d@4ax.com...
> On Thu, 15 Apr 2004 09:20:59 -0700, jopl <hl@vn.com> wrote:
>
> >.
> A Traveling-wave antenna is used for satellite up-link communication.
> The signal is a microwave frequency up into the (multi) GHz region of
> radio waves. The transmitting tube is a traveling-wave tube, which is
> powered by a special pulsed amplifier.
>
> A familiar use for this set-up is to relay telephone signals (from U S
> Sprint, etc.) up to the satellite and then down load to another ground
> station where the signal is converted back into a telephone signal and
> sent (over land line) to the person you called. This eliminates the
> use of land-lines most of the way for your long-distance telephone
> calls.
>
> There are also many military uses for this type of technology.
>
> By the way, the signals are fed from the amplifier through Wave-guides
> (a hollow rectangular cross-section sections that are held together by
> flanges), rather than by wires. It would be similar to a squared-off
> hose section, connected to other hose sections, if this makes the
> concept easier to understand.
>
> Waveguides have much less loss than wire or cable and because of the
> ultra-high frequencies involved, are much more efficient.
>
> Hopes this gives you some idea of this type of communication.
>
> Regards
>
> warren

848. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 06:24:49 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0404152224.143fe48e@posting.google.com>
Source record: 96599

Hi,
this antenna seems to be as revolutionary as the ILA, see
http://download.antennex.com/hws/ws0404/ewaves.pdf IMHO, if gently
rubbed with snake oil, it must work even better.

A73 (= April greetings) Ivan OK1SIP

849. Re: Folded Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 06:30:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bmtu7019t3h3le3h3ptakf225hpcg25n68@4ax.com>
Source record: 96600

On Fri, 16 Apr 2004 04:15:57 GMT, zeno <zeno@sonic.net> wrote:
>Anyone have anything good to say about those folded dipoles
>that use this 300 ohm line for both the antenna and the feed
>line?

Hi Bill,

Nope, not for both - hardly for either (and it is arguable that its Z
even comes close to 300 Ohms). No reason not to try either.

> I have seen illustrations of folded dipoles using
>this, but in actual practice this line will naturally have
>some twising when it is suspended. I cannot imagine how you
>would keep it from doing this to some extent. What effect
>would this twisting have on the effectiveness of the antenna.

Keeps it from thrashing in the wind. As far as noise pick-up, the
twist (used by the power company) reduces that too. Insofar as its
intended purpose - no effect, detrimental or beneficial.

>The illustrations always show them geometrically perfect and
>straight and parallel.

Silly editors....

73's
Richard Clark, KB7QHC

850. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 06:33:05 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bgvu705cvri4li6b19m1gls0nt1tb082ja@4ax.com>
Source record: 96601

On Thu, 15 Apr 2004 22:40:57 -0000, "Dave" <noone@nowhere.com> wrote:
>i just wonder how they got a patent on that
They didn't say it was fractal.

851. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 06:43:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <evvu709aif738clsm2k89novopt7jf6e09@4ax.com>
Source record: 96602

On 15 Apr 2004 23:24:49 -0700, remove_ok1sip@atlas.cz (OK1SIP) wrote:

>Hi,
>this antenna seems to be as revolutionary as the ILA, see
>http://download.antennex.com/hws/ws0404/ewaves.pdf IMHO, if gently
>rubbed with snake oil, it must work even better.
>
>A73 (= April greetings) Ivan OK1SIP

Hi Ivan,

Ronold King covered this design in spades in his work "Antennas in Matter" (I may have the title wrong, my references are packed away following a recent move). Only 600 or 700 pages of antennas immersed in water (and earth, I believe) to reveal no particular advantage (and as one might imagine, many very specific, particular disadvantages).

73's
Richard Clark, KB7QHC

852. Re: Folded Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 11:21:12 UTC
From: KC1DI <kc1di@arrl.net>
Message-ID: <fufv7050nfgt23k7h5fc3aafgolrepd9ne@4ax.com>
Source record: 96603

On Fri, 16 Apr 2004 04:15:57 GMT, zeno <zeno@sonic.net> wrote:

>I have a spool of 300 ohm antenna feed line out in the barn,
>never been used. Probably enough there for some kind of
>antenna, I will have to unspool it and see how much is there.
>Anyone have anything good to say about those folded dipoles
>that use this 300 ohm line for both the antenna and the feed
>line? I have seen illustrations of folded dipoles using
>this, but in actual practice this line will naturally have
>some twising when it is suspended. I cannot imagine how you
>would keep it from doing this to some extent. What effect
>would this twisting have on the effectiveness of the antenna.
>The illustrations always show them geometrically perfect and
>straight and parallel.
>
>
>Bill

Hi Bill,

Used just such an antenna a long time ago, Worked great.. and was
cheap to make.. Problems that take some engineering :)

300 ohm line is not strong thus it will break either due to wind
action or smiply from weight of snow or ice if not well supported. .

you'll need a good method of supporting the connections at the center.

when wet resonant frequency will change.. lower if I remeber
correctly.

you'll most likely need a tuner -- or an old tube rig like we used
that wasn't that fussy about SWR.

Power limited to about 200watts.. safely. Less if not tuned exactly
or if line is wet.

there is not much advantage over an ordinary dipole.. it is for the
most part a single band antenna. But can be used like a dipole on 3rd
harmonic.

My recomendation put up a regular dipole , feed it with the 300 ohm
stuff and a good balanced tuner.. you'll get more milage that way.

73 Dave Kc1di

853. [ANN.] ARM board ARM TEC V2

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 11:59:52 UTC
From: ezarm MCU team <nospam@noemail.com>
Message-ID: <c5oi5f$s8e2@imsp212.netvigator.com>
Source record: 96363

announcing NEW Design board with PHILIPS LPC 2106

http://arm.web7days.com/V2.html

---

mcu development term

http://arm.web7days.com

854. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 13:07:34 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407FDA96.2CE74F0F@cwis.net>
Source record: 96604

Dan & CW,
This may help understand 'how' I post, probably won't excuse any percieved 'mistakes' in the procedure, but at least you'll understand. I use a 'newsgroup' reader, it shows each thread and each response in a thread, and everything progrsses in a very logical manner. One of these 'newsgroup' readers is provided in Netscape and IE. I see no point in repeating what is already 'there' for anyone to see (if they use a NGreader, of course). I have to assume that you don't, too bad.
As for the radiation pattern differences between a 1/2 wave and full wave antenna, a specific explanation would be kind'a difficult because more than the 'length' can make a difference, height, environment, other antennas, etc. But, in general, the usual higher angles of radiation are more pronounced, and the pattern is 'sort of' sharper (if that makes any sense) for the full wave dipole. It's easy to see than to describe if you use a modeling program, or the usual radiation pattern diagrams in the antenna books. This also depends on the antenna's height, what I attempted to describe
is at more than a 1/2 wave above ground. Being lower than a 1/2 wave above ground makes for even greater differences.
I hope that convinces you that I might have at least a faint idea of what's happening...
'Doc

855. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 13:15:11 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407FDC5F.26273B3@cwis.net>
Source record: 96605

Andy,
True, for the most part. But I was 'assuming' a center fed doublet, not an off center fed one. (To cover all the possibilities would mean more 'work' than I'm willing to put into a 'simple' answer.) Both of us are 'right'.
'Doc

PS - I used an antenna something like what you described at one time. Fed with ladder line through a tuner, it loaded like a dream on all bands! Had a really 'crappy' pattern for the use I wanted to put it (couldn't rearrange how it was errected), so I went back to the 'loop'. Oh well...

856. Re: Folded Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 13:25:37 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <407FDED1.4012DFA1@cwis.net>
Source record: 96606

Bill,
If you like 'playing' with antennas, why not try it? I
doubt if you'll see any great difference in performance from
a 'normal' dipole, and matching the '300' ohm feed line will
be 'fun', but certainly 'do-able'.
The usual 300 ohm twin lead that you find has certain
problems when used for an antenna for the lower frequencies.
Mechanical problems, as in strength (which has already been
mentioned). Not really ~that~ big'a problem, but one you should
be aware of. Twisting the line won't cause any problems and may
relieve one, 'flopping' around in wind (also pointed out). Ever
seen one of the twisted 'streamers' used in advertising tear
it's
self apart? Well, very often, anyway?
Using a tuner (I know Cecil, but for me it's easier) to feed
the folded dipole will make things 'more sinple'
'Doc

857. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 13:29:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <407fdfea$1_3@corp.newsgroups.com>
Source record: 96607

'Doc wrote:
> This may help understand 'how' I post, probably won't
> excuse any percieved 'mistakes' in the procedure, but at
> least you'll understand. I use a 'newsgroup' reader, it
> shows each thread and each response in a thread, and
> everything progrsses in a very logical manner.

I use the Netscape newsreader but it is more convenient
for me to sort by date rather than by thread. Therefore,
I don't know to whom you are replying unless you quote
the attributions and understanding the context of
your postings is quite often difficult for me.
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

858. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 13:40:39 UTC
From: King Zulu <k4ykz@mchsi.com>
Message-ID: <rnRfc.3248$yD1.12226@attbi_s54>
Source record: 96608

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:407f33eb$1_5@corp.newsgroups.com...
> King Zulu wrote:
> > The impedance will still be 50-to-70 ohms if you add the extra
> > half-wavelength to just one end of the antenna.
>
> Actually, it may be closer to 100 ohms. It's an OCF somewhat like
> a "Windom" fed with two-conductor transmission line. The "Windom"
> is supposed to have a feedpoint around 300 ohms.

The FW dipole I used for years had a 1.2:1 SWR, fed with RG59 and no balun.

>
> > i.e. The wire on one side of the antenna feed point (coax connection)
is
> > still 32.5 feet, and the wire on the other side would be 65' + 32.5'
plus
> > another 3.3', since there is no end-effect on the extra half-wavelength
of
> > wire you are adding.
>
> It's an interesting OCF antenna but probably subject to common
> mode currents unless an excellent choke is used at the feedpoint.

Never saw an indication that the feed line was radiating. On my many dipole versions, I have tried them with and without baluns. If the resonance of the antenna didn't change with the balun in, I figured the balun wasn't needed. On one, where the coax could not come off perpendicular to the dipole, the balun did raise the resonance frequency - suggesting the feedline was radiating without the balun in. That same W2AU balun caused havoc with TVs in my neighborhood when I used it for ten meter operation. I assumed the core was saturating and causing the harmonics. For that reason, I don't use baluns just for good measure; only when I need the matching (4:1 baluns) or when there is some indication that the feedline is radiating. Plus, baluns add weight to the antenna, loss to the power, and are susceptible to weather problems.

> > You should get almost 2 db of gain in four directions (a
> > "cloverleaf") by doing that.
>
> Since it's a one-wavelength antenna, it won't quite achieve a
> cloverleaf pattern. It's about the same gain as a 1/2WL dipole
> (6 dBi) but with a much wider horizontal beamwidth. For a 130
> ft. long antenna, the cloverleaf pattern develops around 10 MHz.
> --

> 73, Cecil, W5DXP

The 2db gain was what the ARRL Antenna Book (1964 vintage, p. 142) was calling out for a FW collinear array gain. Actually, the FW dipole fed at the current node would be like a 1-wavelength long longwire (a short longwire?), and the Antenna Book shows a negligible 1/2 db gain (p. 170 on "Long-Wire Antennas") over the dipole gain. The cloverleaf assertion was based the Antenna Book radiation patterns shown on p. 39 (Fig 2-16) and the discussion of "How Patterns are Formed", as well as p. 59 (Fig 2-74b) showing the FW pattern distortion caused by end feeding.

K4YKZ

859. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 14:15:58 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040416101558.09984.00000453@mb-m17.aol.com>
Source record: 96609

>
>Nice to hear from another N by 2 callsign. Not very many of us around, it
>seems.
>
>Jim
>N8EE
>

One more -
Howdy from N2EE
making noise in contests as flagship of Nikola Tesla RC,
breaking records, exploring the frontiers of ocean fronts.

Yuri
da keykeeper of N2EE
and NT1E (Nikola Tesla #1 Engineer)

considered it to be my own call, but settled for the part of my old OK3BU

860. Re: Folded Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 14:19:24 UTC
From: KAZeringue <kazeringue@aol.com>
Message-ID: <407FEB74.8000700@aol.com>
Source record: 96610

Okay, I'm compelled to chime in on this one.

The ARRL antenna book has a "cookbook" design for using 300 ohm twinlead to make folded dipoles. In my 18th edition its the first thing in Chapter 15 "Portable Antennas", pg 15-1.

It uses an open stub of the same 300 ohm twinlead to match to a 50 ohm coax. You could just as easily omit the stub and run the twinlead to a tuner.

I have one made from Radio Shack 300 ohm wire. After cutting per the cookbook, including the stub, it tunes up perfectly on 3.775, only 25 kc up from the stated center frequency.

The drawbacks to the design:
1)The stub, which is 37 feet long for 80 meters. You can replace the stub with a capacitor, but I had the twinlead on hand....and was interested in the design.

2)The fragility of the twinlead. Dave, KC1DI, mentioned that in his post too. I have the center taped to a foot-long chunk of electrical PVC, and a bit of nylon cord helping to support the feedline drop. That's been sufficient for two years, so far.

3)Power. I have no idea if this thing would stand up to a kilowatt, but it works fine at 100 watts. I'd be afraid to "smoke test" it....

Twisting, flopping, and drooping seem to make no difference. It plays as well as the inverted vee it replaced, but except for a better SWR bandwidth, its just a dipole. With the stub match, and a 90 foot coax run back to the shack, the SWR is under 2:1 from about 3625 to about 3910, but my rig's internal tuner handles the edges easily. The SWR seems to rise more sharply on the higher end of the band. I don't notice any changes in SWR when its wet--not yet anyway.

On the positive side, the antenna is relatively light, and you can drop the 300 ohm feeder right to ground level rather than pulling 20 lbs of coax 40 feet up. And if you have a spool of twinlead sitting around--its free.

I keep mine because its already in place, and it works. When it falls out of the tree, I might follow Dave's advice and put up a regular dipole fed with the twinlead.

Its only unique quality is a slightly wider SWR bandwidth.

Have fun..

73
Keith, W4KAZ

861. Re: Folded Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 14:50:48 UTC
From: Vito <vito@crosslink.net>
Message-ID: <407ff2d0$0$9773@dingus.crosslink.net>
Source record: 96611

Dunno about a folded dipole but some friends swear by using it to make
VHF/UHF J-Poles. They can be rolled up to carry easily or put inside plastic
water pipe for rigidity. An 80 meter J-Pole? Well ....???
73, K3DWW

"zeno" <zeno@sonic.net> wrote in message news:407F5DF5.217C3C85@sonic.net...
> I have a spool of 300 ohm antenna feed line out in the barn,......

862. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 14:51:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <407ff2d7_2@127.0.0.1>
Source record: 96612

King Zulu wrote:
> The FW dipole I used for years had a 1.2:1 SWR, fed with RG59 and no balun.

It still may have had a feedpoint impedance of ~100 ohms. RG59's
Z0 is 75 ohms, close to what you would need to transform 100 ohms
to 50 ohms. An odd number of 1/4WLs of RG59 will transform 100 ohms
to 57 ohms, neglecting losses.

> Never saw an indication that the feed line was radiating.

We can mount a logical argument that since the feedpoint
impedance looking in each direction is different, the
currents have to be unbalanced resulting in feedline
radiation.

> The 2db gain was what the ARRL Antenna Book (1964 vintage, p. 142) was
> calling out for a FW collinear array gain. Actually, the FW dipole fed at
> the current node would be like a 1-wavelength long longwire (a short
> longwire?), and the Antenna Book shows a negligible 1/2 db gain (p. 170 on
> "Long-Wire Antennas") over the dipole gain. The cloverleaf assertion was
> based the Antenna Book radiation patterns shown on p. 39 (Fig 2-16) and the
> discussion of "How Patterns are Formed", as well as p. 59 (Fig 2-74b)
> showing the FW pattern distortion caused by end feeding.

EZNEC says that it is somewhat of a square pattern where the "corners"
of the square are just barely starting to form a cloverleaf. The "nulls"
off the ends are only 3 dB down. I suspect there was a lot of guessing
about radiation patterns in 1964. Some say there still is a lot of
guessing. :-)
--
73, Cecil http://www.qsl.net/w5dxp

863. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 15:07:05 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <407ff686_2@127.0.0.1>
Source record: 96613

J. McLaughlin wrote:
> After investigating a large set of traveling wave antennas (not
> Beverage) I think that the smallest amount of power dissipated in the
> terminating resistance was about 2 db.

Just modeled the subject antenna as well as I can. Without the
termination resistors, the antenna has a gain of +6 dBi on 3.8
MHz. With the termination resistors, according to EZNEC, the
gain drops to -10 dBi, a difference of 16 dB.
--
73, Cecil http://www.qsl.net/w5dxp

864. Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 15:07:12 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <407ff49c.323616734@news.galilei.com>
Source record: 96614

Hi Gang

Since the radiation of an antenna is done primarily on the surface of the elements (or wire) would gold plating the elements increase the efficiency of the antenna in any way?

Gold sounds expensive, but if thin enough, one ounce of gold could plate an entire football field. Brass corrods, nickel is usually used as the first plating before another metal like gold is plated over that. If the cost for gold over the cost of brass is only about 1 buck per foot of element length, making cost not relavent to the question. Would a gold plated antenna work better than aluminum or nickel plated?

TTUL
Gary

865. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 15:09:52 UTC
From: "Dan Richardson"
Message-ID: <assv705s1tceo1s7u0s7jj8jticvcb8dkd@4ax.com>
Source record: 96618

On Fri, 16 Apr 2004 08:07:34 -0500, 'Doc <w5lz@cwis.net> wrote:

Here, so all can see exactly what I am responding to:
[snip]
> I use a 'newsgroup' reader, it
>shows each thread and each response in a thread, and
>everything progrsses in a very logical manner.
[snip]

I too use a reader as I believe everyone else does, however, rather than clutter up my screen with old obsolete messages I us an option of my reader that lists only the new unread messages.

Additionally, there are at times multiple replies to a thread and your posting may be listed several messages below the one you are replying to and it can be anyone's guess which one it was.

Thirdly, for anyone reading the news group archives and trying to follow anything you have posted is near to impossible as the archive listing can be by the poster and not the thread.

Lastly, news group etiquette was setup of a good reason. Following those suggestions allows for a minimum of confusion.

Please think about this. Of course, if you just want to be contrary then have fun.

73
Danny

866. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 15:24:07 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5otqn$6nh$1@mail.specsol.com>
Source record: 96615

Gary V. Deutschmann, Sr. <raiar@bbs.galilei.com.nospam> wrote:
> Hi Gang

> Since the radiation of an antenna is done primarily on the surface of
> the elements (or wire) would gold plating the elements increase the
> efficiency of the antenna in any way?

> Gold sounds expensive, but if thin enough, one ounce of gold could
> plate an entire football field. Brass corrods, nickel is usually used
> as the first plating before another metal like gold is plated over
> that. If the cost for gold over the cost of brass is only about 1
> buck per foot of element length, making cost not relavent to the
> question. Would a gold plated antenna work better than aluminum or
> nickel plated?

> TTUL
> Gary

Why don't you download the demo version of eznec, www.eznec.com/, model
an antenna with gold, copper, aluminum, etc. and see for yourself how
much difference it makes?

--
Jim Pennino

Remove -spam-sux to reply.

867. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 15:24:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dbuv70d3kp9kpm3k3leo9ctjauehhr646o@4ax.com>
Source record: 96616

On 16 Apr 2004 11:07:12 EDT, raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote:
>Since the radiation of an antenna is done primarily on the surface of
>the elements (or wire) would gold plating the elements increase the
>efficiency of the antenna in any way?

Of Course - you knew that anyway. How much? More than a dB? No.
Less than a dB? Very much less.

-Unless-

>Gold sounds expensive, but if thin enough, one ounce of gold could
>plate an entire football field.

I know you didn't really have this in mind, but putting your gold into
System loss pays back far more than trying to raise the efficiency of
the radiator from 99.89% to 99.90%

Gold plate your lawn and you could easily recover 1dB in a DX lobe.

73's
Richard Clark, KB7QHC

868. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 15:28:36 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <407FFBB1.530A50C5@shaw.ca>
Source record: 96617

"Gary V. Deutschmann, Sr." wrote:
>
> Hi Gang
>
> Since the radiation of an antenna is done primarily on the surface of
> the elements (or wire) would gold plating the elements increase the
> efficiency of the antenna in any way?
>
> Gold sounds expensive, but if thin enough, one ounce of gold could
> plate an entire football field. Brass corrods, nickel is usually used
> as the first plating before another metal like gold is plated over
> that. If the cost for gold over the cost of brass is only about 1
> buck per foot of element length, making cost not relavent to the
> question. Would a gold plated antenna work better than aluminum or
> nickel plated?
>
> TTUL
> Gary

The only real downside would be security! :-)
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

869. Re: What is a traveling-wave antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 15:50:16 UTC
From: richardharrison@webtv.net
Message-ID: <20291-408000B8-61@storefull-3256.bay.webtv.net>
Source record: 96520

Warren wrote:
"A traveling-wave antenna is used for satellite up-link communication."

The similarity between the "traveling wave tube" and the "traveling wave antenna" is that both are wideband devices.

The helical beam antenna is not considered a traveling wave antenna, though it does enjoy a wideband response. The traveling wave tube also employs a helix and enjoys a wideband response but is not usually an antenna.

Many microwave amplifiers are capable of only 1% of the center frequency bandwidth. The traveling wave tube was developed to give more than 10% bandwidth. It was invented in England in 1943.

The traveling wave amplifier generates an electron beam similar to that of a CRT, but the beam is confined within a long helix. The signal input is to the electron gun end of the helix. The signal output is taken from the collector end of the helix.

The traveling wave amplifier electrons are modulated by the signal traveling along the surface of the helix. Interaction between electrons in the cathode beam and signal on the helix promotes signal growth and accumulation as the signal travels to the output end of the helix.

John D. Kraus, inventor of the monofilar axial-mode helical antenna (helical beam antenna) notes that it: "---has inherent broadband properties, posessing desirable pattern, impedance and polarization characteristics over a wide frequency range." (page 268, 3rd edition of "Antennas")

Kraus` 1948 helix had a pitch angle of 14-degrees, 6 turns, 0.31 wavelength diameter, and a center frequency of 400 MHz. Its pattern was satisfactory over the 300 to 500 MHz range.

Kraus says:
"Although the helical beam antenna consists of a continuous conductor carrying a traveling wave, it is also a periodic structure with period equal to the turn spacing as considered in Sect.8-8. (page 271, 3rd edition of "Antennas)

Best regards, Richard Harrision, KB5WZI

870. Wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 16:00:51 UTC
From: Carl Domanico <vze2686b@verizon.net>
Message-ID: <TqTfc.271$2v.220@nwrdny02.gnilink.net>
Source record: 96519

Want To Buy a Collins 30L-1 Linear Amplifer.. Round Emblem...Condition:
Mint, Excellent, will consider very good...Reasonably Priced

Carl Domanico
N2MFW
718-331-7427

871. Re: Maldol HVU-8 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 16:32:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <f82080hb10p537fp3u42jvt2ulqdft6gmk@4ax.com>
Source record: 96521

On Thu, 15 Apr 2004 08:58 +0100 (BST), tsmithers@cix.co.uk (Trevor
Smithers) wrote:
>Just been reading the Radcom review (Jan 2004) and QST (Sept 2003) on the Maldol HVU-8 antenna and
>wondered if anyone here is using one - looks quite good on the face of it. Any comments on overall performance would be appreciated
>especially as a restricted space antenna.

Hi Trevor,

It looks like it would be 2-5% efficient at 80M to 20-50% efficient at
the higher bands. Your full size dipole or monopole with a ground
radial system of 8-10 10M wires would start at 50% (or better).

Efficiency isn't the entire picture; how close to ground is another.
In other words, once your efficiency got you out beyond the radiator,
what is the ground loss look like? The closer you are, the worse.
Get it up high and things may work quite well. The difference between
full sized and this may be a couple of S-Units (better than the
difference being many S-Units) for the low band.

73's
Richard Clark, KB7QHC

872. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 17:08:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10804park703j37@corp.supernews.com>
Source record: 96522

That might not be a fair comparison, since the pattern might be quite different with and without the resistors. To determine what fraction of the applied power is dissipated in the resistors, simply click the Load Dat button.

Roy Lewallen, W7EL

Cecil Moore wrote:
> J. McLaughlin wrote:
>
>> After investigating a large set of traveling wave antennas (not
>> Beverage) I think that the smallest amount of power dissipated in the
>> terminating resistance was about 2 db.
>
>
> Just modeled the subject antenna as well as I can. Without the
> termination resistors, the antenna has a gain of +6 dBi on 3.8
> MHz. With the termination resistors, according to EZNEC, the
> gain drops to -10 dBi, a difference of 16 dB.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>

873. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 17:20:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10805ek15cqib5c@corp.supernews.com>
Source record: 96523

I've seen real-life cases with high-Q microstrip structures where gold plating actually caused a significant lowering of efficiency. As you point out, nickel is used as a barrier metal to prevent alloying of the gold with the underlying copper. If the gold isn't at least several skin depths thick, significant current flows in the nickel. Nickel is a particularly poor RF conductor, very much worse than copper, because the skin depth in nickel is decreased dramatically by its ferromagnetic permeability. So, if you're able to calculate skin depth, and know what you're doing, and are willing to use quite a bit of gold (particularly necessary at HF and below) you can achieve efficiency with gold plating that's pretty much indistinguishable from that of copper. If you don't know what you're doing, it is possible to substantially degrade the efficiency by gold plating. I'm sure somebody could be conned into buying one, though.

Roy Lewallen, W7EL

Gary V. Deutschmann, Sr. wrote:

> Hi Gang
>
> Since the radiation of an antenna is done primarily on the surface of
> the elements (or wire) would gold plating the elements increase the
> efficiency of the antenna in any way?
>
> Gold sounds expensive, but if thin enough, one ounce of gold could
> plate an entire football field. Brass corrods, nickel is usually used
> as the first plating before another metal like gold is plated over
> that. If the cost for gold over the cost of brass is only about 1
> buck per foot of element length, making cost not relavent to the
> question. Would a gold plated antenna work better than aluminum or
> nickel plated?
>
> TTUL
> Gary
>

874. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 17:46:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40801be8_2@127.0.0.1>
Source record: 96524

Roy Lewallen wrote:
> That might not be a fair comparison, since the pattern might be quite
> different with and without the resistors. To determine what fraction of
> the applied power is dissipated in the resistors, simply click the Load
> Dat button.

Well, the shape of the pattern looks the same. The Load Dat function
produces 3015 watts into the antenna (high feedpoint impedance) and
1399 watts dissipated in each resistor. That's 217 watts not dissipated
in the resistors out of 3015 watts into the antenna for an efficiency
of about 7.2%, in the neighborhood of a mobile antenna on 75m.
--
73, Cecil http://www.qsl.net/w5dxp

875. Re: Maldol HVU-8 antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 18:17:01 UTC
From: F8BOE <f8boe-8@bluemail.ch>
Message-ID: <40802328$0$20151$636a15ce@news.free.fr>
Source record: 96525

Hello,

It seems to be a good compromise for multiband from 15m to 70cm.
But keep in mind that there's no miracle antenna!

73 de F8BOE Olivier ...-.-

"Trevor Smithers" <tsmithers@cix.co.uk> a crit dans le message de
news:memo.20040415085851.2960M@Jodan.cix.co.uk...
> Just been reading the Radcom review (Jan 2004) and QST (Sept 2003) on the
Maldol HVU-8 antenna and
> wondered if anyone here is using one - looks quite good on the face of it.
Any comments on overall performance would be appreciated
> especially as a restricted space antenna.
>
> Trevor G0KTN
>

876. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 18:28:42 UTC
From: King Zulu <k4ykz@mchsi.com>
Message-ID: <uBVfc.4924$aM4.16691@attbi_s53>
Source record: 96526

"Cecil Moore" <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
news:407ff2d7_2@127.0.0.1...
> King Zulu wrote:
> > The FW dipole I used for years had a 1.2:1 SWR, fed with RG59 and no
balun.
>
> It still may have had a feedpoint impedance of ~100 ohms. RG59's
> Z0 is 75 ohms, close to what you would need to transform 100 ohms
> to 50 ohms. An odd number of 1/4WLs of RG59 will transform 100 ohms
> to 57 ohms, neglecting losses.
>
> > Never saw an indication that the feed line was radiating.
>
> We can mount a logical argument that since the feedpoint
> impedance looking in each direction is different, the
> currents have to be unbalanced resulting in feedline
> radiation.
>
> > The 2db gain was what the ARRL Antenna Book (1964 vintage, p. 142) was
> > calling out for a FW collinear array gain. Actually, the FW dipole fed
at
> > the current node would be like a 1-wavelength long longwire (a short
> > longwire?), and the Antenna Book shows a negligible 1/2 db gain (p. 170
on
> > "Long-Wire Antennas") over the dipole gain. The cloverleaf assertion was
> > based the Antenna Book radiation patterns shown on p. 39 (Fig 2-16) and
the
> > discussion of "How Patterns are Formed", as well as p. 59 (Fig 2-74b)
> > showing the FW pattern distortion caused by end feeding.
>
> EZNEC says that it is somewhat of a square pattern where the "corners"
> of the square are just barely starting to form a cloverleaf. The "nulls"
> off the ends are only 3 dB down. I suspect there was a lot of guessing
> about radiation patterns in 1964. Some say there still is a lot of
> guessing. :-)

Well, the FW dipole may not have had all the advantages I thought it did -
but it worked well enough that I stopped bothering with the 2-element wire
beam on 40m for the contests. It's a bit like fishing - if you believe in
your equipment you will usually do better than if you don't. HI

K4YKZ

877. Re: Antenna too long??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 18:38:12 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40802801$1_2@127.0.0.1>
Source record: 96527

King Zulu wrote:
> Well, the FW dipole may not have had all the advantages I thought it did -
> but it worked well enough that I stopped bothering with the 2-element wire
> beam on 40m for the contests. It's a bit like fishing - if you believe in
> your equipment you will usually do better than if you don't. HI

It's not a bad antenna and I didn't mean to knock it. I like
that 40m pattern where it has 280 degrees of beamwidth. It's
actually better than a cloverleaf beamwidth pattern.
--
73, Cecil http://www.qsl.net/w5dxp

878. Comparative Reference to Internet Resources for Antennas and Other Related Topics

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 19:35:02 UTC
From: pez/sv7bax/dag <studentant@hotmail.com>
Message-ID: <c5pcik$l6o$1@nic.grnet.gr>
Source record: 96528

```
Comparative Reference
to Internet Resources for
Antennas
and
Other Related Topics:

http://antennas.ee.duth.gr/ooo/openantennaslinks/openantennaslinks.htm

Sincerely,

pez/sv7bax/dag
```

879. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 20:59:04 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <1080idig63tuv6d@corp.supernews.com>
Source record: 96529

Hi Roy;
It's worse than that: Copper will diffuse throught the gold and pile up on the surface.
I showed that with an Auger microprobe at Motorola decades ago.
So to go to a gold surface, nickel is mandatory, then a thick gold coating;
Too expensive!
It's not like the switch from aluminum to copper, which is a 2x resistivity improvement.
You just can't beat plain old copper.
73
H.
NQ5H

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:10805ek15cqib5c@corp.supernews.com...
> I've seen real-life cases with high-Q microstrip structures where gold
> plating actually caused a significant lowering of efficiency. As you
> point out, nickel is used as a barrier metal to prevent alloying of the
> gold with the underlying copper. If the gold isn't at least several skin
> depths thick, significant current flows in the nickel. Nickel is a
> particularly poor RF conductor, very much worse than copper, because the
> skin depth in nickel is decreased dramatically by its ferromagnetic
> permeability. So, if you're able to calculate skin depth, and know what
> you're doing, and are willing to use quite a bit of gold (particularly
> necessary at HF and below) you can achieve efficiency with gold plating
> that's pretty much indistinguishable from that of copper. If you don't
> know what you're doing, it is possible to substantially degrade the
> efficiency by gold plating. I'm sure somebody could be conned into
> buying one, though.
>
> Roy Lewallen, W7EL
>
> Gary V. Deutschmann, Sr. wrote:
>
> > Hi Gang
> >
> > Since the radiation of an antenna is done primarily on the surface of
> > the elements (or wire) would gold plating the elements increase the
> > efficiency of the antenna in any way?
> >
> > Gold sounds expensive, but if thin enough, one ounce of gold could
> > plate an entire football field. Brass corrods, nickel is usually used
> > as the first plating before another metal like gold is plated over
> > that. If the cost for gold over the cost of brass is only about 1

> > buck per foot of element length, making cost not relavent to the
> > question. Would a gold plated antenna work better than aluminum or
> > nickel plated?
> >
> > TTUL
> > Gary
> >

880. Digital Sat dish

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 21:48:25 UTC
From: Mike <kc2jga@twcny.rr.com>
Message-ID: <JwYfc.59250$M3.16186@twister.nyroc.rr.com>
Source record: 96530

Any amatuer use for the oval digital satellite dish? I have one with
reciever, but I don't use it. I know, I could use it as a cereal bowl.
Anything else?
Mike

881. Re: What is a traveling-wave antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 21:56:26 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c5pkpk$4avt5$1@ID-225206.news.uni-berlin.de>
Source record: 96531

an online RF book -- checkout page 519

http://www.ece.rutgers.edu/~orfanidi/ewa/ch15.pdf

<<<<<<<<<@>>>>>>>>>>

"Cecil Moore" <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
news:407edb52_2@127.0.0.1...
> jopl wrote: ???
>
> In a standing wave antenna, like a dipole, the power wave hits
> the end of the antenna and voltage and current are reflected.
> The standing wave pattern on 1/2 of a dipole looks somewhat
> like the standing wave pattern for a lossy 1/4WL open stub.
> In the case of a traveling wave antenna, the power wave hits
> a resistor with close to the same value as the Z0 of the
> antenna and is dissipated in the resistor.
>
> So, a traveling-wave antenna is essentially one without
> reflections.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>

882. Re: Digital Sat dish

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 21:57:08 UTC
From: Bruce in Alaska <bruceg@btpost.net>
Message-ID: <bruceg-89BB9D.13570916042004@netnews.worldnet.att.net>
Source record: 96532

In article <JwYfc.59250$M3.16186@twister.nyroc.rr.com>,
"Mike" <kc2jga@twcny.rr.com> wrote:

> Any amatuer use for the oval digital satellite dish? I have one with
> reciever, but I don't use it. I know, I could use it as a cereal bowl.
> Anything else?
> Mike
>
>

Use it for a WiFi Link antenna.

Bruce in alaska
--
add a <2> before @

883. Re: Digital Sat dish

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 21:58:03 UTC
From: Dave <noone@nowhere.com>
Message-ID: <G5WdnfqYAMRxyx3d4p2dnA@crocker.com>
Source record: 96533

microwave ops use them.

"Mike" <kc2jga@twcny.rr.com> wrote in message
news:JwYfc.59250$M3.16186@twister.nyroc.rr.com...
> Any amatuer use for the oval digital satellite dish? I have one with
> reciever, but I don't use it. I know, I could use it as a cereal bowl.
> Anything else?
> Mike
>
>

884. Portable Satelite antenna for FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 22:22:22 UTC
From: S <fn30@optonline.net>
Message-ID: <y0Zfc.20079$rV4.3057094@news4.srv.hcvlny.cv.net>
Source record: 96534

I am planning on constructing a satellite antenna for feild day this year

Having worked UO-14, AO-27, ISS, etc, i know what it takes to do it but never have really done much portable work lately, not since UO-14 went down. i know AO-27 and SO-50 are alot weeker. ISS should be easy if they are active.

The antenna i am planning on constructing is a quad antenna. 4 elements on 70cm (435Mhz) and 3 elements (145Mhz).

I worked out the math for them, and i know everything should fit on a 40 inch boom with some space to spare.

Any tips on its construction. I have not built a quad before, but have constucted almost every other antenna type related for LEO satellites

i have an abundant supply of bamboo or should i use PVC instead. i plan to use 16GA copper wire for its construction and N type connectors

the finished antenna most likely will be setup on a camcorder tripod for feild day

the one question i really have, is should i bother with any type of matching circuit. I have calculated the SWR to be pretty good at specified freqs, but should i try for anything better than a 1.7:1 ratio.?

thanks in advance for any tips you give,

Steve KC2GOG

885. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 22:24:28 UTC
From: S <fn30@optonline.net>
Message-ID: <w2Zfc.20093$rV4.3064519@news4.srv.hcvlny.cv.net>
Source record: 96535

silver is a better conductor than gold, but will tarnish very easily, might now be a good idea for what you are intending

just my two cents

"H. Adam Stevens, NQ5H" <NQ5H@ARRL.net> wrote in message news:1080idig63tuv6d@corp.supernews.com...
> Hi Roy;
> It's worse than that: Copper will diffuse throught the gold and pile up on
> the surface.
> I showed that with an Auger microprobe at Motorola decades ago.
> So to go to a gold surface, nickel is mandatory, then a thick gold coating;
> Too expensive!
> It's not like the switch from aluminum to copper, which is a 2x resistivity
> improvement.
> You just can't beat plain old copper.
> 73
> H.
> NQ5H
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:10805ek15cqib5c@corp.supernews.com...
> > I've seen real-life cases with high-Q microstrip structures where gold
> > plating actually caused a significant lowering of efficiency. As you
> > point out, nickel is used as a barrier metal to prevent alloying of the
> > gold with the underlying copper. If the gold isn't at least several skin
> > depths thick, significant current flows in the nickel. Nickel is a
> > particularly poor RF conductor, very much worse than copper, because the
> > skin depth in nickel is decreased dramatically by its ferromagnetic
> > permeability. So, if you're able to calculate skin depth, and know what
> > you're doing, and are willing to use quite a bit of gold (particularly
> > necessary at HF and below) you can achieve efficiency with gold plating
> > that's pretty much indistinguishable from that of copper. If you don't
> > know what you're doing, it is possible to substantially degrade the
> > efficiency by gold plating. I'm sure somebody could be conned into
> > buying one, though.
> >
> > Roy Lewallen, W7EL
> >
> > Gary V. Deutschmann, Sr. wrote:
> >
> > > Hi Gang
> > >

> > > Since the radiation of an antenna is done primarily on the surface of
> > > the elements (or wire) would gold plating the elements increase the
> > > efficiency of the antenna in any way?
> > >
> > > Gold sounds expensive, but if thin enough, one ounce of gold could
> > > plate an entire football field. Brass corrods, nickel is usually used
> > > as the first plating before another metal like gold is plated over
> > > that. If the cost for gold over the cost of brass is only about 1
> > > buck per foot of element length, making cost not relavent to the
> > > question. Would a gold plated antenna work better than aluminum or
> > > nickel plated?
> > >
> > > TTUL
> > > Gary
> > >
>
>

886. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 22:31:22 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c5pmvi$c9h$1@newshost.mot.com>
Source record: 96536

Nickel can also be the source of IM.

Anyway, isn't Gold's conductivity really low?

--
Steve N, K,9;d, c. i My email has no u's.

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:10805ek15cqib5c@corp.supernews.com...
> I've seen real-life cases with high-Q microstrip structures where gold
> plating actually caused a significant lowering of efficiency. As you
> point out, nickel is used as a barrier metal to prevent alloying of the
> gold with the underlying copper. If the gold isn't at least several skin
> depths thick, significant current flows in the nickel. Nickel is a
> particularly poor RF conductor, very much worse than copper, because the
> skin depth in nickel is decreased dramatically by its ferromagnetic
> permeability. So, if you're able to calculate skin depth, and know what
> you're doing, and are willing to use quite a bit of gold (particularly
> necessary at HF and below) you can achieve efficiency with gold plating
> that's pretty much indistinguishable from that of copper. If you don't
> know what you're doing, it is possible to substantially degrade the
> efficiency by gold plating. I'm sure somebody could be conned into
> buying one, though.
>
> Roy Lewallen, W7EL
>
> Gary V. Deutschmann, Sr. wrote:
>
> > Hi Gang
> >
> > Since the radiation of an antenna is done primarily on the surface of
> > the elements (or wire) would gold plating the elements increase the
> > efficiency of the antenna in any way?
> >
> > Gold sounds expensive, but if thin enough, one ounce of gold could
> > plate an entire football field. Brass corrods, nickel is usually used
> > as the first plating before another metal like gold is plated over
> > that. If the cost for gold over the cost of brass is only about 1
> > buck per foot of element length, making cost not relavent to the
> > question. Would a gold plated antenna work better than aluminum or
> > nickel plated?
> >
> > TTUL
> > Gary
> >

887. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 22:48:43 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <1080omiickv8544@corp.supernews.com>
Source record: 96537

Cecil Moore wrote:
> J. McLaughlin wrote:
>
>> After investigating a large set of traveling wave antennas (not
>> Beverage) I think that the smallest amount of power dissipated in the
>> terminating resistance was about 2 db.
>
>
> Just modeled the subject antenna as well as I can. Without the
> termination resistors, the antenna has a gain of +6 dBi on 3.8
> MHz. With the termination resistors, according to EZNEC, the
> gain drops to -10 dBi, a difference of 16 dB.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
The antenna described in this thread has been utilized by the military for simple, easy to erect and fairly inexpensive field use.

I don't think that you will get any argument from anyone that a resistance terminated antenna is not as efficient as a tuned dipole. The benefit one receives from using a resistance terminated antenna is the lack of having to use an antenna tuner (another misnomer) when operating off resonance. I, personally, use a B&W folded resistance terminated antenna. This antenna is far from efficient but I can make great changes in operating frequency with out having to worry about matching the final circuit to the antenna.

I would like to have a tuned dipole for each band/subband but have neither the room nor the desire to do so.
Now if you go to the receiver and look at the signal strength meter, s-meter, you will see that 16db is only about 1 to 1 1/2 s units. In that a receiver can differentiate a signal down to a very small value the loss is of only academic interest, except to the purists.

Dave WD9BDZ

888. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 22:49:01 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <1080on8egph9m72@corp.supernews.com>
Source record: 96538

Dear Cecil: Your point is well taken.
I was talking about multiple wavelength structures. I should have
noted additional restrictions.

73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:407f52a2$1_1@corp.newsgroups.com...
> J. McLaughlin wrote:
> > After investigating a large set of traveling wave antennas (not
> > Beverage) I think that the smallest amount of power dissipated in
the
> > terminating resistance was about 2 db. Mind, these were antennas
with
> > useful lengths and angles. It is likely that a rhombic with very
long
> > leg lengths would dissipate even less in its termination resistance.
>
> Well, remember the posting that kicked off this discussion was about
> the following very short traveling-wave antenna:
>
> "It is a military inverted-V, 110 ft. long total, with each end
> terminated in a 150 ohm resistor driven into the ground, center fed
> through a 9:1 balun."
>
> A 110 ft. center-fed inverted-V is certainly going to have extensive
> losses in the resistors on most HF bands. After all, it is less than
> 1/2WL long on 75m and only 3 wavelengths long on 10m.
> --
> 73, Cecil, W5DXP
>
>

889. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 22:54:23 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <1080p19s14rp1f2@corp.supernews.com>
Source record: 96539

Oh my!
If you had a real E-mail address, I would have replied off-list. I am
not sure what is the first to go as we age, but you have forgotten that
we were both grad students of JDK. We have also both read his book!
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"JLB" <IHateSpam@nospam.net> wrote in message
news:9pIfc.8443$pk5.8058@fe03.usenetserver.com...
>
> "J. McLaughlin" <JCM@Power-Net.Net> wrote in message
> news:107ugb52pg7trf1@corp.supernews.com...
> > Nice to hear from N8EE, another of Kraus' boys. 73 Mac
N8TT
>
>
> Please explain. Do you mean that I have read Kraus' book, or that I
was one
> of his students? (Which would be correct on both counts.)
>
> Nice to hear from another N by 2 callsign. Not very many of us
around, it
> seems.
>
> Jim
> N8EE
>
>
>

890. Re: Portable Satelite antenna for FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 22:55:47 UTC
From: jgboyles@aol.com
Message-ID: <20040416185547.12622.00000008@mb-m25.aol.com>
Source record: 96540

>I am planning on constructing a satellite antenna for feild day this year.
Any tips on its construction. I have not built a quad before,

If you are just going to use the quad on Field Day and are not planning on a long term installation, a cheap way to go is use PVC for the boom, and 1/4" or 3/8" wood dowel for the spreaders. May cost $5 at Home Depot. If you want something that will take weather better, use UV resistant PVC and 1/4" fiberglass rods for the spreaders.
As for the 1:7 swr, I would not worry. But, if you are a purist, there are several ways to reduce that if you want to go to the trouble.

73 Gary N4AST

891. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-16 23:46:49 UTC
From: jgboyles@aol.com
Message-ID: <20040416194649.12622.00000012@mb-m25.aol.com>
Source record: 96541

>The antenna described in this thread has been utilized by the military
>for simple, easy to erect and fairly inexpensive field use.

Yes that is very true. However, what the military needs, and what us hams are trying to do is not that similar. What I would like as a ham is 100% of my rf radiated, especially when I am mobile. The military wants to communicate, and they don't care how the efficiency of the antenna system factors in to all this.
In an old textbook of mine, the military wanted an automatic antenna tuner that would match 20KW to a 35' whip 2-30 MHZ. At 2MHZ the whip was very inefficient, and probably glowed in the dark. But they could communicate by the brute force method. I guess it depends on whether your goal is just to communicate, or communicate the most efficient way.
73 Gary N4AST

892. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 00:22:09 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <RM_fc.7370$aM4.18958@attbi_s53>
Source record: 96542

Steve Nosko wrote:

> Nickel can also be the source of IM.
>
> Anyway, isn't Gold's conductivity really low?
>

Relative Conductivities:

Copper 1.00
Aluminum 0.61
Gold 0.706
Nickel 0.198

Now what is IM??

Deacon Dave, W1MCE

893. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 00:34:29 UTC
From: "Dan Richardson"
Message-ID: <4ou080pfpcfkh4lrk883qtu8gf1f030en8@4ax.com>
Source record: 96544

On Fri, 16 Apr 2004 17:48:43 -0500, "David G. Nagel" <nagel@core.com>
wrote:

>Now if you go to the receiver and look at the signal strength meter,
>s-meter, you will see that 16db is only about 1 to 1 1/2 s units. In
>that a receiver can differentiate a signal down to a very small value
>the loss is of only academic interest, except to the purists.

Have you ever check the calibration of your S-meter? I have never
found one that was 6dB per S-unit. Most seem to be around 3ï¿½-dB. Using
that yard stick 16 dB is 4ï¿½ S-units. Many would consider that
subatantial.

Danny
K6MHE

894. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 00:40:53 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <q2%fc.17165$pk5.17078@fe03.usenetserver.com>
Source record: 96543

"S" <fn30@optonline.net> wrote in message
news:w2Zfc.20093$rV4.3064519@news4.srv.hcvlny.cv.net...
> silver is a better conductor than gold, but will tarnish very easily,
might
> now be a good idea for what you are intending
>
I thought that silver oxide was a decent conductor, which is why it is
sometimes used as a plateing material.

jim
N8EE

895. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 01:30:23 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40808a63_4@news1.prserv.net>
Source record: 96545

Gang:

Way back in the 60s, I think, there was a very thorough research article in JIEE (Aust.) about RF skin conductivity of various practical metals. Oxygen Free High Conductivity (OFHC) Copper won hands down. Until you heat it, bend it, or look at it cross-eyed, that is. Silver plate is next best, but only if it is hard Silver, not cosmetic Silver which is what you get at your local plating shop. Hard Silver plate is difficult to come by, and uses chemicals which I'm guessing have since been banned by EPA. In my day (1960), hard Silver plate with a Rhodium flash was the most practical high RF conductivity process available. Nowadays, who knows?

--
Crazy George
Remove N O and S P A M imbedded in return address

896. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 01:37:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o911809o8dlj122jrno683r5v1tkfut38p@4ax.com>
Source record: 96546

On Fri, 16 Apr 2004 20:40:53 -0400, "JLB" <IHateSpam@nospam.net>
wrote:

>
>"S" <fn30@optonline.net> wrote in message
>news:w2Zfc.20093$rV4.3064519@news4.srv.hcvlny.cv.net...
>> silver is a better conductor than gold, but will tarnish very easily,
>might
>> now be a good idea for what you are intending
>>
>I thought that silver oxide was a decent conductor, which is why it is
>sometimes used as a plateing material.

Hi All,

It hardly matters unless you are speaking of switch contacts.
Insulated wire's insulation is absolutely unconductive, and yet in the
context of antennas it doesn't impact the wire's capacity to carry
current.

Oxidation products only become a problem at interfaces where they
either resist current between the joined conductors, or create a
semiconducting barrier.

The technician is taught to clean surfaces of tarnish to bring bright
metal into contact. Then crimp them (or twist the wire - same thing)
for a gas tight seal. Then solder them to weather proof the seal
(solder is never meant to be a mechanical join or the conductive
path). Common practice allows for solder to provide more
functionality than what I describe - this does not elevate the method.
Barring the final solder, switch contact faces must meet the same
conditions of bright metal and gas tight seals. This is often
achieved by pressure (some mistake the so-called "wiping" action as
meaning to scrub the oxide away - a useful metaphor but only that;
otherwise switches would self demolish in very few operations) and a
sustaining current (wet vs. dry contacts).

73's
Richard Clark, KB7QHC

897. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 03:11:12 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108182hs3g0p1ef@corp.supernews.com>
Source record: 96547

David G. Nagel wrote:

>
> I would like to have a tuned dipole for each band/subband but have
> neither the room nor the desire to do so.
> Now if you go to the receiver and look at the signal strength meter,
> s-meter, you will see that 16db is only about 1 to 1 1/2 s units. In
> that a receiver can differentiate a signal down to a very small value
> the loss is of only academic interest, except to the purists.
>
> Dave WD9BDZ

A hundred bucks says you haven't checked your rig's S-meter response to two signals accurately measured as 16 dB different.

16 dB is the approximate gain of a 23 element Yagi having a 6.5 wavelength long boom (that's about 450 feet at 14 MHz), compared to a dipole. Only "Kurt Sterba" and a few others believe this amount of gain is insignificant.

Roy Lewallen, W7EL

898. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 03:22:30 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4080a341_1@corp.newsgroups.com>
Source record: 96548

David G. Nagel wrote:
> I would like to have a tuned dipole for each band/subband but have
> neither the room nor the desire to do so.
> Now if you go to the receiver and look at the signal strength meter,
> s-meter, you will see that 16db is only about 1 to 1 1/2 s units. In
> that a receiver can differentiate a signal down to a very small value
> the loss is of only academic interest, except to the purists.

Well, the average ham receiver's S-units are more like 4-5 dB steps.
Even with the "standard" 6 dB per S-unit, 16 dB is about 2.7
S-units. I guess there are a lot of purist hams, me included.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

899. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 03:54:00 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404161954.4f792f7b@posting.google.com>
Source record: 96549

Hmmm...My book says aluminum's resistivity is about 2.6 microohm-cm,
and copper's is 1.7, only a 1.5:1 ratio--though it may not be quite
that good for commonly used aluminum alloys. OTOH, copper also
suffers from being alloyed. But in any event, it's good to keep in
mind that the RF resistance ratio for non-magnetic materials goes as
the square root of the bulk resistivity ratio, because higher
resistivity materials have larger skin depth. So a 2:1 ratio at DC
ends up being only 1.41:1 at RF, and 1.5:1 at DC is only a bit over
1.2:1 at RF.

Since both copper and aluminum have good conductivity, it's just not
worth sweating in practically all cases, unless the antenna is very
short (and thus has very low feedpoint radiation resistance).

Actually, what I thought Gary might be getting at is the protection
from corrosion that gold might offer, as compared with bare copper.
I'd say that it IS worth worrying about protecting your antenna from
corrosion. Maybe you just have to think about it long enough to
understand that you are lucky to live in a place where corrosion isn't
a problem, or maybe you live next to the ocean where salt spray will
get the best of almost anything metallic. But like Roy says, gold
over nickel is probably a bad idea. Unplated stainless steel antenna
wire is probably a bad idea. Painted copper pipe, or anodized
aluminum tubing, will probably work well for a long time.

Cheers,
Tom

"H. Adam Stevens, NQ5H" <NQ5H@ARRL.net> wrote in message
news:<1080idig63tuv6d@corp.supernews.com>...
> Hi Roy;
> It's worse than that: Copper will diffuse throught the gold and pile up on
> the surface.
> I showed that with an Auger microprobe at Motorola decades ago.
> So to go to a gold surface, nickel is mandatory, then a thick gold coating;
> Too expensive!
> It's not like the switch from aluminum to copper, which is a 2x resistivity
> improvement.
> You just can't beat plain old copper.
> 73
> H.
> NQ5H

900. Help for R7 verticle

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 04:36:08 UTC
From: lenjs@adelphia.net
Message-ID: <otc1809k7495mmkns4uk49t3tp5b547cq7@4ax.com>
Source record: 96550

I boutght a used R7 about a year ago. Finally tried to get it up. It matches on 10M but no where else. Any suggestions as to what might be wrong?

901. Re: Help for R7 verticle

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 04:46:28 UTC
From: "G.Beat" <now9spamgb@spam.comcast.net>
Message-ID: <EE2gc.9271$0b4.18118@attbi_s51>
Source record: 96551

<lenjs@adelphia.net> wrote in message
news:otc1809k7495mmkns4uk49t3tp5b547cq7@4ax.com...
>I boutght a used R7 about a year ago. Finally tried to get it up. It
> matches on 10M but no where else. Any suggestions as to what might be
> wrong?

OK

Here is a good place to start (EI7BA web site):
http://www.qsl.net/ei7ba/r7_vertical.htm

I assume that you have the R7 manual?
http://www.cushcraft.com/support/pdf/r7.pdf

Cushcraft R7 at Mount Everest base camp
http://www.cushcraft.com/amateur/index101.html

w9gb

902. Re: Mercury as an antenna... test trials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 07:20:17 UTC
From: Helmut Wabnig <hXXXwabnig@aXXXon.at>
Message-ID: <6cm18058a56fqb874ohhogni1qcvfo4paj@4ax.com>
Source record: 96552

On Thu, 15 Apr 2004 20:42:02 -0400, Bob <nowhere@nospam.org> wrote:

>Has anyone actually tried it yet?
>
>Considering only a drop in a neon sign or vapor lamp makes the
>difference between not working at radiating a tremendous amount of
>energy, it's worth a few careful experiments.

haha, good joke.

Advertizing Yagi "Neon" tube arrays as STEALTH antennas.
Your are beating my own inventions of crazy antenna designs.

Won't work too well actually, at least not for reception, because the
irregular flickering of the plasma will induce a very large amount
of noise.

w.
--
On the Internet nobody knows that I am a dog.

903. Re: Help for R7 verticle

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 09:08:43 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <4080F41B.21E11893@cwis.net>
Source record: 96553

Assuming that you've gotten the various lengths at least
'close' to what they should be, the problem will be in the
'black box'. It isn't very difficult to 'pop' one of the
capacitors, or even one of the torroid coils. Take a look
at the sites given in the other post...
'Doc

904. Re: Help for R7 verticle

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 09:49:28 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <l47gc.86091$2oI1.32773@twister01.bloor.is.net.cable.rogers.com>
Source record: 96554

had same problem here also. I found that the 15 meter trap was the problem. take a continuity test from bottom of the 15 meter trap to the top and you will find that is dead short. of course take the trap apart from antenna first, as you will have to take all apart anyway, meaning the heat shrink and all, once that is done you will find 2 screws holding the wire from the trap to the aluminium pipe of the antenna. take a file or sandpaper and clean around the screw connections as that's where corrosion will form. I use Vaseline in putting it back together. check your work as you go along. I found some shrink tubing at home depot, it takes 1 inch diameter and 4 inches long. when all the work was done, trap looks as good as new, and now works.ps..a good set of guys made from heavy fishing line or whipper nipper nylon line, which you can buy in large roll really does keep the thing straight.if you want to see my installation, I can send pics.will never put up a vertical without some sort of support. let me know how you make out.

de Jean-Guy/ve9buf
<lenjs@adelphia.net> a crit dans le message de
news:otc1809k7495mmkns4uk49t3tp5b547cq7@4ax.com...
> I boutght a used R7 about a year ago. Finally tried to get it up. It
> matches on 10M but no where else. Any suggestions as to what might be
> wrong?

905. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 09:57:03 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <108200boghhme9b@corp.supernews.com>
Source record: 96555

One place where I can clearly see the difference between copper and aluminum
is comparing my (copper) Nott screwdriver with my (aluminum) Tarheel
screwdriver or my (aluminum) Hi-Q mobile antenna on 20 meters.
Mounted on my Durango, at resonance the Nott's impedance is 9 ohms, while
the Tarheel is 20 ohms and the (smaller tube) Hi-Q is 30 ohms; Measured with
the same whip in all cases.
This is a case of a short antenna.
The difference is significant and easily measured.
73
H.
NQ5H

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0404161954.4f792f7b@posting.google.com...
> Hmmm...My book says aluminum's resistivity is about 2.6 microohm-cm,
> and copper's is 1.7, only a 1.5:1 ratio--though it may not be quite
> that good for commonly used aluminum alloys. OTOH, copper also
> suffers from being alloyed. But in any event, it's good to keep in
> mind that the RF resistance ratio for non-magnetic materials goes as
> the square root of the bulk resistivity ratio, because higher
> resistivity materials have larger skin depth. So a 2:1 ratio at DC
> ends up being only 1.41:1 at RF, and 1.5:1 at DC is only a bit over
> 1.2:1 at RF.
>
> Since both copper and aluminum have good conductivity, it's just not
> worth sweating in practically all cases, unless the antenna is very
> short (and thus has very low feedpoint radiation resistance).
>
> Actually, what I thought Gary might be getting at is the protection
> from corrosion that gold might offer, as compared with bare copper.
> I'd say that it IS worth worrying about protecting your antenna from
> corrosion. Maybe you just have to think about it long enough to
> understand that you are lucky to live in a place where corrosion isn't
> a problem, or maybe you live next to the ocean where salt spray will
> get the best of almost anything metallic. But like Roy says, gold
> over nickel is probably a bad idea. Unplated stainless steel antenna
> wire is probably a bad idea. Painted copper pipe, or anodized
> aluminum tubing, will probably work well for a long time.
>
> Cheers,
> Tom
>
>
> "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net> wrote in message

news:<1080idig63tuv6d@corp.supernews.com>...
> > Hi Roy;
> > It's worse than that: Copper will diffuse throught the gold and pile up
on
> > the surface.
> > I showed that with an Auger microprobe at Motorola decades ago.
> > So to go to a gold surface, nickel is mandatory, then a thick gold
coating;
> > Too expensive!
> > It's not like the switch from aluminum to copper, which is a 2x
resistivity
> > improvement.
> > You just can't beat plain old copper.
> > 73
> > H.
> > NQ5H

906. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 10:51:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108232al1u17g5f@corp.supernews.com>
Source record: 96556

That's much, much more difference than can be explained by the different conductivities of the metals. Either some very resistive alloys are involved, or there are differences between the antennas other than the type of metal.

Roy Lewallen, W7EL

H. Adam Stevens, NQ5H wrote:
> One place where I can clearly see the difference between copper and aluminum
> is comparing my (copper) Nott screwdriver with my (aluminum) Tarheel
> screwdriver or my (aluminum) Hi-Q mobile antenna on 20 meters.
> Mounted on my Durango, at resonance the Nott's impedance is 9 ohms, while
> the Tarheel is 20 ohms and the (smaller tube) Hi-Q is 30 ohms; Measured with
> the same whip in all cases.
> This is a case of a short antenna.
> The difference is significant and easily measured.
> 73
> H.
> NQ5H

907. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 11:37:31 UTC
From: "H. Adam Stevens" <hstevens@totalaccessNOSPAM.net>
Message-ID: <10825slfuvjsl87@corp.supernews.com>
Source record: 96557

Roy
The measurements are reproducible. That's for sure.
And you can bet the aluminum in the Tarheel and Hi-Q are alloys.
Using the Nott (just copper, no plating) I get a 9 ohm load at resonance on 20, 10 ohms on 40 and 80.
With a simple toroidal autoformer the mobile rig sees 50 ohms resistive at resonance on all three bands.
73, NQ5H
H.

"Roy Lewallen" <w7el@eznec.com> wrote in message news:108232al1u17g5f@corp.supernews.com...
> That's much, much more difference than can be explained by the different
> conductivities of the metals. Either some very resistive alloys are
> involved, or there are differences between the antennas other than the
> type of metal.
>
> Roy Lewallen, W7EL
>
> H. Adam Stevens, NQ5H wrote:
> > One place where I can clearly see the difference between copper and aluminum
> > is comparing my (copper) Nott screwdriver with my (aluminum) Tarheel
> > screwdriver or my (aluminum) Hi-Q mobile antenna on 20 meters.
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> > the Tarheel is 20 ohms and the (smaller tube) Hi-Q is 30 ohms; Measured with
> > the same whip in all cases.
> > This is a case of a short antenna.
> > The difference is significant and easily measured.
> > 73
> > H.
> > NQ5H

908. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 11:58:39 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <108274abamjk4c@corp.supernews.com>
Source record: 96558

Roy
I looked up the numbers.
The Nott is 2" diameter bare copper 3' long.
The Tarheel is 2" diameter painted aluminum 4' long.
The Hi-Q is 1" diameter powder-coated aluminum 3' long.
I used the same whip for all measurements.
If we take the conductivity of copper to be 100, aluminum is then 60 and aluminum alloys are as low as 30.
That's a factor of two between the Nott and Tarheel and the reduced surface area of the Hi-Q explains the additional resistance there. Considering the difference in surface area and resistivity among the antennas, the measured impedances seem quite reasonable to me.
73
H.
NQ5H

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108232al1u17g5f@corp.supernews.com...
> That's much, much more difference than can be explained by the different
> conductivities of the metals. Either some very resistive alloys are
> involved, or there are differences between the antennas other than the
> type of metal.
>
> Roy Lewallen, W7EL
>
> H. Adam Stevens, NQ5H wrote:
> > One place where I can clearly see the difference between copper and
aluminum
> > is comparing my (copper) Nott screwdriver with my (aluminum) Tarheel
> > screwdriver or my (aluminum) Hi-Q mobile antenna on 20 meters.
> > Mounted on my Durango, at resonance the Nott's impedance is 9 ohms,
while
> > the Tarheel is 20 ohms and the (smaller tube) Hi-Q is 30 ohms; Measured
with
> > the same whip in all cases.
> > This is a case of a short antenna.
> > The difference is significant and easily measured.
> > 73
> > H.
> > NQ5H

909. RE; r-7 antenna feedback...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 12:32:14 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <it9gc.167301$SQE.80599@news01.bloor.is.net.cable.rogers.com>
Source record: 96559

I had answered a post earlier this morning about r-7 not resonating
anywhere's but 10 meter.
black box is not at fault, as it works on 10 meter, so antenna is good up to
10 and then high swr on all other bands.
I did say in that post that it was the 15 meter trap,,, sorry but meant 12
meter trap, just a typo, doing this left handed only as I just got out of
surgery to right shoulder, does hamper my typing some, hi hi
also check all other traps to make sure that it is the only one to not work.
funny how a little bit of corrosion will cause a lot of problems.
it was fun fixing after finding problem and has gone thru a tough winter
with strong winds,, all still works good and looks great with guys on it.

thank for reading
de Jean-Guy/ve9buf

910. Re: Help for R7 verticle

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 13:07:48 UTC
From: Topaz305RK <2smoore@nemontel.net>
Message-ID: <soydnbrAXYWXsRzdRVn-gw@vnet-inc.com>
Source record: 96560

Good advice. Only thing I have done different is when putting back together instead of Vaseline I use PermaTex Anti-Seize. It is a good conductor, makes things easy to get apart if you have to do it again and does not deteriorate over time.

Just my two cents worth.

911. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 13:51:05 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <6JmdnWPHb-bcqxzdRVn-uQ@comcast.com>
Source record: 96561

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0404161954.4f792f7b@posting.google.com...
> Hmmm...My book says aluminum's resistivity is about 2.6 microohm-cm,
> and copper's is 1.7, only a 1.5:1 ratio--though it may not be quite
> that good for commonly used aluminum alloys. OTOH, copper also
> suffers from being alloyed. But in any event, it's good to keep in
> mind that the RF resistance ratio for non-magnetic materials goes as
> the square root of the bulk resistivity ratio, because higher
> resistivity materials have larger skin depth. So a 2:1 ratio at DC
> ends up being only 1.41:1 at RF, and 1.5:1 at DC is only a bit over
> 1.2:1 at RF.
>
> Since both copper and aluminum have good conductivity, it's just not
> worth sweating in practically all cases, unless the antenna is very
> short (and thus has very low feedpoint radiation resistance).
>
> Actually, what I thought Gary might be getting at is the protection
> from corrosion that gold might offer, as compared with bare copper.
> I'd say that it IS worth worrying about protecting your antenna from
> corrosion. Maybe you just have to think about it long enough to
> understand that you are lucky to live in a place where corrosion isn't
> a problem, or maybe you live next to the ocean where salt spray will
> get the best of almost anything metallic. But like Roy says, gold
> over nickel is probably a bad idea. Unplated stainless steel antenna
> wire is probably a bad idea. Painted copper pipe, or anodized
> aluminum tubing, will probably work well for a long time.
>
> Cheers,
> Tom

On the other hand, aluminum is lighter. Might be worthwhile to compare the
resistance of an Al and Cu conductors (solid and tube) of the same length
and the same weight. I am pretty sure AL wins at 60 Hz.

Tam/WB2TT
>
>
> "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net> wrote in message
news:<1080idig63tuv6d@corp.supernews.com>...
> > Hi Roy;
> > It's worse than that: Copper will diffuse throught the gold and pile up
on
> > the surface.
> > I showed that with an Auger microprobe at Motorola decades ago.
> > So to go to a gold surface, nickel is mandatory, then a thick gold

coating;
> > Too expensive!
> > It's not like the switch from aluminum to copper, which is a 2x
resistivity
> > improvement.
> > You just can't beat plain old copper.
> > 73
> > H.
> > NQ5H

912. Re: Help for R7 verticle

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 14:03:44 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <4Pagc.89499$2ol1.3706@twister01.bloor.is.net.cable.rogers.com>
Source record: 96562

yes I agree, but at the time did not have any on hand, so used the next best thing, and readily available in any household, hi
thanks for reading
de Jean-Guy/ve9buf

"Topaz305RK" <2smoore@nemontel.net> a crit dans le message de news:soydnbrAXYWXsRzdRVn-gw@vnet-inc.com...
> Good advice. Only thing I have done different is when putting back together
> instead of Vaseline I use PermaTex Anti-Seize. It is a good conductor, makes
> things easy to get apart if you have to do it again and does not deteriorate
> over time.
>
> Just my two cents worth.
>
>

913. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 14:04:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408139c1$1_4@corp.newsgroups.com>
Source record: 96563

H. Adam Stevens wrote:
> With a simple toroidal autoformer the mobile rig sees 50 ohms resistive at
> resonance on all three bands.

Got any idea what the efficiency of your autoformer is?
I'm assuming a single coil for a primary, tapped down for
the load. Would a 4:1 transmission line transformer be more
efficient over all the bands?
--
73, Cecil, W5DXP

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

914. Re: Mercury as an antenna... test trials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 14:05:42 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <6Qagc.38426$vF3.2255495@news20.bellglobal.com>
Source record: 96564

I was not suggesting using an entire neon sign or vapor lamp as an antenna. I was pointing out 'the presence of a tiny drop of mercury' is required for these devices to work. A catalyst perhaps?

Therefore, let's say our antenna was a piece of wire or metal tubing was inside another non-metallic tube, and a small amount of mercury was also in the tube. Would the mercury have a desirable effect? Remember, we're not talking about tremendous amounts of power here. Your typical 4' fluorescent tube is a 32 to 40 watt device, and there are much lower output tubes as well. The primary excitation inside the tube is due to high voltage, not high current.

So, it may not be too far fetched to build a few designs and see what performance is observed.

915. Re: Mercury as an antenna... test trials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 15:21:14 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c5ri1a$d83$1@mail.specsol.com>
Source record: 96565

Bob <nowhere@nospam.org> wrote:
> I was not suggesting using an entire neon sign or vapor lamp as an
> antenna. I was pointing out 'the presence of a tiny drop of mercury' is
> required for these devices to work. A catalyst perhaps?

> Therefore, let's say our antenna was a piece of wire or metal tubing was
> inside another non-metallic tube, and a small amount of mercury was also
> in the tube. Would the mercury have a desirable effect? Remember, we're
> not talking about tremendous amounts of power here. Your typical 4'
> fluorescent tube is a 32 to 40 watt device, and there are much lower
> output tubes as well. The primary excitation inside the tube is due to
> high voltage, not high current.

> So, it may not be too far fetched to build a few designs and see what
> performance is observed.

Both neon and fluorescent lights work in basically the same way; something
is ionized with high voltage and low pressure and glows.

Neon lights produce light directly from the gas. The color is determined by
the gas. Common gases are neon, argon and krypton.

Fluorescent lights have mercury vapor in them which glows in the
ultraviolet. The inside of the tube is coated with a phosphor which
glows in the visible region when excited by the UV.

Black lights are fluorescent lights without the phosphor.

In either case, the voltage is high and the current is low, meaning the
resistance is high; hardly a good canidate for an antenna element.

Not to mention the small problem that your antenna would contain a
spark gap...

--
Jim Pennino

Remove -spam-sux to reply.

916. Re: Mercury as an antenna... test trials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 15:52:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gbk2801vpakud6rr855gs1pfvicv1sqs5h@4ax.com>
Source record: 96566

On Sat, 17 Apr 2004 15:21:14 +0000 (UTC), jimp@specsol-spam-sux.com
wrote:

>Not to mention the small problem that your antenna would contain a
>spark gap...

Hi Jim,

100 years ago they all did. And of course, the bands weren't as
crowded then (and VHF started around 2 or 3 MC).

Who would have thought....

73's
Richard Clark, KB7QHC

917. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 16:01:20 UTC
From: "H. Adam Stevens" <hstevens@totalaccessNOSPAM.net>
Message-ID: <1082lbeg17htnb4@corp.supernews.com>
Source record: 96567

It's measurably better than a tuner in terms of near-field strength;
14 turns of #12 insulated copper wire on a ferrite toroid ripped from an R7.
How much coax is needed for that transmission line transformer?
Mobiles are so inefficient, I'm always looking for that last 0.1 db.
73
H.
NQ5H

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:408139c1$1_4@corp.newsgroups.com...
> H. Adam Stevens wrote:
> > With a simple toroidal autoformer the mobile rig sees 50 ohms resistive
at
> > resonance on all three bands.
>
> Got any idea what the efficiency of your autoformer is?
> I'm assuming a single coil for a primary, tapped down for
> the load. Would a 4:1 transmission line transformer be more
> efficient over all the bands?
> --
> 73, Cecil, W5DXP
>
>
>
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> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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918. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 16:15:08 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4081580C.A284B0D8@sonic.net>
Source record: 96568

I had K6CCG in 1953. I was 12.

As a old bongo drummer I prefer "K" over "W" for cw rhythm....

"dah-di-dah" hits strong. "di-dah-dah" is wimpy......hi

-bill

now I am back, after a 50 yr. absence....

Cecil Moore wrote:

> Dave Shrader wrote:
> > Cecil, I know we are close in age and close in our university careers.
> > When were you licensed? My W1MCE is first re-issue in the mid 1950s and
> > predates the 'K' series of calls by a year or more.
>
> My WN5DXP was a first re-issue in 1951. I was 13 at the time with
> a Hallicrafters S53A and a Globe Scout 65B. So I'm working on my
> second half century as a ham. (The 'K' calls always seemed kind
> of sissy to me. :-)
> --
> 73, Cecil, W5DXP
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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919. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 16:47:04 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40815F87.887EE63D@sonic.net>
Source record: 96469

Walking around using an old RatShack portable short wave radio I was able to track down an unusual noise source (an incessant clicking that was all over 40-160m. I was able to aim the portable antenna at various wires while walking around. This particular noise turned out to be someone's bad telephone. When the telephone was disconnected, this loud click-click-click disappeared. Seems like that bad telephone was somehow "transmitting" this noise back through the phone lines.

Admittedly the noise from the power lines here are much more difficult to pin down and seems to change with the weather. It can be very annoying and discouraging. There is a high voltage transformer right here next to the house, which means those hv lines are coming right down my driveway. Designing an antenna which is not even close to parallel to these power lines has helped somewhat. I am hoping the new 160m full wave loop which will be further away is going to be a big improvement. I am just hoping that the ladder line feed to this loop will not also pick up the noise. If so I will have to change that feedline to coax which will be a compromise.

Impoving my RF ground and making sure it was totally independent from the A.C. safety ground at the house main has helped also. My primary RF ground cable goes through a hole in the floor at the station and immediately to a copper pipe driven in under the house. This first run is shorter than 6'. This first copper pipe is then tied to several others at about 10' apart to make up for the fact that they are only driven 5' into the ground. Make sure your RF ground is independent of the house AC safety ground. I also use a constant voltage transformer and a good power conditioner because the AC here is a mess.

-bill

Rick wrote:

> Thanks to all you guys for responding. Good info.
> Here's a quick update.
> I turned off the main breaker in my house and still have the noise.
> As you experts point out, it is tough to get a bearing on the noise
> with HF measurements. I tried on 20, 15, 10 with a 3 element yagi and
> got peaks and nulls in different directions. Also with a 5 element 6
> meter beam. Advice on the ARRL site said to use VHF, so as a first
> cut I drove the neighborhood with my FT100 mobile rig, mode AM, and 2
> meter 1/4 wave antenna. S meter is approximately S2 everywhere except
> near two poles where it goes up to S7.
> This is a rural area, heavily wooded, with houses set way back from
> the street. Along the street there are many transformers on the
> poles, with taps coming from the high voltage. Also there are these

> approximately 1 foot long fuses. I know, because when the squirrels
> get across my transformer that is the fuse that blows like a shotgun.
> So there are many places where a bad connection could occur.
>
> This morning I make my first call to the power company. I'm in
> central NJ. Stay tuned.
> And thanks again for the tremendous help and interest.
>
> Rick K2XT
>
> ps - I started this discussion on the antenna newsgroup because it
> seemed most appropriate. I hope it's ok if we keep it here. I don't
> crosspost.

920. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 16:52:22 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404170852.52380726@posting.google.com>
Source record: 96470

Roy Lewallen <w7el@eznec.com> wrote in message
news:<108232al1u17g5f@corp.supernews.com>...
> That's much, much more difference than can be explained by the different
> conductivities of the metals. Either some very resistive alloys are
> involved, or there are differences between the antennas other than the
> type of metal.
>
> Roy Lewallen, W7EL
>
By the way, I found a very nice and complete listing of conductivities
of aluminum alloys at
http://www.ndt-ed.org/GeneralResources/MaterialProperties/ET/Conductivity_Al.pdf
just after I posted last night. Others may find this useful. Even
the worst of them is not as much as three times the DC resistivity of
the best. So at RF, the worst aluminum alloy will have about twice
the loss of the same diameter copper conductor.

Cheers,
Tom

921. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 17:11:32 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40816545.C2BCA365@shaw.ca>
Source record: 96471

zeno wrote:
>
> Walking around using an old RatShack portable short wave...

> Impoving my RF ground and making sure it was totally independent from the
> A.C. safety ground at the house main has helped also. My primary RF
> ground cable goes through a hole in the floor at the station and
> immediately to a copper pipe driven in under the house.

I did the same thing -- a 10 ft copper clad steel rod driven through a hole in the concrete of my basement floor. The floor is about 5 feet below ground level. I found out later that this was not a great idea because the floor shields the ground below from moisture -- measuring the ground rod to my waterpipe later showed a dc resistance of almost 50 ohms -- it would have made a better dummy load. I have since put 4 10 foot copper clad steel ground rods outside and bonded them together using silver solder. This works much better.

A chum of mine, noting my problematic results, decided to go sideways through his basement concrete intothe back yard where the soil would be moist. The end result was partially flooding his basement after the first rain! He wasn't home at the time!

I should note that the ground rods only provide the safety ground, however they serve as the base for a number of other ground wires spread around the yard in a sort of helter-skelter radial system. This provides a pretty good RF ground.

Moral: The best intentions often have unintended consequences!

Irv VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my very special website at http://members.shaw.ca/finkirv4/
Visit my CFSRS/CFIOG ONLINE OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

922. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 17:23:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bfp2805pmv1ao2hd0l6njpi4594dq55asl@4ax.com>
Source record: 96472

On Sat, 17 Apr 2004 16:47:04 GMT, zeno <zeno@sonic.net> wrote:

>Make sure your RF ground is independent of the house AC
>safety ground. I also use a constant voltage transformer and a good power
>conditioner because the AC here is a mess.

Hi Bill,

The combination of these two statements could kill you. If AC is a mess, and if you have your own independent ground, then there may come a day when you connect/disconnect a wire between them (and it is guaranteed to be there) that has enough potential to blow your fuse.

Think about it. The most common method of connect/disconnect involves the use of both hands, one wire in each (think of holding onto shelled connectors), with a path across the heart - classic killer scenario.

Having separate grounds is against code. Being against code it is also a loophole for insurance to deny a claim if misfortune comes of this misapplication. Having separate grounds is also bad engineering and bad noise control. In short, there is no good reason to do it when it needs to be done right.

What you have the potential for are problems called "ground loops." Closing or breaking those loops is what brings those problems. There was a thread in the last week with excellent links to how to do it right. I don't have them at hand right now, but you should research or prod me for more.

73's
Richard Clark, KB7QHC

923. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 17:31:25 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <NRdgc.17520$fq4.7368@lakeread05>
Source record: 96473

"zeno" <zeno@sonic.net> wrote in message news:40815F87.887EE63D@sonic.net...
> Walking around using an old RatShack portable short wave radio I was able
> to track down an unusual noise source (an incessant clicking that was all
> over 40-160m. I was able to aim the portable antenna at various wires
> while walking around. This particular noise turned out to be someone's
> bad telephone. When the telephone was disconnected, this loud
> click-click-click disappeared. Seems like that bad telephone was somehow
> "transmitting" this noise back through the phone lines.
>
> Admittedly the noise from the power lines here are much more difficult to
> pin down and seems to change with the weather. It can be very annoying
> and discouraging. There is a high voltage transformer right here next to
> the house, which means those hv lines are coming right down my driveway.
> Designing an antenna which is not even close to parallel to these power
> lines has helped somewhat. I am hoping the new 160m full wave loop which
> will be further away is going to be a big improvement. I am just hoping
> that the ladder line feed to this loop will not also pick up the noise.
> If so I will have to change that feedline to coax which will be a
> compromise.
>
> Impoving my RF ground and making sure it was totally independent from the
> A.C. safety ground at the house main has helped also. My primary RF
> ground cable goes through a hole in the floor at the station and
> immediately to a copper pipe driven in under the house. This first run is
> shorter than 6'. This first copper pipe is then tied to several others at
> about 10' apart to make up for the fact that they are only driven 5' into
> the ground. Make sure your RF ground is independent of the house AC
> safety ground. I also use a constant voltage transformer and a good power
> conditioner because the AC here is a mess.
>
> -bill

Hi Bill,

Isolating RF ground from AC ground may be a solution in your individual
circumstance, but it is not recommended or safe under normal conditions.
Single Point Common Ground means what it says and nothing is "isolated".
That begs for problems not the least of which is ground loops.

I do exactly the same thing under my shack WRT multiple RF ground rods as
you have and a very short drop to them as well - that elminates the chance
for 1/4 wave multiples in the ground sytem to raise the impedance
drastically. But according to best available practices and electrical code
everything (antenna ground rods, RF ground rods, and service-mains ground
rod) are all tied together. Understand that this in no way contributes in

any way to "noise" in the receivers, and it can reduce noise significantly. It also helps minimize lightning damage, at least according to all the codes, writings, and many experts in this group.

73's

Jack
Virginia Beach

924. Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 18:14:58 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40817421.ECD12EE1@sonic.net>
Source record: 96474

I am getting ready to put up my masts (5 of them) for a 160m full wave loop. For the most part I am using recycled telescoping tv masts which will be up around 50+ feet. The masts are metal. There will be a pulley at the top of the mast and the antenna will be pulled up with a dacron rope.

The question is what material to use for the guy wires on the masts. Is there a compelling argument not to use wire guys because they might be of lengths that will resonate or otherwise detract from the anticipated effectiveness of this antenna, or is this a non issue, given that the mast is already metal anyway, and the rope to the insulator holding up the antenna wire (#14 hard drawn braided copper) will be approximately 10 feet away from the top of the mast.

Wire for the guys (three sets of four wires, eg. one set for each of the top three tiers) would be easier, and somewhat more permanent than rope. If I were to use the dacron rope for the guys, then I would put up pulleys (that is 12 pulleys just on one mast) so that a new rope could be threaded up there in the future without the mast coming down.

For all practical purposes wire guys would be permanent. If wire is used is it necessary to break up the lengths of the guys with dielectric strain insulators or is this a non-issue with this antenna design.

The physical loop circumscribed by the actual circumstances of mast placement is approx. 588 feet. The loop needs to be about 540 feet, this difference of 48' will be absorbed by the 5 dacron ropes pulling up the antenna, that is why I am saying the antenna wire will be about 10' away from the tops of the masts. It is anticipated that the antenna will be fed by diy ladder line from one of the corners.

Any pointers or useful information is welcome.

tnx,

-bill

925. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 18:35:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <07t2809cccigobjbthfsrsol9af3d97v7f@4ax.com>
Source record: 96475

On Sat, 17 Apr 2004 18:14:58 GMT, zeno <zeno@sonic.net> wrote:
>I am getting ready to put up my masts (5 of them) for a 160m
>full wave loop. For the most part I am using recycled
>telescoping tv masts which will be up around 50+ feet.

Hi Bill,

You are on the threshold of being able to do much more for slightly more effort.

Let's suppose you use wire with insulators to break them up (generally only advised as a must below tower mounted beams so that opportunistic resonances don't mess up directionality and tune).

Further, let's suppose all wires at the top have a good metal connection to the mast.

Further, let's suppose each of these wires is broken such that the first insulator(s) is more than 25 or 30 feet above ground (straight down, I am not measuring along the wire).

Nothing else matters beyond what you would then do for general construction.

I presume that all masts are driven into the ground (or at least are not insulated from ground); and that at each mast you could build a radial ground screen of eight to a dozen wires as broad as those first set of insulators are out from the mast (probably 20 to 30 feet each).

You then have the opportunity of developing four broadband vertical antennas (each with a gamma feed because of the grounded situation). There's a good chance they would operate on 80M without too much effort (you might push them to 160).

Most of the work is in the top connection, and the first set of insulators - beyond that no commitments are needed if you simply decide to walk away later. That is easy with little difference in the up front effort.

73's
Richard Clark, KB7QHC

926. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 18:42:44 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40817AA3.FD44D163@sonic.net>
Source record: 96476

OK, I guess I have to do more thinking about this, even though my head is already totally spinning from the fact that there seems to be blatant discrepancies between expert opinions out there. I am new to this ng and have much to learn.

I am not sure who to believe at this point.

The book says "one common ground", AC safety AND RF, all one thing. This seems to be what is being advised here as well. This seems to be consistent with building codes. That is the "law", the politically correct physics, and what one needs to say in print or be liable, etc.

Then I turn around, and experienced hams are telling me the exact opposite, eg. not to tie the RF ground to the house AC safety ground. To tie the RF ground to the house safety ground rod means a much longer run and thus the potential problems of 1/4 wavelength resonance also mentioned here.

By the way, I am using an older Kenwood TS530S (until I get some experience and decide to invest in a more current rig). Are current rigs now always with three pronged polarized/grounded plugs? My unit here has a two prong non-polarized ac plug, just like the old audio tube amps I still use for hi-fi.

This whole "ground" thing and its history is quite mysterious, controversial, and confusing to say the least.

In 1953 when I was first a novice, I used a bizarre little homemade transmitter with one 117N7 tube which only plugged into one side of the house current!!!! and then used an earth ground and antenna. I am, in retrospect, amazed I am here and alive to tell the story.

Where is Tesla when we need him......

Just curious, if I were to take a light bulb and connect ONE terminal to the hot side of an ac house outlet and then connect the other terminal to a ground rod driven into the ground in the middle of a forest somewhere where trees fall without anyone there to hear them, will the light bulb light up?

bill (feeling a bit ungrounded at the moment.....)

Jack Painter wrote:

> "zeno" <zeno@sonic.net> wrote in message news:40815F87.887EE63D@sonic.net...
> > Walking around using an old RatShack portable short wave radio I was able
> > to track down an unusual noise source (an incessant clicking that was all
> > over 40-160m. I was able to aim the portable antenna at various wires
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> > "transmitting" this noise back through the phone lines.
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> > the house, which means those hv lines are coming right down my driveway.
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> > lines has helped somewhat. I am hoping the new 160m full wave loop which
> > will be further away is going to be a big improvement. I am just hoping
> > that the ladder line feed to this loop will not also pick up the noise.
> > If so I will have to change that feedline to coax which will be a
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> >
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> > A.C. safety ground at the house main has helped also. My primary RF
> > ground cable goes through a hole in the floor at the station and
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> > shorter than 6'. This first copper pipe is then tied to several others at
> > about 10' apart to make up for the fact that they are only driven 5' into
> > the ground. Make sure your RF ground is independent of the house AC
> > safety ground. I also use a constant voltage transformer and a good power
> > conditioner because the AC here is a mess.
> >
> > -bill
>
> Hi Bill,
>
> Isolating RF ground from AC ground may be a solution in your individual
> circumstance, but it is not recommended or safe under normal conditions.
> Single Point Common Ground means what it says and nothing is "isolated".
> That begs for problems not the least of which is ground loops.
>
> I do exactly the same thing under my shack WRT multiple RF ground rods as
> you have and a very short drop to them as well - that elminates the chance
> for 1/4 wave multiples in the ground sytem to raise the impedance
> drastically. But according to best available practices and electrical code
> everything (antenna ground rods, RF ground rods, and service-mains ground
> rod) are all tied together. Understand that this in no way contributes in
> any way to "noise" in the receivers, and it can reduce noise significantly.
> It also helps minimize lightning damage, at least according to all the
> codes, writings, and many experts in this group.
>
> 73's
>
> Jack
> Virginia Beach

927. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 19:16:52 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408182A3.23EC5A4C@sonic.net>
Source record: 96477

Richard,

Interesting, even if a bit above my current point in the learning curve.

Generally, I am experimenting with antennas here, trying to find the junction between theoreticl concepts, and the physical realities of the real estate, building, and trees, etc. just all hams do, I am sure.

Antenna #1 is now up, it is an OCF stung between to trees, not bad.

But now I am moving on to #2 which is this proposed 160m full wave loop. I have collected a handful of these old masts (junk yards, the local dump etc.) nice material to have on hand.

Here is more detail of the proposed loop, so that I can better glean something constructive from your intriguing ideas.

Only one of the proposed masts will be resting on the ground out in the middle of the orchard. Three are attached to buildings (adding height) and one is attached to a sturdy wooden "telephone" pole (again adding height and a way of mounting). The idea of putting radials in the ground does not seem practical for most of these masts, however, your idea is intriguing none the less.

Since I have a bunch of masts to play with, and I am in the antenna experimental mode, and have rural real estate to play around in, I am wondering about the antenna you have suggested.

Maybe we are talking about the possibility of Antenna #3 here.

Am I to understand that a promising antenna (you call a broadband vertical) can be made from a single 50 foot telescoping tv metal mast, the base of which is at ground level, utililizing the guy wires as part of the antenna system, with a system of radials in the ground underneath? How would I best feed this antenna, and would it be worthwhile with just this single mast, and what advantages would such an antenna have over others that I might construct?

At this point, I have only made plans for various wire antennas. Do not have any verticals. The tower and beam are only a twinkle in my minds eye, and I have to visit that neighbor who has a 75 footer he is not using that he suggested might be for sale, but that is down the line a way. Meanwhile I am tree fishing here, and recycling masts when I can find them.

I have more or less concluded, that my nicest 50 foot telescoping tv mast, is not the way to go for a "beam" and rotator, even the small ones, the engineering of such a project seems to court a Laurel and Hardy kind

of fiasco in my imagination, at least until someone tells me that they did it and it was smooth sailing.....

which is to say, I do not yet have a plan for some kind of antenna which can be rotated....whatever its desing might be.....

man, there is so much to this antenna thing......it is what this is all about.....and I love it....

-bill

Richard Clark wrote:

> On Sat, 17 Apr 2004 18:14:58 GMT, zeno <zeno@sonic.net> wrote:
> >I am getting ready to put up my masts (5 of them) for a 160m
> >full wave loop. For the most part I am using recycled
> >telescoping tv masts which will be up around 50+ feet.
>
> Hi Bill,
>
> You are on the threshold of being able to do much more for slightly
> more effort.
>
> Let's suppose you use wire with insulators to break them up (generally
> only advised as a must below tower mounted beams so that opportunistic
> resonances don't mess up directionality and tune).
>
> Further, let's suppose all wires at the top have a good metal
> connection to the mast.
>
> Further, let's suppose each of these wires is broken such that the
> first insulator(s) is more than 25 or 30 feet above ground (straight
> down, I am not measuring along the wire).
>
> Nothing else matters beyond what you would then do for general
> construction.
>
> I presume that all masts are driven into the ground (or at least are
> not insulated from ground); and that at each mast you could build a
> radial ground screen of eight to a dozen wires as broad as those first
> set of insulators are out from the mast (probably 20 to 30 feet each).
>
> You then have the opportunity of developing four broadband vertical
> antennas (each with a gamma feed because of the grounded situation).
> There's a good chance they would operate on 80M without too much
> effort (you might push them to 160).
>
> Most of the work is in the top connection, and the first set of
> insulators - beyond that no commitments are needed if you simply
> decide to walk away later. That is easy with little difference in the
> up front effort.
>

> 73's
> Richard Clark, KB7QHC

928. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 19:54:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7c1380p9mu2h4a7d85g80kv7h7mhcigek8@4ax.com>
Source record: 96478

On Sat, 17 Apr 2004 18:42:44 GMT, zeno <zeno@sonic.net> wrote:

Hi Bill,

By the points offered:

>Then I turn around, and experienced hams are telling me the exact opposite, eg.
>not to tie the RF ground to the house AC safety ground.

Experienced Amateurs (as distinct from experienced Professionals).

>To tie the RF ground to
>the house safety ground rod means a much longer run and thus the potential
>problems of 1/4 wavelength resonance also mentioned here.

The basic confusion that arises is in the distinction between RF and
Mains ground. You can keep your RF ground rod (add some radials to it
to actually make it RF ground) as long as you tie it to the Mains
ground (usually in close proximity to the drop and meter). The
distance between THESE two points is immaterial RF wise as your RF
ground will insure little or no RF current travels to the Mains
ground. In THIS sense, they are separate.

If there is noise (RF) on the Mains, it may seek your RF ground
through this connection, but as long as you are not sharing it (you
are not using this lead to both connect your equipment AND connect the
two grounds) then there will be no problem.

You should have a lead from your equipment to the RF ground and THEN
to the Mains ground (two paths, one conductor) in that order:

MAINSGROUND-------------RFGROUND------------SHACK GOOD
MAINSGROUND----------SHACK-----------RFGROUND BAD
>
>By the way, I am using an older Kenwood TS530S (until I get some experience and
>decide to invest in a more current rig). Are current rigs now always with three
>pronged polarized/grounded plugs? My unit here has a two prong non-polarized ac
>plug, just like the old audio tube amps I still use for hi-fi.

Most rigs aren't AC powered at all - they require 13.6VDC that comes
from an AC powered DC supply. AC power is floating with a
Hot/Neutral. Neutral eventually finds ground but you are in jeopardy
of relying on that. Ground, the third wire, is a safety consideration
and is never expected to conduct current except as a consequence of
failure. Modern construction practices and code certainly mandates a
thick enough conductor, but not for the purpose of supporting power
needs.

>In 1953 when I was first a novice, I used a bizarre little homemade transmitter
>with one 117N7 tube which only plugged into one side of the house current!!!!

This is also from an era when newspapers reported the passing of husbands or wives who, while washing the dishes, leaning on the stove, playing with the toaster, putting down the iron, turning off the mixer, or holding the refrigerator door.... leaned over to turn down the radio volume - classic across the heart scenario - classic results.

They were killed by "modern" engineering design techniques to reduce noise (caps across the mains to the metal frame). Let's see, is it suppose to plug in this way, or was it the oth.*#!!**#.....

73's
Richard Clark, KB7QHC

929. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 20:15:21 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40819059.E966EB56@sonic.net>
Source record: 96479

I think this is starting to make sense, maybe. My RF ground rod which is directly under the station about 6' directly down, also ties to a series of additional rods about 10 feet apart in both directions from that first rod (I am thinking this is like a radial since the bare wire connecting them is also on the earth (?). Should I connect the furthest rod of this series to the house mains ground rod which is actually not that far away at that point? Would I be ok then?

-bill

Richard Clark wrote:

> On Sat, 17 Apr 2004 18:42:44 GMT, zeno <zeno@sonic.net> wrote:
>
> Hi Bill,
>
> By the points offered:
>
> >Then I turn around, and experienced hams are telling me the exact opposite, eg.
> >not to tie the RF ground to the house AC safety ground.
>
> Experienced Amateurs (as distinct from experienced Professionals).
>
> >To tie the RF ground to
> >the house safety ground rod means a much longer run and thus the potential
> >problems of 1/4 wavelength resonance also mentioned here.
>
> The basic confusion that arises is in the distinction between RF and
> Mains ground. You can keep your RF ground rod (add some radials to it
> to actually make it RF ground) as long as you tie it to the Mains
> ground (usually in close proximity to the drop and meter). The
> distance between THESE two points is immaterial RF wise as your RF
> ground will insure little or no RF current travels to the Mains
> ground. In THIS sense, they are separate.
>
> If there is noise (RF) on the Mains, it may seek your RF ground
> through this connection, but as long as you are not sharing it (you
> are not using this lead to both connect your equipment AND connect the
> two grounds) then there will be no problem.
>
> You should have a lead from your equipment to the RF ground and THEN
> to the Mains ground (two paths, one conductor) in that order:
>
> MAINSGROUND------------RFGROUND------------SHACK GOOD
> MAINSGROUND----------SHACK----------RFGROUND BAD
> >

> >By the way, I am using an older Kenwood TS530S (until I get some experience and
> >decide to invest in a more current rig). Are current rigs now always with three
> >pronged polarized/grounded plugs? My unit here has a two prong non-polarized ac
> >plug, just like the old audio tube amps I still use for hi-fi.
>
> Most rigs aren't AC powered at all - they require 13.6VDC that comes
> from an AC powered DC supply. AC power is floating with a
> Hot/Neutral. Neutral eventually finds ground but you are in jeopardy
> of relying on that. Ground, the third wire, is a safety consideration
> and is never expected to conduct current except as a consequence of
> failure. Modern construction practices and code certainly mandates a
> thick enough conductor, but not for the purpose of supporting power
> needs.
>
> >In 1953 when I was first a novice, I used a bizarre little homemade transmitter
> >with one 117N7 tube which only plugged into one side of the house current!!!!
>
> This is also from an era when newspapers reported the passing of
> husbands or wives who, while washing the dishes, leaning on the stove,
> playing with the toaster, putting down the iron, turning off the
> mixer, or holding the refrigerator door.... leaned over to turn down
> the radio volume - classic across the heart scenario - classic
> results.
>
> They were killed by "modern" engineering design techniques to reduce
> noise (caps across the mains to the metal frame). Let's see, is it
> suppose to plug in this way, or was it the oth.*#!!**#.....
>
> 73's
> Richard Clark, KB7QHC

930. Window clip mount - last one FA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 20:22:01 UTC
From: Martin <admin@127.0.0.1>
Message-ID: <c5s3se$t2p$1$8300dec7@news.demon.co.uk>
Source record: 96481
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,uk.radio.amateur

Lowe LAC1 new unused window clip aerial mount.
The last one I have (at the moment) being auctioned
for funds of East Cheshire Radio Group.

Please have a look at this auction -
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3091364426

ideal for the temporary aerial while on holiday !!

Thanks Martin

931. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 20:22:56 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4081921F.9679670C@sonic.net>
Source record: 96480

Richard Clark wrote:

>
> MAINSGROUND-------------RFGROUND------------SHACK GOOD
> MAINSGROUND----------SHACK----------RFGROUND BAD

I may still be confused here, not really fuly comprehending the above illustration.

The mainsground comes to the shack anyway in the AC outlets powering the shack, being the third or ground terminal (although not really connecting to my Kenwood 530 which in this unique case only has a two prong AC plug and internal power suppy.

I think this ground thing has to do with the "routing" as you indicate, just as the mystery of ground loops in an old tube hi-fi amp where the correct star grounding is the way to get rid of hum. As long as my shack RF ground is a short direct route to the first ground rod of the series, I should be ok then tying the mains ground to a "later" point in the RF ground rod system. (?)

bill

932. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 20:27:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <f333809kq4tbv5ho4p1phn4chcmvm7vhju@4ax.com>
Source record: 96482

On Sat, 17 Apr 2004 19:16:52 GMT, zeno <zeno@sonic.net> wrote:
>Am I to understand that a promising antenna (you call a broadband
>vertical) can be made from a single 50 foot telescoping tv metal mast,
>the base of which is at ground level, utililizing the guy wires as part
>of the antenna system, with a system of radials in the ground underneath?
>How would I best feed this antenna, and would it be worthwhile with just
>this single mast, and what advantages would such an antenna have over
>others that I might construct?

Hi Bill,

We will do this by stages.

We are going to maximize what you already have: mast material.

Grounded or ungrounded are immaterial - there are ways of getting RF
into either. If grounded, this may require a drop wire described
below (I was a little too enthusiastic about possibilities in the
first post).

The masts will be guyed. The trick here is to think in advance to be
able to support ANY mission, vertical OR horizontal antennas. BOTH
may be available at the same time.

The usual vertical of 50 feet may resonate at several places in HF,
but almost certainly not in the Ham bands - so we must expect some
form of matching along the way. For ungrounded masts this can be done
within a meter of ground so there is no going aloft to perform any
jobs. For grounded masts you may wish to have a conductive yard arm,
perhaps more accurately described not as a yard but as 18 inches,
dropping a wire to ground for a 160M or 80M Gamma feed, or as a folded
monopole.

Note, I suggest 160M or 80M operation for an obviously too short
vertical. This is where the guy wires come in handy. As described
previously, think of them as the skeleton of an umbrella (no fabric,
but ribs expanded out). With the use of insulators, this can be
achieved so that you can construct what is called a "capacitive top
hat." Such additions to verticals lower their resonance (but this
does not imply it makes them 50Ohms - that is a separate issue). You
want them to be resonant (so they will absorb and radiate power), but
you will need to match them further (no different that any wire
antenna for that matter). For 80M, this antenna will probably offer
20 to 30 Ohms (not bad, but not 50). For 160M, this antenna could
offer 5 to 20 Ohms (becoming difficult, but not undo-able), but in all
likelihood, it will also have reactance (the top hat will probably not

be big enough).

Now, why would you want another 160M antenna? The bad news is that horizontals in this band are abysmal performers even if you could get one up the minimum quarter wave (a long way from only 50 feet up). Verticals on the other hand use earth far more effectively for communication in this band (how many AM stations do you know of with horizontal antennas?). 80M sits on the borderline of earth characteristics where horizontals may do better, but this doesn't mean that verticals do poorer. Higher bands see earth differently, and verticals need height (lifted into the air) to compete; or they need to reside near a lake or the sea.

However, most of this discussion gets very far afield. The point is to plan ahead, construct top hats (they will mix easily with your loop project) and think about the gamma drop wires if the masts are grounded. This is very little investment and you have four opportunities (this then brings experimentation with phased, vertical arrays - each mast driven separately through delay lines).

73's
Richard Clark, KB7QHC

933. Micro Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 20:27:12 UTC
From: Gery Duyck <Gery@duyck-co.be>
Message-ID: <40819326$0$875$a0ced6e1@news.skynet.be>
Source record: 96483

Yesterday I heard somebody talking over micro vertical antenna's for HF.
Seems very similar to magnetic loop's but easyer to adjust, and a bigger
band coverage.

They where talking about an 60cm antenna for the 40m band.

To bad I couldn't reply ...

Does anybody knows something more about this antenna?

73'
ON4GDK, Gery

934. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 20:28:35 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40819373.B2B559F0@sonic.net>
Source record: 96484

Richard Clark wrote:

>
> Black is usually indicative of carbon content; but I wouldn't let that
> stop me the first time around if it was handy (pop it into the
> microwave and nuke it to see if it gets hot - this is not about
> microwave frequencies, merely tendency to conduct and to dissipate).

Wouldn't sticking my multi/ohmeter into the material at a couple of points tell me if it dielectric or not? I did that and it would seem that this black poly pipe is totally non-conductive. If it contained carbon it would be like a composition resistor and register something (no?).

Anyway I am working on another source of rigid 3/8" dia. UV/PVC which might work out better.

bill

935. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 20:46:06 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4081978D.4CE3D4B9@sonic.net>
Source record: 96485

Richard,

tnx a bunch for this fb. I am going to digest it a bit while I go out and mow the weeds around the prospective antenna mast sites (in my usual effort to convert manual labor into my preferred fantasies). I do see your important point about anticipating future possibilites before these beasts are already committed in the air, I like that approach. You have also inspired me to re-examine some of those carelessly glossed over chapters in the various Antenna books here at the shack.

We will undoubtedly need to continue this qso a bit more for me to fully apply your ideas to the particularities here.

So, to understand something basic: What you are talking about is not necessarily interferring in any way with the 160m loop project, but rather to anticipate additional antenna experiments utilizing the poles (masts). If the vertical antenna ideas are later explored, would each mast be a separate antenna requiring its own coax feed line?

btw, my newbie's facination with the ladder line fed 160 loop has to do with its multi-band promise. To tell the truth, I have heard very little on 160m here. Seems like (at least with the new 80m OCF (up 30' ++ depending on which end) I am hearing alot on 20, 40, and 80 with this old Knwd 530. Sure beats the old tube Hallicrafters I was using only a few months ago when I started my process of catching up with 50 years inactivity....!

I might end up one of those hams that loves the old tube gear, but also uses the latest technology as well.....those fancy Icoms are kind of tempting....but what do I know....

bill

Richard Clark wrote:

> On Sat, 17 Apr 2004 19:16:52 GMT, zeno <zeno@sonic.net> wrote:
> >Am I to understand that a promising antenna (you call a broadband
> >vertical) can be made from a single 50 foot telescoping tv metal mast,
> >the base of which is at ground level, utililizing the guy wires as part
> >of the antenna system, with a system of radials in the ground underneath?
> >How would I best feed this antenna, and would it be worthwhile with just
> >this single mast, and what advantages would such an antenna have over
> >others that I might construct?
>
> Hi Bill,
>
> We will do this by stages.
>

> We are going to maximize what you already have: mast material.
>
> Grounded or ungrounded are immaterial - there are ways of getting RF
> into either. If grounded, this may require a drop wire described
> below (I was a little too enthusiastic about possibilities in the
> first post).
>
> The masts will be guyed. The trick here is to think in advance to be
> able to support ANY mission, vertical OR horizontal antennas. BOTH
> may be available at the same time.
>
> The usual vertical of 50 feet may resonate at several places in HF,
> but almost certainly not in the Ham bands - so we must expect some
> form of matching along the way. For ungrounded masts this can be done
> within a meter of ground so there is no going aloft to perform any
> jobs. For grounded masts you may wish to have a conductive yard arm,
> perhaps more accurately described not as a yard but as 18 inches,
> dropping a wire to ground for a 160M or 80M Gamma feed, or as a folded
> monopole.
>
> Note, I suggest 160M or 80M operation for an obviously too short
> vertical. This is where the guy wires come in handy. As described
> previously, think of them as the skeleton of an umbrella (no fabric,
> but ribs expanded out). With the use of insulators, this can be
> achieved so that you can construct what is called a "capacitive top
> hat." Such additions to verticals lower their resonance (but this
> does not imply it makes them 50Ohms - that is a separate issue). You
> want them to be resonant (so they will absorb and radiate power), but
> you will need to match them further (no different that any wire
> antenna for that matter). For 80M, this antenna will probably offer
> 20 to 30 Ohms (not bad, but not 50). For 160M, this antenna could
> offer 5 to 20 Ohms (becoming difficult, but not undo-able), but in all
> likelihood, it will also have reactance (the top hat will probably not
> be big enough).
>
> Now, why would you want another 160M antenna? The bad news is that
> horizontals in this band are abysmal performers even if you could get
> one up the minimum quarter wave (a long way from only 50 feet up).
> Verticals on the other hand use earth far more effectively for
> communication in this band (how many AM stations do you know of with
> horizontal antennas?). 80M sits on the borderline of earth
> characteristics where horizontals may do better, but this doesn't mean
> that verticals do poorer. Higher bands see earth differently, and
> verticals need height (lifted into the air) to compete; or they need
> to reside near a lake or the sea.
>
> However, most of this discussion gets very far afield. The point is
> to plan ahead, construct top hats (they will mix easily with your loop
> project) and think about the gamma drop wires if the masts are
> grounded. This is very little investment and you have four

> opportunities (this then brings experimentation with phased, vertical
> arrays - each mast driven separately through delay lines).
>
> 73's
> Richard Clark, KB7QHC

936. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 21:07:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <pu63805qvk0hdt82dltd8pdpun934mi8ub@4ax.com>
Source record: 96486

On Sat, 17 Apr 2004 20:46:06 GMT, zeno <zeno@sonic.net> wrote:

>We will undoubtedly need to continue this qso a bit more for me to fully
>apply your ideas to the particularities here.

Hi Bill,

That's the whole point of this group.

>So, to understand something basic: What you are talking about is not
>necessarily interferring in any way with the 160m loop project, but rather
>to anticipate additional antenna experiments utilizing the poles (masts).

Exactimundo.

>If the vertical antenna ideas are later explored, would each mast be a separate
>antenna requiring its own coax feed line?

Yup - any, all, or none depending upon where the future leads.

73's
Richard Clark, KB7QHC

937. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 21:10:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <25738058d609jfr2obn3ddtbemg07oi93b@4ax.com>
Source record: 96487

On Sat, 17 Apr 2004 20:15:21 GMT, zeno <zeno@sonic.net> wrote:

>I think this is starting to make sense, maybe. My RF ground rod which is directly
>under the station about 6' directly down, also ties to a series of additional rods
>about 10 feet apart in both directions from that first rod (I am thinking this is
>like a radial since the bare wire connecting them is also on the earth (?).

Hi Bill,

The additional ground rods don't do much, RF-wise. You are far better
off with wire laid out radially on or just below the ground surface.
However, what you have is good.

>Should I connect the furthest rod of this series to the house mains ground rod which is
>actually not that far away at that point? Would I be ok then?

Depends on what you mean by furthest, but it sounds OK. Look at my
answer in the other post.

73's
Richard Clark, KB7QHC

938. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 21:27:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108389vb9dslrbb@corp.supernews.com>
Source record: 96488

There are several variables here other than the conductivity of the primary metal. Again, what you're seeing is not "the difference between copper and aluminum" as initially stated, but a number of other factors -- diameter, length, coating, and alloy --, combined.

If the DC conductivity of two materials differs by a factor of two, their RF conductivity differs only by a factor of the square root of two, or about 1.4. This is because the skin depth is greater in the less conductive material, which partially offsets the conductivity difference. The relatively small difference in DC conductivity between pure copper and aluminum is further reduced by this effect, so you'll very seldom be able to see any difference.

Roy Lewallen, W7EL

H. Adam Stevens, NQ5H wrote:
> Roy
> I looked up the numbers.
> The Nott is 2" diameter bare copper 3' long.
> The Tarheel is 2" diameter painted aluminum 4' long.
> The Hi-Q is 1" diameter powder-coated aluminum 3' long.
> I used the same whip for all measurements.
> If we take the conductivity of copper to be 100, aluminum is then 60 and
> aluminum alloys are as low as 30.
> That's a factor of two between the Nott and Tarheel and the reduced surface
> area of the Hi-Q explains the additional resistance there. Considering the
> difference in surface area and resistivity among the antennas, the measured
> impedances seem quite reasonable to me.
> 73
> H.
> NQ5H
>
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:108232al1u17g5f@corp.supernews.com...
>
>>That's much, much more difference than can be explained by the different
>>conductivities of the metals. Either some very resistive alloys are
>>involved, or there are differences between the antennas other than the
>>type of metal.
>>
>>Roy Lewallen, W7EL
>>
>>H. Adam Stevens, NQ5H wrote:
>>

>>>One place where I can clearly see the difference between copper and
>
> aluminum
> . . .

939. Re: Micro Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 21:30:51 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c5s7no$52949$1@ID-225834.news.uni-berlin.de>
Source record: 96489

Gery Duyck wrote:

> Yesterday I heard somebody talking over micro vertical antenna's for HF.
> Seems very similar to magnetic loop's but easyer to adjust, and a bigger
> band coverage.
>
> They where talking about an 60cm antenna for the 40m band.
>
> To bad I couldn't reply ...
>
> Does anybody knows something more about this antenna?
>
> 73'
> ON4GDK, Gery

Sounds like a dummy load, or one of the attachments for the comet UHV6
multiband hf antenna.

If they figured out a way to make it that small and actually work very well
I'd love to hear about that.

--
Registered Linux User #346565
http://www.tblx.net
WA5K

940. Re: Windom antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 21:46:33 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4081a606_7@corp.newsgroups.com>
Source record: 96490

zeno wrote:
> I had K6CCG in 1953. I was 12.

Oh yeah, the land of fruits and nuts got some of the
first sissy calls. :-)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

941. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 21:51:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <nb7380hm3nrdkt05nr5uma3minlesu9kq8@4ax.com>
Source record: 96491

On Sat, 17 Apr 2004 20:22:56 GMT, zeno <zeno@sonic.net> wrote:
>Richard Clark wrote:
>>
>> MAINSGROUND-------------RFGROUND------------SHACK GOOD
>> MAINSGROUND----------SHACK----------RFGROUND BAD
>
>I may still be confused here, not really fuly comprehending the above illustration.
>
>The mainsground comes to the shack anyway in the AC outlets powering the shack,
>being the third or ground terminal (although not really connecting to my Kenwood
>530 which in this unique case only has a two prong AC plug and internal power
>suppy.
>
>I think this ground thing has to do with the "routing" as you indicate, just as the
>mystery of ground loops in an old tube hi-fi amp where the correct star grounding
>is the way to get rid of hum. As long as my shack RF ground is a short direct route
>to the first ground rod of the series, I should be ok then tying the mains ground
>to a "later" point in the RF ground rod system. (?)

Hi Bill,

Look again at the illustration. Now think of noise originating in the Mains and traveling towards RF ground. That current, across impedance, produces noise voltage. In the "BAD" illustration, think of the left hand as hot, and the right side as cold. Just like at a setting of a potentiometer, noise voltage is injected INTO the SHACK if there are other paths to ground (there always are, you describe just exactly how it happens above).

Now, repeat the same problematic noise current in the "GOOD" illustration. It sinks right into RFGROUND and does not proceed on towards the SHACK.

You will of course have mixed grounds because this vale of tears we call reality demands that you power your SHACK from the Mains. And if it weren't that, it would be the 'puter, or the phone, or a battery charger for the drill (the list is endless and so common that we become blind to the obvious paths mixing noise into our life).

Most local noise is conductive. That is, it comes from the source and the sink residing on the same breaker in the panel. The source noise current injects itself into the sensitive sink side that is sharing the path. By using an extension cord, you can confirm this by powering the noise source off another outlet that goes to a different breaker. That noise that is not conductive is radiative. It arrives from the source through the air. This can be nipped in the bud by

using a transmission line choke at its entry (generally the feedpoint of the antenna).

73's
Richard Clark, KB7QHC

942. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 21:58:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ep9380p9b4qrc98nme8ita4sf8tr5au95d@4ax.com>
Source record: 96492

On Sat, 17 Apr 2004 20:28:35 GMT, zeno <zeno@sonic.net> wrote:
>Richard Clark wrote:
>>
>> Black is usually indicative of carbon content; but I wouldn't let that
>> stop me the first time around if it was handy (pop it into the
>> microwave and nuke it to see if it gets hot - this is not about
>> microwave frequencies, merely tendency to conduct and to dissipate).
>
>Wouldn't sticking my multi/ohmeter into the material at a couple of points
>tell me if it dielectric or not? I did that and it would seem that this black
>poly pipe is totally non-conductive. If it contained carbon it would be like
>a composition resistor and register something (no?).
>
>Anyway I am working on another source of rigid 3/8" dia. UV/PVC which might
>work out better.

Hi Bill,

Being conductive and being lossy are not the same thing. You may have
both situations, or one, or the other; however "not being conductive"
does not necessarily mean "not lossy." The microwave test is hardly
conclusive unless you notice it heat up. Other testing is more
sophisticated.

73's
Richard Clark, KB7QHC

943. Call for an Impeachment Inquiry of Bush and Cheney

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 22:01:26 UTC
From: Greg Stump <anonymous@yahoo.com>
Message-ID: <b1e52b16.155d0172@host-69-48-73-244.roc.choiceone.net>
Source record: 96497
Cross-posted to:
rec.autos.makers.honda,rec.music.experimental,rec.radio.amateur.antenna,rec.games.frp.industry,rec.arts.movies.erotica

Call for an Impeachment Inquiry of Bush and Cheney,
Get Congress to Take Action

Sign our online Petition and read below for more information:

http://www.votenader.org/get_involved/impeach.php

HEY DUDE WHERE'S MY BUDDY!!!???
COME BACK HOME MICHAEL!!!

Ok Michael, you've had your realpolitik fling with ex-General Wesley Clark. Your endorsed Presidential candidate in the Democratic Primaries has withdrawn. It is time for you to come home, to join your buddies and resume your only genuine role which is that of defiance and resistance. Compliance and assistance with the Democrats does not accord with your past, your character, your bold writings and, most memorably, your long corrosive assaults on the Party that betrayed the working classes and plunged our country into corporate globalization. Remember, Michael, you're the flinty man from Flint, Michigan. You've never forgotten your roots. The heady Hollywood, Manhattan scene with the celebrities and Academy Awards have never gotten to your head but rather have gotten into your deserving pockets. How we all recall your standing before one billion people in Los Angeles at the televised Academy Awards in 2003 and, breaking the customary cant of the awardees, throwing the gauntlet down to George W. Bush and his "fictitious" war mongering.

Now the War has become a quagmire, with both Republicans and Democrats complicit (check the votes in Congress). The Draft may be on the way. So what are you doing going on the Al Franken Show very nearly breaking down when Al Gore (he of the pro NAFTA/GATT, anti-worker, regime-change, Iraq-bombing, lethal sanctions on half a million children Administration) called and thought you were apologizing. You have nothing to apologize for, Michael. Gore has a lot to apologize for-blowing the election he won in Florida and the country as a whole and for blowing, with Bill Clinton, the many opportunities the rich-booming Nineties and the collapse of the Soviet Union gave this country to turn a peace dividend into a pro-worker, pro-environment, pro-consumer and anti-poverty resurgence.

Come back and join our Presidential campaign, Michael. Talk to those "Reagan Democrats"-those 35% of union members who still vote Republican and against their own interests-as only you can. Michael, if you go pumping for the Democratic Party this year, just what are you going to say to the unemployed steelworkers near Sparrows Point in Maryland? To

the megathousands of laid off textile and furniture workers in North and South Carolina? To the abandoned auto workers waiting and waiting near their empty factories that went to repressive countries? To the millions of blue-collar workers, who fought our wars, only to learn that the two parties won't fight for their company pensions and health insurance? Are you going to tell them how the Democratic Party pushed through the WTO, let their pensions erode or disappear, were too busy collecting checks from the corporate bosses to pay attention to the corporate crime wave that looted and drained trillions of dollars from millions of workers, their retirement and small investments? Will you tell them that the cowardly Democrats, who couldn't win the fewer elections they are now not losing without the labor vote, won't even mount a determined drive to repeal the notorious, union-blocking Taft Hartley Act?

How can you be free to be what you are, or to depress Bush's vote, to jolt into consciousness the moribund Democratic Party?

Hey Dude, join your real buddies! The ones you may be thinking about just don't fit either your message, your vision, or our website VoteNader.org.

Come back home Michael. The workers and the youth of America are looking for you.

Best regards,
Ralph Nader

P.S. Will you put this invitation on your website and see how your fans react to Michael Moore returning to the Nader 2004 presidential campaign? Patti Smith will reserve a big singing spot, for you, on the stage for the customary finale, PEOPLE HAVE THE POWER.

Wednesday April 14, 2004

Join the Call for an Impeachment Inquiry of Bush and Cheney
Help us Get Congress to Take Action

You can help the call for an impeachment inquiry of President Bush and Vice President Dick Cheney. Sign our online Petition.

http://www.votenader.org/get_involved/impeach.php

George W. Bush and Dick Cheney should be impeached for two reasons:

They led the United States into an illegal, unconstitutional war in Iraq.
They misled the Congress and the American people with five falsehoods that led to war.

All it takes is one Member of the House of Representatives to call for an Impeachment Inquiry to start the process to investigate the two grounds. If the House then votes by a simple majority for Articles of Impeachment, the Senate would then undertake a trial of the President and Vice President. They would only be convicted, and impeached, if two-thirds of the Senate agrees.

--

people's war in our country
continues to blaze defiantly, expanding, spreading its roots and preparing for newer and higher tasks, guided always by Marxism-Leninism-Maoism, battling for the emancipation of our people for the purpose of and at the service of the world revolution. Thus we are contributing and will contribute to the tasks of the RIM, more and more willing and able to aid in every possible way our glorious common cause: the emancipation of the proletariat and communism prevailing though out the earth.

"Comrades, the Communist Party of Peru is part of the Revolutionary Internationalist Movement and feels honored to be so, honored to serve in such a far-reaching and historic vanguard battle, as well as to have the comrades in arms found in our Movement's ranks; and furthermore, the Party feels fortified and augmented by the repeated expressions of support, of proletarian internationalism, which it receives from the very outstanding fraternal communist parties and organizations, and very especially from the Committee of the Revolutionary Internationalist Movement to which we extend our revolutionary gratitude for its constant encouragement and support. All this, comrades, increases our proletarian internationalist responsibility and our unshakeable commitment to the world revolution and its concrete form today, the Revolutionary Internationalist Movement."

NION: ANSWERs Needed

Is NION's financial relationship with IFCO some innocuous charitable funding arrangement? Is it a coincidence that NION donations are funneled through an organization with links to communist and pro-Palestinian groups? Is it a coincidence that NION's donations are mailed to an organization that has links with Castro? Is it a coincidence that NION is operated by an organization with links to Communist terrorists? And do the long list of entertainment industry notables who have signed onto its "Statement of Conscience" aware of NION's links? If not, why not?

The government n

944. Re: Window clip mount - last one FA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 22:05:03 UTC
From: M3 <***>
Message-ID: <4081aa46.0@entanet>
Source record: 96493
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,uk.radio.amateur

Martin wrote:
> Lowe LAC1 new unused window clip aerial mount.
> The last one I have (at the moment) being auctioned
> for funds of East Cheshire Radio Group.
>
> Please have a look at this auction -
> http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=3091364426
>
> ideal for the temporary aerial while on holiday !!
>
> Thanks Martin

Another PayPal charge idiot!

945. 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 22:09:32 UTC
From: M3 <***>
Message-ID: <4081ab53.0@entanet>
Source record: 96494

Hi,

Any designs for a small antenna to work on 160M? My garden is approx 40ft x 17ft.

Post links here.

Thanks.

946. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 22:22:43 UTC
From: AM200 <gt@am200.net>
Message-ID: <m6igc.31$8t5.7@newsfe2-gui.server.ntli.net>
Source record: 96495

OMG your garden is TINY. You will never be able to operate on top band
unless you get a vertical!
I wish mine was 40*17ft.

"M3" <***> wrote in message news:4081ab53.0@entanet...
> Hi,
>
> Any designs for a small antenna to work on 160M? My garden is approx 40ft
x
> 17ft.
>
> Post links here.
>
> Thanks.
>
>
>

947. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 23:02:03 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404171502.13298777@posting.google.com>
Source record: 96496

"H. Adam Stevens, NQ5H" <NQ5H@ARRL.net> wrote in message
news:<108274abamjk4c@corp.supernews.com>...

> The Nott is 2" diameter bare copper 3' long.
> The Tarheel is 2" diameter painted aluminum 4' long.
> The Hi-Q is 1" diameter powder-coated aluminum 3' long.

A 2" diameter bare copper rod or cylinder at 14MHz, 3' long, should
have an RF resistance about 6 milliohms. The worst aluminum alloy
you're likely to see should be about 12 milliohms; 24 for the 1"
diameter. What am I missing here? How does that translate to a
change from 9 ohms to 20 ohms to 30 ohms at the feedpoint? If the
cause is resistance heating of the copper or aluminum tube, what's
doing the impedance transformation, and how is it so efficient? That
much loss should result in measurable temperature rise in the tube (or
wherever the loss is), at 100-W power levels.

Or perhaps my image of what you're measuring is all out of whack.
Same loading coil in each case? I'd kind of expect the loading coil
to be the main loss mechanism, if all the connections are tight.

Puzzled and seeking enlightenment,
Tom

948. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-17 23:38:29 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4081BFF4.F09E4688@sonic.net>
Source record: 96498

>
>
> Being conductive and being lossy are not the same thing. You may have
> both situations, or one, or the other; however "not being conductive"
> does not necessarily mean "not lossy." The microwave test is hardly
> conclusive unless you notice it heat up. Other testing is more
> sophisticated.
>
> 73's
> Richard Clark, KB7QHC

Ohhhhh! I get it now. Its like why some kitchenware is ok for the microwave and some not. The RF might be heating my spacers and if the spacers are the wrong stuff, we have a melt down! Darn....why did all those neat industries making cool things out of glass and ceramic dry up and disappear.....

with the collectible price of simple glass antenna strain insulators you would think some industry would fire it up again, and while they are at it they could make some of them out of purple glass and the collectors would go nuts unleashing all kinds of cash on them. How hard is it to make things out of glass?

ps. has anyone actually heard of a diy ladder line having a spacer melt down while running power? no reason why it couldn't happen....

Now that I understand, I will at least put my prospective spacers through the microwave test....

-bill

949. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 00:23:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4081cac6$1_5@corp.newsgroups.com>
Source record: 96499

M3 wrote:
> Any designs for a small antenna to work on 160M? My garden is approx 40ft x
> 17ft.

A 1/2WL vertical should fit in a 40'x17' section. :-)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

950. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 00:59:09 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <JO-dnXdbiqS3SRzdRVn-iQ@comcast.com>
Source record: 96500

"AM200" <gt@am200.net> wrote in message
news:m6igc.31$8t5.7@newsfe2-gui.server.ntli.net...
> OMG your garden is TINY. You will never be able to operate on top band
> unless you get a vertical!
> I wish mine was 40*17ft.

A loop?

951. Re: Window clip mount - last one FA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 01:26:06 UTC
From: Martin <admin@127.0.0.1>
Message-ID: <c5sllu$rs0$1$8300dec7@news.demon.co.uk>
Source record: 96502
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,uk.radio.amateur

"M3" <***> wrote in message news:4081aa46.0@entanet...
snip
> Another PayPal charge idiot!
>
You do not have to pay via "PAY-PAL"
I will accept "NOCHEX" as well and they charge you (more than 5%
I think) !!
If you do not like my terms then you do not have to bid on the items
I list on eBay, Walt never does !
there are alternative methods for payment ... Cheque, Bank transfer
or even use real "Wonga" (£ or $ or ?).
I do not pass on any charge for using these methods.

C U .. Have a nice day now

Martin

952. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 01:28:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r8m380heism2hb4m4o49iln09397uobbvu@4ax.com>
Source record: 96501

On Sat, 17 Apr 2004 23:38:29 GMT, zeno <zeno@sonic.net> wrote:
>ps. has anyone actually heard of a diy ladder line having a spacer melt down
>while running power? no reason why it couldn't happen....

Hi Bill,

This has never been reported here. Instead, it is noted by the
characteristic Z of the line being lower than computed. Such
measurements (of the characteristic Z) can be performed through a few
simple but still time consuming tests.

73's
Richard Clark, KB7QHC

953. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 01:30:46 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <4081d655.89239468@news.galilei.com>
Source record: 96503

Thanks for all the excellent commentary guys!

My reason for the question was not really looking for a major improvement in the operation of the antenna, but more longetivity.

I'm getting close to retirement and have moved to a new state. Whatever I put up, I want it to stay up and keep looking nice for about 20 years or longer.

I lived in my last home for over 20 years, my backyard was almost solid copper from all the radials I had run over the years, plus when I first moved there, I did the entire backyard in 2x4 welded wire fabric, a layer of straw and some grass seed, then another layer of 2x4 welded wire fabric running the other way, then eventually sod over that. The last antenna I put up, a Butternut I used 3,500 feet of wire to make the radials and tied them to the welded wire fabric.

I have set up an area at the top of a hill, am in the process of grading this area to flat, and hopefully within a couple of months have everything up except the antennas.

I have cheap access to a plating company who will plate everything to keep it from corroding. When I checked into the price of gold plating, it was only a couple of bucks more than stainless silver or stainless brass and I was just thinking perhaps the gold would last longer and perhaps even work better.

I have 1,225 sq. ft. of small link aluminum chain link fencing that is going to be buried as the start of my ground system in this graded area.

I am also having a 62 foot fiberglass utility pole (50 feet after installation) installed at the corner of the house, this will hold my VHF/UHF antenna's and the my HF Inverted Vees, plus be the center of two dipoles, etc. Up near the antenna farm there will be another 30 foot fiberglass utility pole (after installation), which will be horizontal with the 50 foot pole at the house.

I'm just trying to get everything planned out on paper before I do anything as it's easier to erase a pencil line than redo an antenna farm after the fact.

In effect, I'm going to duplicate as closely as possible what I had in St. Loo and hopefully add a few more, since I now have the space.

TTUL
Gary

954. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 01:33:34 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <4081da45.90247062@news.galilei.com>
Source record: 96504

Hi M3

Can you eke out 6 to 8 more feet somehow?

Take a look at my linear loaded inverted Vee
http://archimedes.galilei.com/raiar

It has worked like gangbusters for me and for several others who have
tried it also.

TTUL
Gary

"M3" <***> verbositized:

>Hi,
>
>Any designs for a small antenna to work on 160M? My garden is approx 40ft x
>17ft.
>
>Post links here.
>
>Thanks.
>
>
>

955. Re: Micro Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 01:44:08 UTC
From: Nick Lelyak <ve3ukr@sympatico.ca>
Message-ID: <K4lgc.38923$vF3.2544070@news20.bellglobal.com>
Source record: 96507

"Jeremy Salch" <salchNOSPAM@tblx.net> wrote in message
news:c5s7no$52949$1@ID-225834.news.uni-berlin.de...
> Gery Duyck wrote:
>
> > Yesterday I heard somebody talking over micro vertical antenna's for HF.
> > Seems very similar to magnetic loop's but easyer to adjust, and a bigger
> > band coverage.
> >
> > They where talking about an 60cm antenna for the 40m band.
> >
> > To bad I couldn't reply ...
> >
> > Does anybody knows something more about this antenna?
> >
> > 73'
> > ON4GDK, Gery
>
> Sounds like a dummy load, or one of the attachments for the comet UHV6
> multiband hf antenna.
>
> If they figured out a way to make it that small and actually work very
well
> I'd love to hear about that.
>
>
>
> --
> Registered Linux User #346565
> http://www.tblx.net
> WA5K

http://www.antennex.com/preview/archive4/Apr601/microvert.htm

73!
VE3UKR

956. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 01:45:46 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <a5lgc.19735$pk5.15064@fe03.usenetserver.com>
Source record: 96505

What about silver plated RF connectors?

As far as that goes, there are also plenty of gold plated connectors out
there.

Jim
N8EE

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:o911809o8dlj122jrno683r5v1tkfut38p@4ax.com...
> On Fri, 16 Apr 2004 20:40:53 -0400, "JLB" <IHateSpam@nospam.net>
> wrote:
>
> >
> >"S" <fn30@optonline.net> wrote in message
> >news:w2Zfc.20093$rV4.3064519@news4.srv.hcvlny.cv.net...
> >> silver is a better conductor than gold, but will tarnish very easily,
> >might
> >> now be a good idea for what you are intending
> >>
> >I thought that silver oxide was a decent conductor, which is why it is
> >sometimes used as a plateing material.
>
> Hi All,
>
> It hardly matters unless you are speaking of switch contacts.
> Insulated wire's insulation is absolutely unconductive, and yet in the
> context of antennas it doesn't impact the wire's capacity to carry
> current.
>
> Oxidation products only become a problem at interfaces where they
> either resist current between the joined conductors, or create a
> semiconducting barrier.
>
> The technician is taught to clean surfaces of tarnish to bring bright
> metal into contact. Then crimp them (or twist the wire - same thing)
> for a gas tight seal. Then solder them to weather proof the seal
> (solder is never meant to be a mechanical join or the conductive
> path). Common practice allows for solder to provide more
> functionality than what I describe - this does not elevate the method.
> Barring the final solder, switch contact faces must meet the same
> conditions of bright metal and gas tight seals. This is often
> achieved by pressure (some mistake the so-called "wiping" action as
> meaning to scrub the oxide away - a useful metaphor but only that;
> otherwise switches would self demolish in very few operations) and a

> sustaining current (wet vs. dry contacts).
>
> 73's
> Richard Clark, KB7QHC

957. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 01:50:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1in380thuivddlgicpterif1u2fod7d7vm@4ax.com>
Source record: 96506

On 17 Apr 2004 21:30:46 EDT, raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote:

>When I checked into the price of gold
>plating, it was only a couple of bucks more than stainless silver or
>stainless brass and I was just thinking perhaps the gold would last
>longer and perhaps even work better.

Hi Gary,

Ships at sea, for millennia, have used bronze for durability. Talk about an aggressive environment. One of my buddy's told about his experience at the Naval Research Lab where a scientist offered a cube of solid stainless steel for testing. They dumped it into sea water and dissolved it.

73's
Richard Clark, KB7QHC

958. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 02:32:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <h4o380dnhtcqjqs9f2eb4dvvs2jep4m3c7@4ax.com>
Source record: 96508

On Sat, 17 Apr 2004 21:45:46 -0400, "JLB" <IHateSpam@nospam.net>
wrote:
>What about silver plated RF connectors?
>
>As far as that goes, there are also plenty of gold plated connectors out
>there.

Hi Jim,

What about them indeed? If they don't meet the requirements of bright untarnished metal, then they need pressure mating (all the good ones I know specify this - but deeply embedded within their core manufacturing specs) e.g. Amp RF connectors:
"Insufficient contact force will give rise to metal to oxide junctions. The classic rectifiers were metal oxide by composition.

"The applied mounting force is concentrated in the surface area of the protrusion which, on engagement with the panel, punctures the existing oxide layer to give a metal-to-metal, gas-tight junction."

The gold plating, presumably, precludes giving rise to oxidation products; however, pressure then becomes an issue of mating surface area (Ohms). Every precision contact used for Resistance and Voltage standards (in the old days) were tapered brass plugs that could be wedged into the jack with a twist (pressure). They knew about gold then too, but brass served admirably.

73's
Richard Clark, KB7QHC

959. Re: collins 30L1

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 02:34:58 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4081E951.DAF49435@sonic.net>
Source record: 96509

Why is this vintage so sought after?

Aren't there as good units available today that include all the current bands?

Any recommendation for linears in the same power realm which are comparable in reliability and price? Also, how do Solid State amps compare to Tube amps?

-bill

Carl Domanico wrote:

> Wanted Collins 30L-1 Round Emblem Amplifer...Mint to Excellent
> Condition........
>
> Reasonably Priced
> Carl
> N2MFW

960. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 02:36:42 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4081E9B9.DEB8E61F@sonic.net>
Source record: 96510

Anyone tested that gray UV resitant PVC pipe? What about that for ladder line spacers?

-bill

Richard Clark wrote:

> On Sat, 17 Apr 2004 23:38:29 GMT, zeno <zeno@sonic.net> wrote:
> >ps. has anyone actually heard of a diy ladder line having a spacer melt down
> >while running power? no reason why it couldn't happen....
>
> Hi Bill,
>
> This has never been reported here. Instead, it is noted by the
> characteristic Z of the line being lower than computed. Such
> measurements (of the characteristic Z) can be performed through a few
> simple but still time consuming tests.
>
> 73's
> Richard Clark, KB7QHC

961. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 02:48:58 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4081EC9A.6CBB8E7F@sonic.net>
Source record: 96511

>
> Most local noise is conductive. That is, it comes from the source and
> the sink residing on the same breaker in the panel. The source noise
> current injects itself into the sensitive sink side that is sharing
> the path. By using an extension cord, you can confirm this by
> powering the noise source off another outlet that goes to a different
> breaker. That noise that is not conductive is radiative. It arrives
> from the source through the air. This can be nipped in the bud by
> using a transmission line choke at its entry (generally the feedpoint
> of the antenna).
>
> 73's
> Richard Clark, KB7QHC

Is this true for all antenna designs? Is this choke various depending on other characteristics of antenna and feedline.

For example, in my anticipated 160m full wave loop which I plan to feed with diy ladder line to a Johnson Matchbox (250w), is there a specific recommendation for such a choke? Can I simply make what I need with a few windings of something around another round something and than wrapp it in rubber tape etc. Is this something I can incorporate into the hardware system at the antenna feedpoint where I will be attaching the two ends of my loop to the ladder line?

-bill

962. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 03:29:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bat380dv37jagk5f514u164fa1uft1leug@4ax.com>
Source record: 96512

On Sun, 18 Apr 2004 02:36:42 GMT, zeno <zeno@sonic.net> wrote:
>Anyone tested that gray UV resitant PVC pipe? What about that for ladder line
>spacers?

Hi Bill,

Each formulation seems to be distinct, but offhand I don't recall
which is which. To broaden your experience with this forum, visit:
http://groups.google.com/groups?oi=djq&as_ugroup=rec.radio.amateur.antenna
and checkout their advanced search page. Use "PVC" and "Loss" as
keywords in the search. The topic is not so novel as to be sparsely
represented in the archive.

73's
Richard Clark, KB7QHC

963. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 03:36:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <vjt380lc3eosrv0rdcfu1uej6umaqnercq@4ax.com>
Source record: 96513

On Sun, 18 Apr 2004 02:48:58 GMT, zeno <zeno@sonic.net> wrote:
> Is this something I can incorporate
>into the hardware system at the antenna feedpoint where I will be attaching the two
>ends of my loop to the ladder line?

Hi Bill,

Feedline chokes are principally designed for the nature of coax which
is unbalanced by design. Ladder line is presumably balanced and thus
resists noise pickup of local origin. However, the balance is
strictly a matter of its load, and if either end of the line meets an
unbalance, the whole system is off balance and noise can intrude
through what is called "the common mode." As such, balance is a very
local thing that only you can determine through performance.

I imagine that a loop would be harder to unbalance; but dipoles,
especially low ones, are very susceptible.

73's
Richard Clark, KB7QHC

964. Re: collins 30L1

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 03:37:35 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <TISdnUOTj-0ZZRzd4p2dnA@ctc.net>
Source record: 96514

"zeno" <zeno@sonic.net> wrote in message news:4081E951.DAF49435@sonic.net...
> Why is this vintage so sought after?
>
> Aren't there as good units available today that include all the
> current bands?
>

This item is one of the 'collector radios'. Just as some older cars are
more desirable to restore than others. The Heathkit will work just as well
or beter than the Collins but does not have the collector value. Maybe
there were more Heathkits made but they are around $ 300 for the 1 kw modle
and the Collins are twice that or more.

965. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 03:40:42 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <1KudnSpfuMiiZBzdRVn-sQ@ctc.net>
Source record: 96515

"zeno" <zeno@sonic.net> wrote in message news:4081E9B9.DEB8E61F@sonic.net...
> Anyone tested that gray UV resitant PVC pipe? What about that for ladder
line
> spacers?
>
>

I can't say that I tested it but I have an 8 element 220 mhz beam on a 10
foot piece of the grey electrical conduit that has been up over 15 years. I
think it is about 1 1/2 inches in diameter.

966. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 06:20:49 UTC
From: j999w@aol.com
Message-ID: <20040418022049.27202.00000048@mb-m15.aol.com>
Source record: 96516

How about a top loaded vertical with every bit of that garden loaded with radials???

Many of those longwave NDB's run antennas that are fairly small and they get out well.

jw
K9RZZ

967. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 06:45:41 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c5t86l$9li$1@titan.btinternet.com>
Source record: 96517

> Any designs for a small antenna to work on 160M? My garden is approx 40ft
x
> 17ft.
==========

Hi, M3,

The following set-up will work okay. Been there, done that. Height is the critical dimension. It will be about 2 S-units worse than ideal.

Inverted-L antenna. Vertical section = 40 feet. Put a pole on house chimney to increase height. Horizontal section 40 feet. You can extend length at far end by making it an Inverted-U.

A sytem of ground radials is essential. 8, 12, 16 shallow-buried radial wires at least 25 or 30 feet long in ordinary, damp garden soil. Important - connect the domestic plumbing pipes and incoming water main to the ground radial system.

A tuner is essential. The average commercial tuner will NOT cope. You will need a home brew tuner. Wind some tapped coils on toilet roll tubes using 20 or 22 gauge wire. Inductance values up to 100 uH. See program SOLNOID3.

Tuning capacitor = 500 pF maximum, 750 volts working, not particularly wide spaced plates. A LARGE old-fashioned receiving-type capacitor would be OK. Also obtain a few fixed-value, mica capacitors. Be prepared to experiment with tuning capacitor and coil values.

If you like playing with a few numbers, download in a few seconds program ENDFEED from website below and run immediately. This program computes performance and also provides values of T-match and L-match components for given antenna wire dimensions.

160 meters, 50 miles groundwave in daylight with 100 watts. Transatlantic on CW, if you try hard, on long, very quiet, winter nights.

It will be also be usable at high efficiency on higher frequency bands. For practical purposes, taking one band with another, it will be omni-directional.

Get program ENDFEED from -
.....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
.....

968. grounding half size g5rv

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 11:00:57 UTC
From: David Browne <dddd@ddd>
Message-ID: <20040418070051.181$74@news.newsreader.com>
Source record: 96518

hi were is the best place to ground the g5rv,i have ground wire from pl259
were coax connects to the ladder line,then run to ground rod is this
rightor should it be run from radio end
thanks dave browne 2e0dmb

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.659 / Virus Database: 423 - Release Date: 15/04/2004

969. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 11:22:27 UTC
From: K1SWR <K1SWR@adelphia.net>
Message-ID: <kledncтjlv1q-R_dRVn-vg@adelphia.com>
Source record: 96369

How about the isotron antenna. take a look at:
www.rayfield.net/isotron

"M3" <***> wrote in message news:4081ab53.0@entanet...
> Hi,
>
> Any designs for a small antenna to work on 160M? My garden is approx 40ft
x
> 17ft.
>
> Post links here.
>
> Thanks.
>
>
>

970. Re: Micro Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 11:47:46 UTC
From: Gery Duyck <Gery@duyck-co.be>
Message-ID: <40826ae9$0$928$a0ced6e1@news.skynet.be>
Source record: 96370

Tnx for info!

Looks ideal for on holiday.

"Nick Lelyak" <ve3ukr@sympatico.ca> schreef in bericht
news:K4lgc.38923$vF3.2544070@news20.bellglobal.com...
>
> "Jeremy Salch" <salchNOSPAM@tblx.net> wrote in message
> news:c5s7no$52949$1@ID-225834.news.uni-berlin.de...
> > Gery Duyck wrote:
> >
> > > Yesterday I heard somebody talking over micro vertical antenna's for
HF.
> > > Seems very similar to magnetic loop's but easyer to adjust, and a
bigger
> > > band coverage.
> > >
> > > They where talking about an 60cm antenna for the 40m band.
> > >
> > > To bad I couldn't reply ...
> > >
> > > Does anybody knows something more about this antenna?
> > >
> > > 73'
> > > ON4GDK, Gery
> >
> > Sounds like a dummy load, or one of the attachments for the comet
UHV6
> > multiband hf antenna.
> >
> > If they figured out a way to make it that small and actually work very
> well
> > I'd love to hear about that.
> >
> >
> >
> > --
> > Registered Linux User #346565
> > http://www.tblx.net
> > WA5K
>
>
> http://www.antennex.com/preview/archive4/Apr601/microvert.htm
>
> 73!

> VE3UKR
>

971. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 13:13:03 UTC
From: "H. Adam Stevens" <mayaone@earthlink.net>
Message-ID: <z9vgc.19562$A_4.13276@newsread1.news.pas.earthlink.net>
Source record: 96371

Well Tom, I'm just looking to explain the data: I'm puzzled as well.
Same truck, Durango with a ball mount right rear.
Same MFJ analyzer. Same very short coax from inside the truck.
Everything grounded with 2" copper strap.
Same 14.300 MHz; Same whip. The measurements repeat reliably.
Three motor-tuned antennas, Nott, Tarheel, Hi-Q.
Three different impedances at resonance (ie purely resistive load.)
9, 20 and 30 ohms. Now I can see the radiation resistance being slightly higher with the Tarheel, it's a foot longer, but that hardly explains a factor of two. So it must be the loss resistance. Part of the difference is the base tube, and the copper/aluminum/diameter issue obeys the appropriate scaling laws. (BTW I think the Hi-Q is 1.5" diameter, but I'm not sure and I am not at the ranch where the antenna is stored.)
When I adjust the tap on the transformer to give a 50 ohm load to the MFJ for each antenna, the Nott gives the greatest near-field signal strength.
Perhaps a further investigation of the remaining sources of resistance is in order. The Hi-Q should have the least leakage, it's a beautiful piece of work. The Tarheel appears to be built of better materials than the Nott. (Lexan vs PVC for example.) Go down to 80 meters and they're all 10 ohms; coil losses clearly dominate there where radiation resistance is tiny.

I think a complete solution to Maxwell's Equations would be helpful, but I'm busy at the moment.

For all I know the paint or powder coating on the aluminum antennas is the real culprit.
The Nott's just bare copper.
What is the radiation resistance of an 8 foot whip antenna resonant in a 16.5 foot world?
Just a bit less than 10 ohms, right?
Maybe the comparison should be to BARE aluminum.
Just my morning thought on a puzzle I've been looking at for several months.

73 es tnx fer qso
de nq5h
k

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0404171502.13298777@posting.google.com...
> "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net> wrote in message
news:<108274abamjk4c@corp.supernews.com>...
>
> > The Nott is 2" diameter bare copper 3' long.
> > The Tarheel is 2" diameter painted aluminum 4' long.
> > The Hi-Q is 1" diameter powder-coated aluminum 3' long.

>
> A 2" diameter bare copper rod or cylinder at 14MHz, 3' long, should
> have an RF resistance about 6 milliohms. The worst aluminum alloy
> you're likely to see should be about 12 milliohms; 24 for the 1"
> diameter. What am I missing here? How does that translate to a
> change from 9 ohms to 20 ohms to 30 ohms at the feedpoint? If the
> cause is resistance heating of the copper or aluminum tube, what's
> doing the impedance transformation, and how is it so efficient? That
> much loss should result in measurable temperature rise in the tube (or
> wherever the loss is), at 100-W power levels.
>
> Or perhaps my image of what you're measuring is all out of whack.
> Same loading coil in each case? I'd kind of expect the loading coil
> to be the main loss mechanism, if all the connections are tight.
>
> Puzzled and seeking enlightenment,
> Tom

972. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 13:25:50 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404180525.433bd307@posting.google.com>
Source record: 96372

raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote in message news:<4081da45.90247062@news.galilei.com>...
> Hi M3
>
> Can you eke out 6 to 8 more feet somehow?
>
> Take a look at my linear loaded inverted Vee
> http://archimedes.galilei.com/raiar
>
> It has worked like gangbusters for me and for several others who have
> tried it also.

I took a look at it and it's not 100% clear to me from the sketch in your website how your loaded vee is actually laid out, half of it seems to be "missing". Is the "missing half" another complete leg attached to the other side of the balun? In other words is the end-to-end overall "wingspan" 80+ feet? If yes how could it fit in the M3's 40 foot back yard? Or am I missing something very fundamental??

> TTUL
> Gary

Brian w3rv

>
>
> "M3" <***> verbositized:
>
> >Hi,
> >
> >Any designs for a small antenna to work on 160M? My garden is approx 40ft x
> >17ft.
> >
> >Post links here.
> >
> >Thanks.
> >
> >
> >

973. May 86 Article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 13:52:08 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <cKvgc.8856$PO4.5841@newssvr24.news.prodigy.com>
Source record: 96373
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

There'a an article in the May 1986 QEX titled "A Bridge Method of Sweep-Frequency Impedance Measurement" by W3UB. My QEX collection is missing this issue and I wonder if anyone has a scan they can provide me?
tnx
Hank WD5JFR

974. Re: Best antenna for an Icom T90A (rig and car)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 14:19:02 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <yu-dnQnJ-cfJEx_dRVn-hw@adelphia.com>
Source record: 96374
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.antenna

Daniel J. Morlan wrote:
> Anyone have what they think is the best antenna for a 2m, 70cm, 6m?
> Price isn't an object in this case. I just want a choice of some
> great antennas. I have a mag mount right now, but it's got a
> Bayonet-style antenna, and not the screw-on.
>
> (Pardon the lack of expertise, I'm a comparative new ham)
>
> WW6DJM
>
> Dan

Hi Dan.

I took the liberty of forwarding the message to
rec.radio.amateur.antenna. It is a better group for this subject.

Your question is a little broad. I'm not sure of the application, base
or mobile, or if you would like a multiband or what.

If you want a good general purpose antenna, there are multiband 2m/70cm
ones out there. Single band antennas work well also. I've made a ground
plane for the house, and the mobile antennas use the car body for the
ground plane, although I've heard some discussion to the contrary. A
number of people like J-pole antennas, I've just built one for 2 meters,
and am evaluating it now.

If you want more "gain", you might look into one of the multi-element
antennas. These are a good deal more expensive, and need a rotator, as
the gain in one direction is offset by a null in the opposite direction.

But so much depends on what you want to do. If repeater operations are
your main interest on the higher frequencies, then the ground
plane/jpole approach is better IMO, unless you are on a fringe area and
need the gain just to hit the repeater.

On six meters, there are a number of options, from dipole to the
multiple element antennas also. The same ideas apply.

Hope this helps, but if you like, you can give us a few more details.

- Mike KB3EIA -

975. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 14:45:13 UTC
From: M3 <***>
Message-ID: <408294b0.0@entanet>
Source record: 96375

K1SWR wrote:
> How about the isotron antenna. take a look at:
> www.rayfield.net/isotron

Sounds ideal, any one used/using one do they really work. I'm only looking to work local not really bothered with DX as such.

Cheers all for your replies so far.

976. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 14:58:45 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408297f6$1_7@corp.newsgroups.com>
Source record: 96376

M3 wrote:

> K1SWR wrote:
>>How about the isotron antenna. take a look at:
>>www.rayfield.net/isotron
>
> Sounds ideal, any one used/using one do they really work. I'm only looking
> to work local not really bothered with DX as such.

Save your money. An Isotron for 160m is simply a very bad idea.
The best idea so far is a vertical, as tall as you can make it,
with a radial system as extensive as you can make it, with a
top hat as big as you can make it, matched at the base of the
antenna.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

977. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 15:22:52 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40829c33.139892765@news.galilei.com>
Source record: 96377

Thanks Richard

You may have solved my problem!

I will definitely check into using bronze.

Thanks
Gary

978. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 15:37:03 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40829e59.140442953@news.galilei.com>
Source record: 96378

Hi Brian

There are two legs, only one is shown as the other is identical to it.

The closer you bring the ends the more directional the antenna becomes. I had my legs 80 feet apart on one system and only 25 feet apart on another system, both worked equally well, except the one with the smaller spread was considerably more directional.

In my response I had asked if the poster could eke out another 6 to 8 feet, making that 17 feet dimension possibly 23 to 25 feet wide. Because at under 20 feet of spread, it begins to loose some functionality and noise levels increase exponentially. At least where mine was installed that is.

I had tried all kinds of antennas for 160 in my small backyard and this one worked the best for me in my situation. Many others have used it, most with great success, but in some locations it worked worse than other designs they were using.

When I moved the legs from the northern facing backyard to the southern facing front yard, the antenna did not work very well at all. Probably because of the many obstructions around it when situated in that direction.

It's cheap, easy to assemble and try, if it doesn't work, you still have your two 130 feet sections of wire to try something else.

TTUL
Gary

979. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 15:53:21 UTC
From: Edward Lewis <kq6dx@pacbell.net>
Message-ID: <bu8580dddk4kbbcuo23rkn4tehij08q4gi@4ax.com>
Source record: 96379

On Sun, 18 Apr 2004 15:45:13 +0100, "M3" <***> wrote:

>K1SWR wrote:
>> How about the isotron antenna. take a look at:
>> www.rayfield.net/isotron
>
>Sounds ideal, any one used/using one do they really work. I'm only looking
>to work local not really bothered with DX as such.
>
>Cheers all for your replies so far.
>
I used an isotron 160 antenna for a short time. Working local stations
it worked great but I was never able to work any DX.

980. Re: Best antenna for an Icom T90A (rig and car)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 16:06:27 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <lh9580hlr8v3s4jvq8pndh4ee574i6fi08@4ax.com>
Source record: 96380

On Sun, 18 Apr 2004 10:19:02 -0400, Mike Coslo <mcoslo@adelphia.net>
wrote:

>Daniel J. Morlan wrote:
>> Anyone have what they think is the best antenna for a 2m, 70cm, 6m?
>> Price isn't an object in this case. I just want a choice of some
>> great antennas. I have a mag mount right now, but it's got a
>> Bayonet-style antenna, and not the screw-on.
>>
>> (Pardon the lack of expertise, I'm a comparative new ham)
>>
>> WW6DJM
>>
>> Dan
>
> Hi Dan.
>
>I took the liberty of forwarding the message to
>rec.radio.amateur.antenna. It is a better group for this subject.
>
> Your question is a little broad. I'm not sure of the application, base
>or mobile, or if you would like a multiband or what.
>
> If you want a good general purpose antenna, there are multiband 2m/70cm
>ones out there. Single band antennas work well also. I've made a ground
>plane for the house, and the mobile antennas use the car body for the
>ground plane, although I've heard some discussion to the contrary. A
>number of people like J-pole antennas, I've just built one for 2 meters,
>and am evaluating it now.
>
> If you want more "gain", you might look into one of the multi-element
>antennas. These are a good deal more expensive, and need a rotator, as
>the gain in one direction is offset by a null in the opposite direction.
>
>But so much depends on what you want to do. If repeater operations are
>your main interest on the higher frequencies, then the ground
>plane/jpole approach is better IMO, unless you are on a fringe area and
>need the gain just to hit the repeater.
>
> On six meters, there are a number of options, from dipole to the
>multiple element antennas also. The same ideas apply.
>
>Hope this helps, but if you like, you can give us a few more details.
>

> - Mike KB3EIA -
>
>
My guess is that he's interested in a mobile antenna due to mentioning the mag-mount. Diamond has a 6/2/440 mobile antenna available in either UHF or NMO mount; it can be connected to just about any type of vehicle mount as long as you go UHF to UHF or NMO to NMO. The radio mentioned is a handheld with an SMA mount, a means of connecting the PL259 to the SMA is needed. I'd recommend one of the newer adapter cables as using a direct 239 to SMA adapter will put notably more stress on the SMA connector on the radio and that's inviting problems.

Howard KE6something or other

981. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 16:34:02 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040418123402.08553.00000054@mb-m01.aol.com>
Source record: 96381

>>I have 1,225 sq. ft. of small link aluminum chain link fencing that is going to be buried as the start of my ground system in this graded area.<<

which will most likely disintegrate in the ground into white powder.

Yuri, K3BU

982. Re: May 86 Article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 16:50:23 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <jlygc.18358$gF.9928@newssvr22.news.prodigy.com>
Source record: 96382
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I got them..
thanks
Hank WD5JFR
"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:cKvgc.8856$PO4.5841@newssvr24.news.prodigy.com...
> There'a an article in the May 1986 QEX titled "A Bridge Method of
> Sweep-Frequency Impedance Measurement" by W3UB. My QEX collection is
> missing this issue and I wonder if anyone has a scan they can provide me?
> tnx
> Hank WD5JFR
>
>

983. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 16:54:57 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4082b331$1_2@corp.newsgroups.com>
Source record: 96383

Gary V. Deutschmann, Sr. wrote:
> I had my legs 80 feet apart ...

Ouch!

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984. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 16:56:26 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4082b38a$1_2@corp.newsgroups.com>
Source record: 96384

Edward Lewis wrote:
> I used an isotron 160 antenna for a short time. Working local stations
> it worked great but I was never able to work any DX.

I'll bet most of your radiation was from your feedline.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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985. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 17:01:46 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <0LqdnZc3z7H_KR_dRVn-sQ@comcast.com>
Source record: 96385

"Yuri Blanarovich" <k3bu@aol.comNoUsama> wrote in message
news:20040418123402.08553.00000054@mb-m01.aol.com...
>
> >>I have 1,225 sq. ft. of small link aluminum chain link fencing that is
> going to be buried as the start of my ground system in this graded
> area.<<
>
> which will most likely disintegrate in the ground into white powder.

Anyone remember "beldfoil" aluminum sheilded cables?
It was sold in the 70's as a replacement for copper shielding.
After a few months exposure to salt air, the aluminum turned into white
powder, leaving only the drain wire as a sheild. Not very effective.
I think they've given up on that, and gone back to copper, though I have
seen copper shield used along with the aluminum-mylar material.

986. Re: Micro Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 17:09:23 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0404180909.5f96c4fa@posting.google.com>
Source record: 96386

The secret to the MicroVert and other "amazing" short verticals is the choked quarter-wavelength feedline acting as the primary radiator -- contrary to claims that it defies physics and doesn't radiate. The short vertical element and its accompanying accouterments are contributing very little to radiation but a lot to imedpance balancing -- the need for which is caused by the short element. It would actually perform better as a low-angle DX antenna if the "counterpoise" were made vertical and the short loaded element made horizontal.

Al WA4GKQ

"Gery Duyck" <Gery@duyck-co.be> wrote in message news:<40819326$0$875$a0ced6e1@news.skynet.be>...
> Yesterday I heard somebody talking over micro vertical antenna's for HF.
> Seems very similar to magnetic loop's but easyer to adjust, and a bigger
> band coverage.
>
> They where talking about an 60cm antenna for the 40m band.
>
> To bad I couldn't reply ...
>
> Does anybody knows something more about this antenna?
>
> 73'
> ON4GDK, Gery

987. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 17:44:50 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4082BE90.1C0782F@sonic.net>
Source record: 96387

Hi Richard,

Thanks for the link to the archives, I will check it out.

I imagine there a few hams who want to make their own ladder line these days. Other than finding some vintage ceramic spacers (rare) what are they using?

Apparently paraffin soaked dowels are not without some shortcomings. I think there is at least one ham who has a cottage industry selling his homemade version ladder-line which, from what I can gather, utilizes the black poly piping that I mentioned earlier.

I think I came across at least one ham who has used the grey UV/PVC pipe which he slices (saws) lengthwise and then drills holes and/or notches etc. This seems a bit labor intensive if one wants to make any quantity, but maybe not as much as I think.

If the UV/PVC pipe is a good solution, I might be able to track down a source of 3/8" UV/PVC pipe which I would not slice up, but just cut into 6" lengths and then devise a fastening system on either end for the wire.

Bill

Richard Clark wrote:

> On Sun, 18 Apr 2004 02:36:42 GMT, zeno <zeno@sonic.net> wrote:
> >Anyone tested that gray UV resitant PVC pipe? What about that for ladder line
> >spacers?
>
> Hi Bill,
>
> Each formulation seems to be distinct, but offhand I don't recall
> which is which. To broaden your experience with this forum, visit:
> http://groups.google.com/groups?oi=djq&as_ugroup=rec.radio.amateur.antenna
> and checkout their advanced search page. Use "PVC" and "Loss" as
> keywords in the search. The topic is not so novel as to be sparsely
> represented in the archive.
>
> 73's
> Richard Clark, KB7QHC

988. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 17:48:23 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4082BF65.DB20F786@sonic.net>
Source record: 96388

Richard Clark wrote:

The additional ground rods don't do much, RF-wise. You are far better

> off with wire laid out radially on or just below the ground surface.
> However, what you have is good.

How long should those radials be? and would just a couple be better than none?

Bill

989. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 17:54:39 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c5ufcvfnn1@hercules.btinternet.com>
Source record: 96389

> I'll bet most of your radiation was from your feedline.
> --
> 73, Cecil

But it worked, didn't it!

990. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 18:04:22 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <Gqzgc.22101$6m4.691102@twister.southeast.rr.com>
Source record: 96391

First thought is that it would heat up and detune itself. But this would only be a problem on transmission and if the tube holding the mecury was very thin. Conductivity of mercury is not so great compared to more traditionally used metals but this should not be significant compared to the radiation resistance of most antennas.

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:407af777_3@corp.newsgroups.com...
> Forget about the feasibility of this question for the moment.
> Could a column of mercury inside a tube of glass be used as an
> antenna?
> --
> 73, Cecil, W5DXP
>
>
>
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> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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991. Re: grounding half size g5rv

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 18:08:22 UTC
From: w9dmk@crosslink.net
Message-ID: <4082c3f5.21061224@news.crosslink.net>
Source record: 96390

On Sun, 18 Apr 2004 12:00:57 +0100, "David Browne" <dddd@ddd> wrote:

>hi were is the best place to ground the g5rv,i have ground wire from pl259
>were coax connects to the ladder line,then run to ground rod is this
>rightor should it be run from radio end
> thanks dave browne 2e0dmb

Dear Dave,

It is simpler to do the earthing at the point where the coax is coming
as close to the earth as it gets.

You may find it helpful to build a "ground frame", which is a metal
framework having bulkhead UHF connectors in a metal plate, which is
then well earthed. The coax lines from the antennas come to this plate
and then proceed into the shack from the other side. You can place as
many deep ground rods as you like around that frame and connected to
that frame - the more the better.

Bob, W9DMK, Dahlgren, VA
http://www.qsl.net/w9dmk

992. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 18:10:13 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4082C483.E1E7998D@sonic.net>
Source record: 96392

Hi Richard,

I think at least one of the metal masts I will be using to hang the 160m loop might lend itself to the vertical antenna you suggest. It is the one that is a full 50' in height, and will be out in the middle of the orchard where ground radials can be installed easily. Unfortunately this particular mast is the one farthest away from the shack, approx. 500 feet.

Questions:

1. For reference purposes, what is the exact description (name) of this vertical? Any recommendations for information in print about this concept?

2. What band, or bands, would it be good for? (Assuming the guy wires are generally in the position of effectivenes as guy wires.)

3. Would it be monoband, tuned to an exact f, or possibly multiband?

4. Where would one attach the feed line and would a run of 500' to the shack still be worth the effort?

5. If I understand, the antenna is comprised of the mast itself (with telescoping sections securely and electrically bonded to each other) plus the "extension" of calculated lengths of the four guy wires, utilizing insulators at precise points before being attached to ground anchors.

6. How would the mast be mounted to the ground? Should it ideally be isolated from ground or contiguous with the ground? Theortically I could build a short wooden platform or something.

7. Other than the mast itself, the four guy wires, and some kind of system of radials in the ground, are there any other elements to this antenna that I should know about or be thinking about?

Bill

Richard Clark wrote:

> On Sat, 17 Apr 2004 18:14:58 GMT, zeno <zeno@sonic.net> wrote:
> >I am getting ready to put up my masts (5 of them) for a 160m
> >full wave loop. For the most part I am using recycled
> >telescoping tv masts which will be up around 50+ feet.
>
> Hi Bill,
>
> You are on the threshold of being able to do much more for slightly

> more effort.
>
> Let's suppose you use wire with insulators to break them up (generally
> only advised as a must below tower mounted beams so that opportunistic
> resonances don't mess up directionality and tune).
>
> Further, let's suppose all wires at the top have a good metal
> connection to the mast.
>
> Further, let's suppose each of these wires is broken such that the
> first insulator(s) is more than 25 or 30 feet above ground (straight
> down, I am not measuring along the wire).
>
> Nothing else matters beyond what you would then do for general
> construction.
>
> I presume that all masts are driven into the ground (or at least are
> not insulated from ground); and that at each mast you could build a
> radial ground screen of eight to a dozen wires as broad as those first
> set of insulators are out from the mast (probably 20 to 30 feet each).
>
> You then have the opportunity of developing four broadband vertical
> antennas (each with a gamma feed because of the grounded situation).
> There's a good chance they would operate on 80M without too much
> effort (you might push them to 160).
>
> Most of the work is in the top connection, and the first set of
> insulators - beyond that no commitments are needed if you simply
> decide to walk away later. That is easy with little difference in the
> up front effort.
>
> 73's
> Richard Clark, KB7QHC

993. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 18:19:46 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4082C6C0.51F53950@sonic.net>
Source record: 96393

Richard,

I just remembered, there will be three tiers of guy wires (four wires at each level), one set at the top, one set ten feet down from that, another ten feet down from that,etc.. Can all of these guy wires be part of the antenna system? Like you mentioned, kind of a "umbrella skeleton". It might be tricky to make sure that the guy wires both bond to the circular ring around the mast which the wires attach to, and to make sure that this metal ring also bonds well to the mast, I will have to think about a good technique here. I guess I could carefully weld them in place (normally they are tightly fitted to the pole, but can still slide up or down), I am sure you have seen these old tv telescoping masts, they seem fairly standard.

Bill

zeno wrote:

> Hi Richard,
>
> I think at least one of the metal masts I will be using to hang the 160m
> loop might lend itself to the vertical antenna you suggest. It is the one
> that is a full 50' in height, and will be out in the middle of the
> orchard where ground radials can be installed easily. Unfortunately this
> particular mast is the one farthest away from the shack, approx. 500
> feet.
>
> Questions:
>
> 1. For reference purposes, what is the exact description (name) of this
> vertical? Any recommendations for information in print about this
> concept?
>
> 2. What band, or bands, would it be good for? (Assuming the guy wires are
> generally in the position of effectivenes as guy wires.)
>
> 3. Would it be monoband, tuned to an exact f, or possibly multiband?
>
> 4. Where would one attach the feed line and would a run of 500' to the
> shack still be worth the effort?
>
> 5. If I understand, the antenna is comprised of the mast itself (with
> telescoping sections securely and electrically bonded to each other) plus
> the "extension" of calculated lengths of the four guy wires, utilizing
> insulators at precise points before being attached to ground anchors.
>

> 6. How would the mast be mounted to the ground? Should it ideally be
> isolated from ground or contiguous with the ground? Theortically I could
> build a short wooden platform or something.
>
> 7. Other than the mast itself, the four guy wires, and some kind of
> system of radials in the ground, are there any other elements to this
> antenna that I should know about or be thinking about?
>
> Bill
>
> Richard Clark wrote:
>
> > On Sat, 17 Apr 2004 18:14:58 GMT, zeno <zeno@sonic.net> wrote:
> > >I am getting ready to put up my masts (5 of them) for a 160m
> > >full wave loop. For the most part I am using recycled
> > >telescoping tv masts which will be up around 50+ feet.
> >
> > Hi Bill,
> >
> > You are on the threshold of being able to do much more for slightly
> > more effort.
> >
> > Let's suppose you use wire with insulators to break them up (generally
> > only advised as a must below tower mounted beams so that opportunistic
> > resonances don't mess up directionality and tune).
> >
> > Further, let's suppose all wires at the top have a good metal
> > connection to the mast.
> >
> > Further, let's suppose each of these wires is broken such that the
> > first insulator(s) is more than 25 or 30 feet above ground (straight
> > down, I am not measuring along the wire).
> >
> > Nothing else matters beyond what you would then do for general
> > construction.
> >
> > I presume that all masts are driven into the ground (or at least are
> > not insulated from ground); and that at each mast you could build a
> > radial ground screen of eight to a dozen wires as broad as those first
> > set of insulators are out from the mast (probably 20 to 30 feet each).
> >
> > You then have the opportunity of developing four broadband vertical
> > antennas (each with a gamma feed because of the grounded situation).
> > There's a good chance they would operate on 80M without too much
> > effort (you might push them to 160).
> >
> > Most of the work is in the top connection, and the first set of
> > insulators - beyond that no commitments are needed if you simply
> > decide to walk away later. That is easy with little difference in the
> > up front effort.

> >
> > 73's
> > Richard Clark, KB7QHC

994. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 18:24:18 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4082C7D0.6E67FE4@sonic.net>
Source record: 96394

Hi Richard,

OK, I will install the ladder line to the loop without embellishment first, then see how it performs in the specific locale then go from there.

Bill

Richard Clark wrote:

> On Sun, 18 Apr 2004 02:48:58 GMT, zeno <zeno@sonic.net> wrote:
> > Is this something I can incorporate
> >into the hardware system at the antenna feedpoint where I will be attaching the two
> >ends of my loop to the ladder line?
>
> Hi Bill,
>
> Feedline chokes are principally designed for the nature of coax which
> is unbalanced by design. Ladder line is presumably balanced and thus
> resists noise pickup of local origin. However, the balance is
> strictly a matter of its load, and if either end of the line meets an
> unbalance, the whole system is off balance and noise can intrude
> through what is called "the common mode." As such, balance is a very
> local thing that only you can determine through performance.
>
> I imagine that a loop would be harder to unbalance; but dipoles,
> especially low ones, are very susceptible.
>
> 73's
> Richard Clark, KB7QHC

995. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 18:32:05 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ioh580dchrv0oimgpb05u5a7uonh5ihl07@4ax.com>
Source record: 96395

On Sun, 18 Apr 2004 18:04:22 GMT, "Jimmy" <Gfender@carolina.rr.com>
wrote:
>First thought is that it would heat up and detune itself. But this would
>only be a problem on transmission and if the tube holding the mecury was
>very thin. Conductivity of mercury is not so great compared to more
>traditionally used metals but this should not be significant compared to the
>radiation resistance of most antennas.

Hi Jimmy,

There are so many things wrong with this sentiment....

For one, this "tube of mercury" (that everyone takes for granted) to
be "tuned" by temperature would have an exceedingly small capillary
(my lab models are easily less than 1mm). Second, constructions of
wavelengths longer than for 2M are laughable (but then, so is the
entire concept). You could never support the column within it as it
would draw a vacuum in its collapse under the influence of gravity
(AKA barometer). Try to counter that with a thinner capillary
(anyone see where this is going in comparison to radiation
resistance?) and almost any heat expansion will rift the enclosure.

When do we get to depleted uranium elements that pre-ionize the ï¿½ther
around them for "matching?" Will it escape the notice of many that we
would have to then abide by exposure rules from both the FCC and the
Nuclear Regulatory Agency? Or even the NIH?

73's
Richard Clark, KB7QHC

996. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 18:34:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8ei580lr6qjmt1rpd61d13ljkrid06uqin@4ax.com>
Source record: 96396

On 18 Apr 2004 11:22:52 EDT, raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote:

>Thanks Richard
>
>You may have solved my problem!
>
>I will definitely check into using bronze.
>
>Thanks
>Gary
>

Hi Gary,

Look for what is called "white bronze." Such is the premium connector base metal that is then plated with Gold. The reason for this is to reduce IM products (the Bronze has a lower electrochemical interface).

73's
Richard Clark, KB7QHC

997. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 18:46:37 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <m5j580tiepqinh5olh1tmqkp1mq65ed07a@4ax.com>
Source record: 96397

On Sun, 18 Apr 2004 17:54:39 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:

>> I'll bet most of your radiation was from your feedline.
>> --
>> 73, Cecil
>
>But it worked, didn't it!

Why doesn't someone write a book on radiating feedlines? They'd be a
heck of a lot easier to put up than antennas :-)

Bob
k5qwg
>

998. Re: Tracking down noise

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 19:16:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0ki5809va5pa9pffpj3ecpi35l4h0n6p5h@4ax.com>
Source record: 96398

On Sun, 18 Apr 2004 17:48:23 GMT, zeno <zeno@sonic.net> wrote:
>Richard Clark wrote:
>>The additional ground rods don't do much, RF-wise. You are far better
>> off with wire laid out radially on or just below the ground surface.
>> However, what you have is good.
>
>How long should those radials be? and would just a couple be better than none?

Hi Bill,

The current is densest at the feed point for a quarterwave vertical.
Invest copper density in the first eighth wavelength with fewer
radials migrating out beyond there, and so on for as much as you can
tolerate.

The classic FCC grounds run from 112 to 120 quarterwave lengths to
give something like 95% shielding from ground (the point of radials).
Scaling does not follow a strict law of proportionality as 60 would be
85% effective. The proportion is more log based than arithmetic such
that a dozen (roughly a tenth of the FCC standard) would be at least
50% effective. Now, such pencil-whipping is based on abstractions
drawn from full quarterwave radials under a full quarterwave radiator
(classic field work for AM stations). As such, there are a lot of
variables to consider, and yet a dozen, eighthwave long would be a
solid RF ground.

However, few of us have properties that long/wide (without things in
the way) when trying to get into the 160M band game. So ultimately
you do what you can and don't gloat to those who know better. On the
flip side, 160M RF penetration into the ground is substantial and the
traditional ground rods do offer some advantage, and as Reggie offers,
so does the water service - find pipes.

Another myth exploded is when you hear DXers crow about horizontals
have no need of ground systems - they obviously have enough "gain" to
discard the 1 or more dB advantage in a ground screen below their
prima donna antenna.

RF ground serves many functions:
1. A reference to tune against (stability, a sink - what you seek);
2. A shield to reduce ground loss (more gain);
3. A reflector to enhance low propagation angles (more gain).

Please note that number 3 is offered for verticals only, at distances
of many wavelengths away - such is the advantage of shore placed
antennas. As such, "ground" is a misnomer (swamp, lake, ocean, or sea

serves instead) - and ignore the babble about the "conductivity" of these being so much better. It is the drastic mismatch between the ï¿½ther and the body of water that does the DX charm, conductivity is in the toilet.

73's
Richard Clark, KB7QHC

999. RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 19:31:20 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <clAgc.18390$fQ1.3296@newssvr22.news.prodigy.com>
Source record: 96399
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Does anyone recall seeing an article for constructing a return loss bridge
in RF Design in late 80s or early 90s? I'd like to see if I can get a
scan, I've been bitten by the RLB bug.
tnx
Hank WD5JFR

1000. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 19:37:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4082d952_3@corp.newsgroups.com>
Source record: 96401

Reg Edwards wrote:

>>I'll bet most of your radiation was from your feedline.

> But it worked, didn't it!

Pity the poor ham who puts an Isotron on a ten foot pole
for field day.
--
73, Cecil http://www.qsl.net/w5dxp

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1001. Re: RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 19:38:33 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <ZOAgc.21625$yD1.50337@attbi_s54>
Source record: 96400
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> Does anyone recall seeing an article for constructing a return loss bridge
> in RF Design in late 80s or early 90s? I'd like to see if I can get a
> scan, I've been bitten by the RLB bug.

If you finished your VNA, you already have one Hank.

W4ZCB

1002. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 19:41:28 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4082da39$1_3@corp.newsgroups.com>
Source record: 96402

Richard Clark wrote:
> Second, constructions of
> wavelengths longer than for 2M are laughable ...

For a horizontal antenna???
--
73, Cecil http://www.qsl.net/w5dxp

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1003. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 19:51:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4082dc8f$1_3@corp.newsgroups.com>
Source record: 96403

Bob Miller wrote:
> Why doesn't someone write a book on radiating feedlines? They'd be a
> heck of a lot easier to put up than antennas :-)

A 1/2WL dipole is an open-circuit radiating feedline
complete with reflections. :-) From Balanis: "The current
and voltage distributions on open-ended wire antennas are
similar to the standing wave patterns on open-ended
transmission lines." Wasn't the original Gap antenna
simply a leaky transmission line?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1004. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 20:04:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <12l580t0jk5ok24r4e7ifntkpf2bh037h2@4ax.com>
Source record: 96404

On Sun, 18 Apr 2004 18:10:13 GMT, zeno <zeno@sonic.net> wrote:

>Hi Richard,
>
>I think at least one of the metal masts I will be using to hang the 160m
>loop might lend itself to the vertical antenna you suggest.

Hoist wire for the rest! After all, you are already doing that aren't
you?

> It is the one
>that is a full 50' in height, and will be out in the middle of the
>orchard where ground radials can be installed easily. Unfortunately this
>particular mast is the one farthest away from the shack, approx. 500
>feet.
>
>Questions:
>
>1. For reference purposes, what is the exact description (name) of this
>vertical? Any recommendations for information in print about this
>concept?

Folded Unipole (N. O. L.);
Type UG;
NORD;
Triangular Folded Unipole (VOA aboard the USCGC Courier)

re:
"The Amateur Radio Vertical Antenna Handbook," Capt. Paul H. Lee, N6PL
>
>2. What band, or bands, would it be good for? (Assuming the guy wires are
>generally in the position of effectivenes as guy wires.)

Folded Triangular Unipole is 45 feet tall and rated from 3 to 10.5 MHz

NORD 30 feet tall and rated from 2 to 4 MHz;

Folded NOL Unipole is 0.124 wavelength tall;

Type UG is 0.048 wavelength tall.

>
>3. Would it be monoband, tuned to an exact f, or possibly multiband?

Depends on antenna type and number of guy wires. The devil is in the
details as the saying goes.

>4. Where would one attach the feed line and would a run of 500' to the
>shack still be worth the effort?

At the base. Run an exciter to a remote amp. That is, put your loss
into the cheapest signal to boost. Move the shack ;-)

>5. If I understand, the antenna is comprised of the mast itself (with
>telescoping sections securely and electrically bonded to each other) plus
>the "extension" of calculated lengths of the four guy wires, utilizing
>insulators at precise points before being attached to ground anchors.

Exactimundo.

>6. How would the mast be mounted to the ground? Should it ideally be
>isolated from ground or contiguous with the ground? Theortically I could
>build a short wooden platform or something.

Folded Unipoles (which are wide band within the band of interest and
some bands are very wide) are fed with their base at ground potential
(add radials here). The feed point is through a cap, up the drop
wire. that is descending from the conductive (half) yard arm.

The other types are fed in series (the base insulated from ground).
Comparisons should be studied. If building an insulated base is no
problem, shorting it to ground becomes an easy option.

>7. Other than the mast itself, the four guy wires, and some kind of
>system of radials in the ground, are there any other elements to this
>antenna that I should know about or be thinking about?

Don't forget the drop wire. Search the web for Folded Unipoles
(verticals) for illustrations to make this clearer. There is also a
series cap to tune it. It is basically a very big gamma match.

By varying the diameter of the drop wire to the mast diameter, you get
transformer action that boosts or lowers the feedpoint R. As most of
these are very short antennas with very low radiation resistance, the
wire diameter to mast diameter ratio often boosts that value to 50
Ohms without too much problem.

WARNING, this boost does not raise efficiency! That remains a
function of the radiation resistance compared to structure Ohmic loss
and ground loss. The feed point R is simply a boosting of BOTH the
radiation resistance AND those loss Rs too.

73's
Richard Clark, KB7QHC

1005. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 20:06:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <arn5801n1ep6b3fs2hr5fnfqvm211h0umk@4ax.com>
Source record: 96405

On Sun, 18 Apr 2004 17:44:50 GMT, zeno <zeno@sonic.net> wrote:

>If the UV/PVC pipe is a good solution, I might be able to track down a source of
>3/8" UV/PVC pipe which I would not slice up, but just cut into 6" lengths and
>then devise a fastening system on either end for the wire.

Hi Bill,

The sellers and methods are as diverse as the stars. It is really
very simple with few gotchas. It really is more a matter of build
and test - the only real validation you can trust.

73's
Richard Clark, KB7QHC

1006. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 22:34:39 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4083027D.D4A3B41B@sonic.net>
Source record: 96406

Richard Clark wrote:

> On Sun, 18 Apr 2004 18:10:13 GMT, zeno <zeno@sonic.net> wrote:
>
> >Hi Richard,
> >
> >I think at least one of the metal masts I will be using to hang the 160m
> >loop might lend itself to the vertical antenna you suggest.
>
> Hoist wire for the rest! After all, you are already doing that aren't
> you?
>

This goes back to my original question, should I use rope or wire for the guys on these masts. If I use the dacron rope I would use pulleys so i can later change out the rope if need be without taking down the masts. My concern with using wire as guys (as was usually done with old tv masts on roofs) was that all these lengths of wire in the proximity might in some way adversely effect my 160m loop.

Using wire guys would be easier. Aside from all this additional complication of anticipating some kind of future vertical antenna system I barely understand at this point, is it definitely ok to use wire as guys? I might just use wire guys, not broken up with insulators, not worrying about these future antenna possibilities. These masts are simply too far away from the shack, but I need to guy them just to put them up.

When using metal masts for wire antennas, what is the standard practice for guying these masts?

>

> Folded Unipole (N. O. L.);
> Type UG;
> NORD;
> Triangular Folded Unipole (VOA aboard the USCGC Courier)
>
> re:
> "The Amateur Radio Vertical Antenna Handbook," Capt. Paul H. Lee, N6PL
> >
> >2. What band, or bands, would it be good for? (Assuming the guy wires are
> >generally in the position of effectivenes as guy wires.)
>
> Folded Triangular Unipole is 45 feet tall and rated from 3 to 10.5 MHz
>
> NORD 30 feet tall and rated from 2 to 4 MHz;

>
> Folded NOL Unipole is 0.124 wavelength tall;
>
> Type UG is 0.048 wavelength tall.
>

I will not really understand this antenna until I can see a simple picture of it somewhere, and, since I am a beginner, would need to know what purposes such an antenna might serve me at this point, eg. is there a particular band or a particular advantage that I cannot get elsewhere with my other more common antenna systems. I am at a point where I am simply looking for possible worthwhile antennas I can construct hoping that one or two might prove effective.

You did mention something about the advantages of vertical over horizontal and I was not sure which band you were referring to. At this point I have not considered any vertical antennas, but am open to verticals, if not the folded unipole you are discussing, maybe some other kind of vertical. At this point I don't know anything about verticals really other than the hassel of putting in radials. I like the idea of a mast being an antenna and the guy wires being part of the antenna, but what I need is a child's picture book illustration of such an antenna and why such an antenna would be the bees knees for me.

Here is what I currently (and practically) understand about the antenna you are discussing. It is a vertical folded dipole of some kind in which the 50' mast is one leg, another drop wire from the top is the other half (which I assume is fed somewhere in the middle of this drop wire by hooking up coax feed line). In addition to this folded dipole (vertically oriented) and with one leg (the mast) much greater diamter than the other half (drop wire), it has a bunch of guy wires attached to the mast at various points which somehow add something to the antenna, the guy wires need to be some special length. There needs to be an elaborate radial system underneath threaded through the orchard with weeds growing on top of them and not shallow enough to get caught in the mower. To even use this antenna, on whatever mysterious band it is good for, I would have to make special electronic accomodations to deal with the loss resulting from the feedline being greater than 500 feet to the shack (or move the shack closer to the antenna), eventually this long feedline would have to be in conduit and buried.

I think that it would be easier just to put up another mast, closer to the shack, just for the purpose of exploring this antenna, rather than bend over backwards to make use of a mast out in the field just because it is there. These old telescoping tv masts are plentiful at the county dump, I will keep collecting them. It is conceivable I could put one up with a feedline less than 200 feet to the shack, that shouldn't be any problem with loss, no?

But I still need to know, or be reminded, in the simplest of terms, why I want such an antenna, and what special advantages it might have on what bands I might eventually be excited about.

1007. Re: collins 30L1

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 22:39:44 UTC
From: Dan/W4NTI <w4nti@get>
Message-ID: <QsDgc.12689$l75.8385@newsread2.news.atl.earthlink.net>
Source record: 96407

"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:TISdnUOTj-0ZZRzd4p2dnA@ctc.net...
>
> "zeno" <zeno@sonic.net> wrote in message
news:4081E951.DAF49435@sonic.net...
> > Why is this vintage so sought after?
> >
> > Aren't there as good units available today that include all the
> > current bands?
> >
>
> This item is one of the 'collector radios'. Just as some older cars are
> more desirable to restore than others. The Heathkit will work just as
well
> or beter than the Collins but does not have the collector value. Maybe
> there were more Heathkits made but they are around $ 300 for the 1 kw
modle
> and the Collins are twice that or more.
>
>

Also the Collins amp is built like a brick battleship. I can attest to its rugidness having draged it all around South East Asia while in the military.

Dan/W4NTI

1008. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 22:42:05 UTC
From: jgboyles@aol.com
Message-ID: <20040418184205.12201.00000053@mb-m13.aol.com>
Source record: 96408

>I imagine there a few hams who want to make their own ladder line these days.
>Other than finding some vintage ceramic spacers (rare) what are they using?

Hi Zeno, Read back thru this thread, there have been all sorts of suggestions. You can use cut up plastic coathangers, plexiglass, PVC, cut-up vinyl chopping boards ect., for spacers. The spacing can be 1"-6". The wire can be #14 insulated-#20 insulated or uninsulated. Saw a number of suggestions to get it in the house.
My suggestion is to pick out a method and materials that you like, and try it out. You will probably be pleased with the results. I like all my ladder (open wire) line
73 Gary N4AST

1009. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 22:50:29 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <10861he51cld870@corp.supernews.com>
Source record: 96409

But then, maybe SILVER (AG) ! Silver is one heck of a conductor, and what,
pray , when it Oxidizes (AG - O) ? Turns out that the conductivity of
Silver Oxide is almost as great as SILVER! (but, as for the effeciency, ,
unless severe resistance (perhaps in a hi "Q" loading coil for a mobile)
Doubt would make much difference that could be detected! Jim NN7K

--
No trees were killed in the sending of this message. However, a large number
of electrons were terribly inconvenienced !

"H. Adam Stevens, NQ5H" <NQ5H@ARRL.net> wrote in message
news:1080idig63tuv6d@corp.supernews.com...
> Hi Roy;
> It's worse than that: Copper will diffuse throught the gold and pile up on
> the surface.
> I showed that with an Auger microprobe at Motorola decades ago.
> So to go to a gold surface, nickel is mandatory, then a thick gold
coating;
> Too expensive!
> It's not like the switch from aluminum to copper, which is a 2x
resistivity
> improvement.
> You just can't beat plain old copper.
> 73
> H.
> NQ5H
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:10805ek15cqib5c@corp.supernews.com...
> > I've seen real-life cases with high-Q microstrip structures where gold
> > plating actually caused a significant lowering of efficiency. As you
> > point out, nickel is used as a barrier metal to prevent alloying of the
> > gold with the underlying copper. If the gold isn't at least several skin
> > depths thick, significant current flows in the nickel. Nickel is a
> > particularly poor RF conductor, very much worse than copper, because the
> > skin depth in nickel is decreased dramatically by its ferromagnetic
> > permeability. So, if you're able to calculate skin depth, and know what
> > you're doing, and are willing to use quite a bit of gold (particularly
> > necessary at HF and below) you can achieve efficiency with gold plating
> > that's pretty much indistinguishable from that of copper. If you don't
> > know what you're doing, it is possible to substantially degrade the
> > efficiency by gold plating. I'm sure somebody could be conned into
> > buying one, though.
> >
> > Roy Lewallen, W7EL

> >
> > Gary V. Deutschmann, Sr. wrote:
> >
> > > Hi Gang
> > >
> > > Since the radiation of an antenna is done primarily on the surface of
> > > the elements (or wire) would gold plating the elements increase the
> > > efficiency of the antenna in any way?
> > >
> > > Gold sounds expensive, but if thin enough, one ounce of gold could
> > > plate an entire football field. Brass corrods, nickel is usually used
> > > as the first plating before another metal like gold is plated over
> > > that. If the cost for gold over the cost of brass is only about 1
> > > buck per foot of element length, making cost not relavent to the
> > > question. Would a gold plated antenna work better than aluminum or
> > > nickel plated?
> > >
> > > TTUL
> > > Gary
> > >
>
>

1010. Re: Best antenna for an Icom T90A (rig and car)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 22:50:30 UTC
From: danielmorlan@yahoo.com
Message-ID: <a7dee37b.0404181450.133aaa52@posting.google.com>
Source record: 96410
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.antenna

Ah! Thanks a lot! Actually 2 Meters is really the ONLY one I'm wanting to be using. I have a new Icom T90A, and just want a nice car antenna for talking on 2 meters. It's an HT. I have an actual Icom V8000 rig, but that's for indoors. (Got a beautiful Diamond X-50 for that, and I get repeaters all over the place here in the sierra foothills. Though I have to get to work on my coax, which is damaged, but ... Got the new coax and connectors, and will be dealing with that after I move to Indianapolis.)

For now, I want to operate with a reasonable degree of effectiveness from inside my vehicle with my HT. It's a fine, fine HT. My biggest concern is 2 meters, and whether or not it comes with the coax I'll need to put on my car. Again, I am VERY new to this hobby, having only gone on the air a dozen times (since moving has taken all of my energies) and I want something to use in the car. I have a mag mount, but it has the bayonet style connector. I'll need an adapter, but I ALSO want to get a good antenna. My radio only puts out 5 watts max.

I wouldn't mind being able to test out some 6M, but 2M is most important for me. Thanks so much for your help and interest in helping.

73, WW6DJM

Dan

Mike Coslo <mcoslo@adelphia.net> wrote in message news:<yu-dnQnJ-cfJEx_dRVn-hw@adelphia.com>...
> Daniel J. Morlan wrote:
> > > Anyone have what they think is the best antenna for a 2m, 70cm, 6m?
> > > Price isn't an object in this case. I just want a choice of some
> > > great antennas. I have a mag mount right now, but it's got a
> > > Bayonet-style antenna, and not the screw-on.
> > >
> > > (Pardon the lack of expertise, I'm a comparative new ham)
> > >
> > > WW6DJM
> > >
> > > Dan
> >
> > Hi Dan.
> >
> > I took the liberty of forwarding the message to
> > rec.radio.amateur.antenna. It is a better group for this subject.
> >

> Your question is a little broad. I'm not sure of the application, base
> or mobile, or if you would like a multiband or what.
>
> If you want a good general purpose antenna, there are multiband 2m/70cm
> ones out there. Single band antennas work well also. I've made a ground
> plane for the house, and the mobile antennas use the car body for the
> ground plane, although I've heard some discussion to the contrary. A
> number of people like J-pole antennas, I've just built one for 2 meters,
> and am evaluating it now.
>
> If you want more "gain", you might look into one of the multi-element
> antennas. These are a good deal more expensive, and need a rotator, as
> the gain in one direction is offset by a null in the opposite direction.
>
> But so much depends on what you want to do. If repeater operations are
> your main interest on the higher frequencies, then the ground
> plane/jpole approach is better IMO, unless you are on a fringe area and
> need the gain just to hit the repeater.
>
> On six meters, there are a number of options, from dipole to the
> multiple element antennas also. The same ideas apply.
>
> Hope this helps, but if you like, you can give us a few more details.
>
> - Mike KB3EIA -

1011. Re: collins 30L1

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 22:53:52 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408306FE.89678F2B@sonic.net>
Source record: 96411

Hi Dan,

So it is desirable because it is great to have Collins quality and reliability, and the compromise of its not having some of the current bands is forgiveable in light of its collectibility.

Vintage has a certain "bargain" appeal because you get "yesterdays" high quality (USA) without the very high cost of today's quality units. I just wondered how people felt about the apparent compromises in band versitility, and the slightly lower power.

bill

Dan/W4NTI wrote:

> "Ralph Mowery" <rmowery@ctc.net> wrote in message
> news:TISdnUOTj-0ZZRzd4p2dnA@ctc.net...
> >
> > "zeno" <zeno@sonic.net> wrote in message
> news:4081E951.DAF49435@sonic.net...
> > > Why is this vintage so sought after?
> > >
> > > Aren't there as good units available today that include all the
> > > current bands?
> > >
> >
> > This item is one of the 'collector radios'. Just as some older cars are
> > more desirable to restore than others. The Heathkit will work just as
> well
> > or beter than the Collins but does not have the collector value. Maybe
> > there were more Heathkits made but they are around $ 300 for the 1 kw
> modle
> > and the Collins are twice that or more.
> >
> >
>
> Also the Collins amp is built like a brick battleship. I can attest to its
> rugidness having draged it all around South East Asia while in the military.
>
> Dan/W4NTI

1012. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 23:04:36 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40830982.57C4CD32@sonic.net>
Source record: 96412

I just found several hundered feet of used #10 solid copper, insulated wire, it was pulled out of my well (submersible 240V pump) a few years ago. Any reason, aside from weight, not to use this #10 wire for constructing diy ladder-line? I understand the bigger the wire the less the loss (what little there is with ladder-line), also I understand that solid core copper will stay straighter and maintain the spacing better than braided. The insulation is kind of thick and rubbery (it went down to the well submersible), would it be better to cut off the insulation or just leave it? If cut off do I need to clean it up further or just leave the residue on the wire? Since this is three wires braded together I would have to do some major straigtening first. Maybe this is just a bit too heavy, now that I think of it, there is alot of copper there. Any motivating advantages???

Bill

Larry Gagnon wrote:

> Hello to all. I intend to erect an 80 meter full size dipole and feed
> it with homebrew open ladder line. Would anyone care to reply as to how
> to construct ladder line easily and effectively? How does one determine
> spacing to get X ohms impedance line?
>
> Also any ideas on how such line can easily be fed in through a window
> with a wood frame would be greatly appreciated.
>
> Larry Gagnon VE7EA
>
> --
> **********
> to reply via email remove "fake"

1013. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 23:24:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <793680d5lrfi8u8f919skpbv33ts2h8617@4ax.com>
Source record: 96413

On Sun, 18 Apr 2004 18:19:46 GMT, zeno <zeno@sonic.net> wrote:
> I am sure
>you have seen these old tv telescoping masts, they seem fairly standard.

Hi Bill,

I have a 40 foot military vertical mast that can be guyed at 4
intervals. Comes with stakes, rope (nylon), hardware, and a 5 pound
sledge hammer and it all fits into a 5 foot duffel bag.

As for bonding the lower guys (if they were wire), that would not be
par for the course. The top loading is only described at the top.
This is not to say such "linear loading" wouldn't be useful, but the
topic becomes more elaborate.

73's
Richard Clark, KB7QHC

1014. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 23:28:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mh36809ra0hq7p1hqts80k8s7hhng3lfvc@4ax.com>
Source record: 96414

On Sun, 18 Apr 2004 22:34:39 GMT, zeno <zeno@sonic.net> wrote:

>This goes back to my original question, should I use rope or wire for the
>guys on these masts. If I use the dacron rope I would use pulleys so i can
>later change out the rope if need be without taking down the masts.

Hi Bill,

Still a very good question. As I put pulleys up many trees (pulleys
at the bottom to for a continuous loop, flag pole style), your point
is well taken.

>My
>concern with using wire as guys (as was usually done with old tv masts on
>roofs) was that all these lengths of wire in the proximity might in some way
>adversely effect my 160m loop.

For a loop, it depends on how you drive it and if it is square. This
is the story of the origin of the quad in Quito Ecuador at HCJB. If
you corner feed it, then each corner exhibits hi-tension and becomes a
source for corona. If you center feed it, you rotate those hi-tension
points into the centers of the other sides. Less sharp bend, less
corona prospects.

I would imagine wire supports in the vicinity of a corona bend would
spell trouble.

73's
Richard Clark, KB7QHC

1015. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 23:29:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tq3680hgm45gg4s4aj4f37jqgfdln4k28f@4ax.com>
Source record: 96415

On Sun, 18 Apr 2004 14:41:28 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Second, constructions of
>> wavelengths longer than for 2M are laughable ...
>
>For a horizontal antenna???
keep the chuckles comin'

1016. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-18 23:56:40 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4083160a_7@corp.newsgroups.com>
Source record: 96416

zeno wrote:
> This goes back to my original question, should I use rope or wire for the
> guys on these masts?

Not only do I use non-conductive rope/string for my guy "wires",
I use non-conductive supports, wood/fiberglas. Works for me.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

1017. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:00:14 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408316df_7@corp.newsgroups.com>
Source record: 96417

zeno wrote:
> I just found several hundered feet of used #10 solid copper, insulated
> wire, it was pulled out of my well (submersible 240V pump) a few years
> ago. Any reason, aside from weight, not to use this #10 wire for
> constructing diy ladder-line?

Maybe you should patent the idea of a self-supporting transmission line?
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1018. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:01:55 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40831745_7@corp.newsgroups.com>
Source record: 96418

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>
>>Richard Clark wrote:
>>>Second, constructions of
>>>wavelengths longer than for 2M are laughable ...
>>
>>For a horizontal antenna???
>
> keep the chuckles comin'

You know I don't care for verticals. :-)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1019. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:10:50 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40831908.758D080D@sonic.net>
Source record: 96419

Anyone just use lengths of copper pipe or tubing? You might only need a tiny spacer every 5 feet or so. Was that you or someone else who made the ladder line out of tubing shaped like a sine wave.... hi hi

seriously, though, if one needed a section of ladder line to really stay put (say a section which gets nervously close to other naughty metal things or wire, why couldn't you fabricate just that section out of copper tubing and then go the rest of the way with wire? Are there impedance issues when changing the wire thickness along the way?

73

Bill

Cecil Moore wrote:

> zeno wrote:
> > I just found several hundered feet of used #10 solid copper, insulated
> > wire, it was pulled out of my well (submersible 240V pump) a few years
> > ago. Any reason, aside from weight, not to use this #10 wire for
> > constructing diy ladder-line?
>
> Maybe you should patent the idea of a self-supporting transmission line?
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1020. Re: Best antenna for an Icom T90A (rig and car)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:29:48 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <DemdnehNkK7ngB7dRVn-gg@adelphia.com>
Source record: 96420
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.antenna

Daniel J. Morlan wrote:

> Ah! Thanks a lot! Actually 2 Meters is really the ONLY one I'm
> wanting to be using. I have a new Icom T90A, and just want a nice car
> antenna for talking on 2 meters. It's an HT.

Okay, now we have something to work with. I'm using a 5/8th wave antenna on my car. It works pretty well. I'd suggest one of those. The brand is MFJ. Some don't like them, but it has performed well for over 3 years now. It has a small bottom loading coil. If you can spare the height, a full length version should perform a bit better.

Most come with coax.

Then you have to deal with mounting. I use a mag mount, and can run the cable between the doors of my Cherokee and it looks good. If that doesn't work for you, you can possibly run the cable down the back and into the trunk, then back up.

You can also use a trunk lip mount and do the same.

If you are really brave, you can body mount the antenna, but that is quite a project.

I don't recommend glass mount antennas for 2 meters.

After mounting the antenna, get a bnc or sma adapter, according to your needs, give the swr a check, and there you go. The big thing to look out for on installations is to avoid crimping the coax between doors, trunk lid, etc. That can create a swore problem.

I used a HT in the car for quite a while. (FT-50) Worked just fine. You should be happy with it. With a decent antenna and 5 watts, it is impressive how well it works.

- Mike KB3EIA -

1021. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:35:21 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40831EC7.89903029@sonic.net>
Source record: 96421

Richard Clark wrote:

> On Sun, 18 Apr 2004 22:34:39 GMT, zeno <zeno@sonic.net> wrote:
>
> >This goes back to my original question, should I use rope or wire for the
> >guys on these masts. If I use the dacron rope I would use pulleys so i can
> >later change out the rope if need be without taking down the masts.
>
> Hi Bill,
>
> Still a very good question. As I put pulleys up many trees (pulleys
> at the bottom to for a continuous loop, flag pole style), your point
> is well taken.
>
> >My
> >concern with using wire as guys (as was usually done with old tv masts on
> >roofs) was that all these lengths of wire in the proximity might in some way
> >adversely effect my 160m loop.
>
> For a loop, it depends on how you drive it and if it is square. This
> is the story of the origin of the quad in Quito Ecuador at HCJB. If
> you corner feed it, then each corner exhibits hi-tension and becomes a
> source for corona. If you center feed it, you rotate those hi-tension
> points into the centers of the other sides. Less sharp bend, less
> corona prospects.
>
> I would imagine wire supports in the vicinity of a corona bend would
> spell trouble.
>
> 73's
> Richard Clark, KB7QHC

Hi Richard,

Interesting about the loop configurtion. My propose loop was at first going to be square, then after scouting the actual route around the real estate here, it became more of a trapazoid with the feed (diy ladder line) in the corner of the shortest side. Upon more precise measurement of the actual perimeter inscribed by the four masts, it was discovered that said perimeter was actuall about 50' in excess of 540' loop length. Now I am planning to add the 5th mast (the one in the middle of the orchard discussed earlier) which will both put a little new "corner" in the longest side and also add renewed elevation (50') to an otherwise sagging 180' continuous run, this 5th mast will be used to pull out (via pulleys and dacron line) some of that 50' excess to the 540' loop length.

So basically we are talking a squarish 160m full wave loop, fed at a corner. Since I may not actually hitch-hike the vertical unipole we discussed on any of these masts (having plenty of other options on my 7 acre spread as well as other masts) maybe I will just make life simple and use the dacron and pulleys for the system of guys. But this does still leave the metal mast in the proximity of these corners, so the question is: how much more of a problem (corona etc.) is adding metal wire guys to an already existing metal mast. My simplistic intuition is, the more wire at more angles in the vacinity cannot help the situation. So unless I hear otherwise, I guess I will plan to use the dacron for the guys on all masts.

Speaking of trees and pulleys. I just had my first experience putting up an 80m OCF between two trees 140' apart. I used a sling shot method. When the antenna was hoisted, the rope perch at the top dropped down and although the antenna does work (especially better than my previous random end fed long wire), I do have to do it over again to get it as high as the trees are capable of. After a little wind storm, it dropped down further. Trees are a challenge. I am hoping to meet the local ham-archer who, rumor has it, can shoot an arrow exactly where you want it with exactly the right amount of momentum. He will definitely be necessary to get a line 175' up my Eucalytus tree in the back section of the property where I was fantasizing a 160 OCF and an alternate "getaway" shack.

I may just end up with little alternate ham shacks anywhere where I can put up a good antenna here. This will be another definition of "mobile" or "portable"......

Bill

1022. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:40:10 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40831FE8.CE4AAACF@sonic.net>
Source record: 96422

Hi Cecil,

Tell me more about your wood/fiberglass supports. How do you make a 40-50' mast out of this material? Is this a type of nautical craftsmanship? Do you feel that the metal masts are inviting potential problems or do you think my proposed loop might be in the ballpark of ok to good with the metal masts at the corners? The actual loop wire may be ten feet away (via ropes) from the top of the masts.

73

Bill

Cecil Moore wrote:

> zeno wrote:
> > This goes back to my original question, should I use rope or wire for the
> > guys on these masts?
>
> Not only do I use non-conductive rope/string for my guy "wires",
> I use non-conductive supports, wood/fiberglas. Works for me.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
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1023. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:41:35 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4083203E.DA9E4452@sonic.net>
Source record: 96423

Hi Cecil,

tnx for the link. I will visit your website and get some more ideas.

73, bill

Cecil Moore wrote:

> zeno wrote:
> > This goes back to my original question, should I use rope or wire for the
> > guys on these masts?
>
> Not only do I use non-conductive rope/string for my guy "wires",
> I use non-conductive supports, wood/fiberglas. Works for me.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1024. Re: Best antenna for an Icom T90A (rig and car)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:46:34 UTC
From: Stephen Cowell <scowell@sbcglobal.net>
Message-ID: <KjFgc.18468$VE3.12533@newssvr22.news.prodigy.com>
Source record: 96424
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.antenna

"Daniel J. Morlan" <danielmorlan@yahoo.com> wrote in message
news:a7dee37b.0404181450.133aaa52@posting.google.com...
> Ah! Thanks a lot! Actually 2 Meters is really the ONLY one I'm
> wanting to be using. I have a new Icom T90A, and just want a nice car
> antenna for talking on 2 meters.

You want a mag-mount 5/8wave Larsen... it's a
nice 1/4wave on 6m, too. Get the Larsen mag
mount, too... your present mag-mount (probably
BNC, with a duck on it) is insufficient... BNC
connectors are not rated for outdoor exposure.
Just run the coax in the passenger side, via the
rear door's front edge, down the center post, and
under the rocker panel to the dash.

--
Steve
KI5YG
.

1025. Re: Ansoft Ensemble SV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:47:14 UTC
From: Lance Carey <lscarey@pclv.com>
Message-ID: <AkFgc.12735$dZ1.10964@fed1read04>
Source record: 96425

Ansoft no longer offers Ensemble SV for downloading.
Would any-body know where I can get a copy of the student version?
Thanks
"Eskay" <spark_gap2000@yahoo.ca> wrote in message
news:hbneukoex8ay.1wbc6kvx980yq$.dlg@40tude.net...
> On 4 Apr 2004 08:50:23 -0700, Arun SV wrote:
>
> > Hi all,
> > I need to simulate a couple of microstrip antenna designs.I
> > am told that Ansoft Ensemble SV (Student version) is a good tool to
> > work with.I was not able to find a link to download it on Ansoft's
> > website.Can anyone mail me as to where can I get the version 7/8 of
> > Ansoft ensemble SV.Thank you.
> >
> > -Arun
>
> Google: "ensemble sv" first hit.
> 73 de Eskay

1026. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 00:56:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40832407$1_7@corp.newsgroups.com>
Source record: 96426

zeno wrote:
> seriously, though, if one needed a section of ladder line to really stay
> put (say a section which gets nervously close to other naughty metal things
> or wire, why couldn't you fabricate just that section out of copper tubing
> and then go the rest of the way with wire? Are there impedance issues when
> changing the wire thickness along the way?

I have used solid copper wire sliding inside copper tubing to achieve
an adjustable length transmission line for matching purposes.
--
73, Cecil http://www.qsl.net/w5dxp

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1027. Re: collins 30L1

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 01:01:55 UTC
From: Dan/W4NTI <w4nti@get>
Message-ID: <7yFgc.12817$l75.1710@newsread2.news.atl.earthlink.net>
Source record: 96427

Depends what ur looking for I reckon. I would love to have my S-line back,
but I don't and I likely never will.

I have a SB-200 I just fixed up. Works like a champ. Looks reasonable,
but even with new tubes it wont get what a good shape 30L-1 will.

Plus I only have a couple hundred of bux in the amp. Course I know how to
fix them, so that helps.

Dan/W4NTI

"zeno" <zeno@sonic.net> wrote in message news:408306FE.89678F2B@sonic.net...
> Hi Dan,
>
> So it is desirable because it is great to have Collins quality and
reliability,
> and the compromise of its not having some of the current bands is
forgiveable
> in light of its collectibility.
>
> Vintage has a certain "bargain" appeal because you get "yesterdays" high
> quality (USA) without the very high cost of today's quality units. I just
> wondered how people felt about the apparent compromises in band
versitility,
> and the slightly lower power.
>
> bill
>
> Dan/W4NTI wrote:
>
> > "Ralph Mowery" <rmowery@ctc.net> wrote in message
> > news:TISdnUOTj-0ZZRzd4p2dnA@ctc.net...
> > >
> > > "zeno" <zeno@sonic.net> wrote in message
> > news:4081E951.DAF49435@sonic.net...
> > > > Why is this vintage so sought after?
> > > >
> > > > Aren't there as good units available today that include all the
> > > > current bands?
> > > >
> > >
> > > This item is one of the 'collector radios'. Just as some older cars
are
> > > more desirable to restore than others. The Heathkit will work just as
> > well

> > > or beter than the Collins but does not have the collector value.
Maybe
> > > there were more Heathkits made but they are around $ 300 for the 1 kw
> > modle
> > > and the Collins are twice that or more.
> > >
> > >
> >
> > Also the Collins amp is built like a brick battleship. I can attest to
its
> > rugidness having draged it all around South East Asia while in the
military.
> >
> > Dan/W4NTI
>

1028. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 01:05:28 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408325D6.D27E8D61@sonic.net>
Source record: 96429

Cecil Moore wrote:

> zeno wrote:
> > seriously, though, if one needed a section of ladder line to really stay
> > put (say a section which gets nervously close to other naughty metal things
> > or wire, why couldn't you fabricate just that section out of copper tubing
> > and then go the rest of the way with wire? Are there impedance issues when
> > changing the wire thickness along the way?
>
> I have used solid copper wire sliding inside copper tubing to achieve
> an adjustable length transmission line for matching purposes.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
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That's interesting, so you find wire whose OD is just right for the ID of the tubing and that makes a good enough connection and is adjustable. How much adjustment were you after, inches or feet?

-Bill

1029. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 01:08:56 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408326fb_7@corp.newsgroups.com>
Source record: 96428

zeno wrote:
> Tell me more about your wood/fiberglass supports. How do you make a 40-50'
> mast out of this material?

I use 2x4s to get to 30' and then 1.5" fiberglass tubing for the other 20'.
If cost is no object, the entire support could be fiberglass. I got mine
from: http://www.ryanherco.com in Houston. Fiberglass pipe is really
handy for a number of applications (including Escrima Sticks :-)
--
73, Cecil http://www.qsl.net/w5dxp

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1030. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 01:17:53 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40832914_7@corp.newsgroups.com>
Source record: 96431

zeno wrote:

> Cecil Moore wrote:
>>I have used solid copper wire sliding inside copper tubing to achieve
>>an adjustable length transmission line for matching purposes.

> That's interesting, so you find wire whose OD is just right for the ID of the
> tubing and that makes a good enough connection and is adjustable. How much
> adjustment were you after, inches or feet?

I just relied on skin effect to effect the proper conductive function. RF
won't flow into the inside of the tubing if it has any other "choice". :-)

The thing was adjustable from 20 feet to 35 feet in order to make a G5RV
truly a fully functional all-HF-band antenna. It really did work nearly
perfectly and could be automated using something like a screwdriver motor.
--
73, Cecil http://www.qsl.net/w5dxp

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1031. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 01:17:56 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4396805j2v3top09i99vde587irjjhsdjo@4ax.com>
Source record: 96430

On Mon, 19 Apr 2004 00:35:21 GMT, zeno <zeno@sonic.net> wrote:
>But this does still leave the metal mast in the proximity of
>these corners, so the question is: how much more of a problem (corona etc.) is
>adding metal wire guys to an already existing metal mast. My simplistic
>intuition is, the more wire at more angles in the vacinity cannot help the
>situation. So unless I hear otherwise, I guess I will plan to use the dacron for
>the guys on all masts.

Goferit.

The answer to proximity (seeing you have more perimeter than you need)
is to simply keep the corner off, away from the mast about 10 or 20
feet. In other words, you put the masts at corners that are well
outside the bends of the loop. Thus you are suspending the loop bends
with dacron line (through the pulley) such that THOSE bends are well
inside the box described by the mast co-ordinates. (Think box inside
a box co-ordinate system. The exterior box corners, the masts,
support the interior box corners, the antenna.)
View with fixed font:

```
M--------------------M
|\ /|
| \ / |
| ................. |
| . . |
| . . |
| . . |
| . . |
| . . |
| . . |
| ................. |
| / \ |
|/ \|
M--------------------M
```

where
M is mast
--- is a ghost line
/ or \ is dacron going to antenna wire
... is antenna wire

You have the flexibility to put acreage to work for you, don't try
passing the bends through AT the mast itself.

73's
Richard Clark, KB7QHC

1032. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 01:40:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1086bgen2e3bab4@corp.supernews.com>
Source record: 96432

Ah, finally, someone who knows what the conductivity of silver oxide is. Although I believe silver sulfide is much more common than oxide, I've been able to find the conductivity of the sulfide but not the oxides. Just what are the conductivities of the silver oxides (AgO and Ag2O)? Which are we most likely to find on the outsides of wires? Are they really more common than the sulfide?

Roy Lewallen, W7EL

Jim wrote:
> But then, maybe SILVER (AG) ! Silver is one heck of a conductor, and what,
> pray , when it Oxidizes (AG - O) ? Turns out that the conductivity of
> Silver Oxide is almost as great as SILVER! (but, as for the effeciency, ,
> unless severe resistance (perhaps in a hi "Q" loading coil for a mobile)
> Doubt would make much difference that could be detected! Jim NN7K
>

1033. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 01:55:50 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <j3c680h9e0r1mgb3hpjjdhidag37n1ir7s@4ax.com>
Source record: 96433

On Mon, 19 Apr 2004 00:10:50 GMT, zeno <zeno@sonic.net> wrote:

>Anyone just use lengths of copper pipe or tubing? You might only need a
>tiny spacer every 5 feet or so. Was that you or someone else who made the
>ladder line out of tubing shaped like a sine wave.... hi hi
>
>seriously, though, if one needed a section of ladder line to really stay
>put (say a section which gets nervously close to other naughty metal things
>or wire, why couldn't you fabricate just that section out of copper tubing
>and then go the rest of the way with wire? Are there impedance issues when
>changing the wire thickness along the way?
>
>73
>
>Bill
>
>Cecil Moore wrote:
>
>> zeno wrote:
>> > I just found several hundered feet of used #10 solid copper, insulated
>> > wire, it was pulled out of my well (submersible 240V pump) a few years
>> > ago. Any reason, aside from weight, not to use this #10 wire for
>> > constructing diy ladder-line?

Zeno, all of your suggestions would increase the weight of the
feedline, and possibly stretch the antenna. FYI, a 500-ft. spool of
#14 or #12 insulated, stranded copper wire from Lowe's Home
Improvement (or Home Depot) runs about $15.00

Bob
k5qwg

>>
>> Maybe you should patent the idea of a self-supporting transmission line?
>> --
>> 73, Cecil http://www.qsl.net/w5dxp
>>
>> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1034. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 02:17:44 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <lEGgc.2726$CO3.241945@news20.bellglobal.com>
Source record: 96434

That IS funny!!!

Everybody knows vertical mercury antennas perform better than horizontal ones!!!

;-)

1035. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 02:36:01 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <xLmdnZLh5NuOph7d4p2dnA@adelphia.com>
Source record: 96435

Roy Lewallen wrote:

> Ah, finally, someone who knows what the conductivity of silver oxide is.
> Although I believe silver sulfide is much more common than oxide, I've
> been able to find the conductivity of the sulfide but not the oxides.
> Just what are the conductivities of the silver oxides (AgO and Ag2O)?
> Which are we most likely to find on the outsides of wires? Are they
> really more common than the sulfide?
>
> Roy Lewallen, W7EL

An interesting and eventually amusing link on silover sulfide

http://www.eecs.cwru.edu/misc/AMANDA/Student_Talk_Flyer_revised.doc

another:

http://www.brushwellman.com/alloy/tech_lit/sep02.pdf

and this:

http://nepp.nasa.gov/whisker/reference/tech_papers/chudnovsky2002-paper-silver-corrosion-whiskers.pdf<

It is interesting that the NASA paper refers to silver sulfide as
non-conductive, while the first paper gives a short and tantilizing
tidbit about forcing it into conductivity.

Hope you find the links interesting!

- Mike KB3EIA -

1036. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 05:28:39 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1086os9g2tuppb6@corp.supernews.com>
Source record: 96436

Mike,

Thanks very much for the links. They furnished quite a bit of information about silver, its alloys, and its salts, that I didn't know. They do seem to support what I had thought about sulfide being more common than oxide, and added chloride to the list of common tarnishes. And maybe the reason for the elusiveness of information on the conductivity of silver oxide is because of the strange nonlinear effects reported in the first paper. Hopefully Jim will be able to fill us in about that, since he apparently has some information on the oxides. I'm frankly startled that any oxide can have conductivity within even a few orders of magnitude of a good pure metal, so I hope he'll post the information soon. One of the links notes that only silver alloys (particularly with copper) tend to oxidize, so in order to get a coating of silver oxide, you'd need to coat your wire not with pure silver, but with an alloy that's somewhat more resistive than copper to begin with. Does that mean, Jim, that the conductivity of the plated wire would actually improve as it oxidizes?

A paper I read some time ago showed that silver plating nearly always consists not of pure silver but of some alloy (as one of the links pointed out), and nearly all those alloys have a conductivity less than copper -- some, much less. So if you want to reap whatever benefit there might be in silver corrosion products over copper ones, you'll have to put up with lower conductivity in the uncorroded wire. Seems to me to make more sense to use enameled or insulated copper wire to begin with, but I guess some folks think the appearance of silver is worth the hassle.

The only resistivity information I have is for AgS, which is apparently a common corrosion product, and its resistivity is about 100,000 times as great as silver. This isn't necessarily bad, since both a perfect conductor and a perfect insulator provide a lossless coating. The loss incurred by conductors of intermediate quality depends on the frequency and coating thickness, so it can be hard to draw conclusions about what compound might be better than another except in a specific case.

Roy Lewallen, W7EL

Mike Coslo wrote:

> Roy Lewallen wrote:
>
>> Ah, finally, someone who knows what the conductivity of silver oxide
>> is. Although I believe silver sulfide is much more common than oxide,
>> I've been able to find the conductivity of the sulfide but not the
>> oxides. Just what are the conductivities of the silver oxides (AgO and

>> Ag2O)? Which are we most likely to find on the outsides of wires? Are
>> they really more common than the sulfide?
>>
>> Roy Lewallen, W7EL
>
>
>
> An interesting and eventually amusing link on silover sulfide
>
>
> http://www.eecs.cwru.edu/misc/AMANDA/Student_Talk_Flyer_revised.doc
>
> another:
>
> http://www.brushwellman.com/alloy/tech_lit/sep02.pdf
>
>
> and this:
>
> http://nepp.nasa.gov/whisker/reference/tech_papers/chudnovsky2002-paper-silver-corrosion
-whiskers.pdf<
>
>
> It is interesting that the NASA paper refers to silver sulfide as
> non-conductive, while the first paper gives a short and tantilizing
> tidbit about forcing it into conductivity.
>
> Hope you find the links interesting!
>
> - Mike KB3EIA -
>

1037. Re: Guy wire vs. guy rope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 06:30:54 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4083721C.AD322664@sonic.net>
Source record: 96437

Hi Richard and the group,

Excellent. I can even move the 5th mast out to add even more perimeter. The clearance at each mast will be at least 10'-15' maybe more. Your keyboard image making was appreciated.

Did I mention that the ladder-line will be perpendicular, but moving away from the loop more horizontally than as a strict vertical drop. The ladder-line will be 10-20' away from the mast at that corner and needs to span maybe 45+' to the house and then maybe another 15+' feet to the matchbox. I only mention this in case I am overlooking any precautions I may have not already considered.

It looks like the loop will have to have a bit of tension in order not to droop, especially with these dacron extensions at each mast. I was planning to have the loop wire free-flowing at each corner glass strain insulator (glass can handle the abrasion, plastic could not), except the one corner closest to the point where the ladder line-attaches in order to minimize movement at that feed point juncture.

Most of the mast materials are set to go. I still need to decide on the details of the ladder-line construction, which wire and which spacers. I will use solid copper wire because braided is too wiggly and might swarm at me. Insulated vs. bare? Bare has a certain appeal. #14 vs. #12 vs. #10 (?).
Why not #10?, it is only in the air for 45'....ok maybe that is a bit heavy, a bit overkill, maybe #12 then.... anyone ever use #10 for ladder line?

I am thinking that bare #10 (or even #12) solid copper would hold its shape especially negotiating the curve from the 4' of PVC pipe it will be tied to above the house at the edge of the roof peak, then arching down and crossing between some telephone and cable tv lines, into the the side of the house through some porcelin insulators, suspended briefly in the attic, and then down through the ceiling, again through porcelin tube insulators. In other words, after I poke the two wires through the side of the house into the attic, I will, shortly thereafter, be up in the attic continuing to attach a number of spacers to these wires (wearing a dust mask and a cob-web proof hat), until I get to that point in the ceiling where the wires will again go through the porcelin insulator tubes, then on the other side of the ceiling (in the "shack"), as the wire comes into the station, I will again be adding a few more spacers until it arrives at the matchbox, at which point, I will have a coffee break.

This way the ladder line will have no breaks from the antenna feed point to the matchbox.

hmmmmm....what if I need to add length to my ladder-line later for some reason? I will hate to cut into it!

Does 60-65' of ladder line seem like a "good" number. I will double check this meaurement tomorrow. If anything, it might be longer. Are there any particular

lengths in this type of feed system I should be avoiding? BTW, the matchbox has no 160m. Until I acquire some other balanced tuner that does, if I want to try this loop on 160m, I will have to connect it to a little balanced tuner I have here using a balun.

I have learned that a good technique for tying the ladder line to the anchor above the roof's edge is to weave some of that small dia. dacron line into each side of the ladder line and use that to pull the ladder line to the support. Anyone second this, or have another solution? Pulling on the spacers doesn't seem like a good idea.

If I have stated anything that needs advice or correction, anyone, please don't hesitate.

73

Bill

Richard Clark wrote:

> On Mon, 19 Apr 2004 00:35:21 GMT, zeno <zeno@sonic.net> wrote:
> >But this does still leave the metal mast in the proximity of
> >these corners, so the question is: how much more of a problem (corona etc.) is
> >adding metal wire guys to an already existing metal mast. My simplistic
> >intuition is, the more wire at more angles in the vacinity cannot help the
> >situation. So unless I hear otherwise, I guess I will plan to use the dacron for
> >the guys on all masts.
>
> Goferit.
>
> The answer to proximity (seeing you have more perimeter than you need)
> is to simply keep the corner off, away from the mast about 10 or 20
> feet. In other words, you put the masts at corners that are well
> outside the bends of the loop. Thus you are suspending the loop bends
> with dacron line (through the pulley) such that THOSE bends are well
> inside the box described by the mast co-ordinates. (Think box inside
> a box co-ordinate system. The exterior box corners, the masts,
> support the interior box corners, the antenna.)
> View with fixed font:
>
> M----------M
> |\ /|
> | \ / |
> | ..... |
> | . . |
> | . . |
> | . . |
> | . . |
> | . . |
> | . . |
> | ..... |
> | / \ |

> |/ \|
> M----------M
>
> where
> M is mast
> --- is a ghost line
> / or \ is dacron going to antenna wire
> ... is antenna wire
>
> You have the flexibility to put acreage to work for you, don't try
> passing the bends through AT the mast itself.
>
> 73's
> Richard Clark, KB7QHC

1038. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 09:15:38 UTC
From: Thierry <"Use http">
Message-ID: <408398b8@news.vo.lu>
Source record: 96438

"Dave VanHorn" <dvanhorn@cedar.net> wrote in message
news:JO-dnXdbiqS3SRzdRVn-iQ@comcast.com...
>
> "AM200" <gt@am200.net> wrote in message
> news:m6igc.31$8t5.7@newsfe2-gui.server.ntli.net...
> > OMG your garden is TINY. You will never be able to operate on top band
> > unless you get a vertical!
> > I wish mine was 40*17ft.
>
> A loop?

A loop should be cut at approx. lambda/10, so with a circumference of 16m or
a radius of 5m !
Too bulky for a small garden

Thierry, ON4SKY
http://www.astrosurf.com/lombry

>
>

1039. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 11:02:03 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c60bjb$gl7$1@hercules.btinternet.com>
Source record: 96439

```
> A loop should be cut at approx. lambda/10, so with a circumference of 16m
or
> a radius of 5m !
> Too bulky for a small garden
==============================

What prevents it being cut with a circumference LESS than 16m.
---
Reg, G4FGQ
```

1040. Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 11:25:08 UTC
From: WA3MOJ <WA3MOJ@home.com>
Message-ID: <c60cuk02d43@drn.newsguy.com>
Source record: 96441
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Hi all, I'm looking for a good reference manual, pdf file, or web site's that will assist me in converting used UHF gear to operate on 11 meters. I'm finding there is a substantial market for such gear and I'll need some references for various solid state and tube conversions.

Thanks in advance for any help.

WA3MOJ

1041. Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 11:34:47 UTC
From: Duane Allen <computeruser@sprintmail.com>
Message-ID: <rPOgc.213$eZ5.52@newsread1.news.pas.earthlink.net>
Source record: 96440

From cartalk.com

Two antennas meet on a roof, fall in love and get married. The ceremony wasn't much, but the reception was excellent.

Duane
N6JPO

1042. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 12:03:50 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <1087g15pd92l6c7@corp.supernews.com>
Source record: 96442

But, as the respected Mother's noted ..

Duane Allen wrote:

> From cartalk.com
>
> Two antennas meet on a roof, fall in love and get married. The
> ceremony wasn't much, but the reception was excellent.
>
>
> Duane
> N6JPO

It's still a matter of propagation!

;)

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

1043. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 12:07:02 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0404190407.5d892230@posting.google.com>
Source record: 96443

raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote in message news:<40829e59.140442953@news.galilei.com>...
> Hi Brian
>
> There are two legs, only one is shown as the other is identical to it.
>
> The closer you bring the ends the more directional the antenna
> becomes. I had my legs 80 feet apart on one system and only 25 feet
> apart on another system, both worked equally well, except the one with
> the smaller spread was considerably more directional.
>
> In my response I had asked if the poster could eke out another 6 to 8
> feet, making that 17 feet dimension possibly 23 to 25 feet wide.
> Because at under 20 feet of spread, it begins to loose some
> functionality and noise levels increase exponentially. At least where
> mine was installed that is.
>
> I had tried all kinds of antennas for 160 in my small backyard and
> this one worked the best for me in my situation. Many others have
> used it, most with great success, but in some locations it worked
> worse than other designs they were using.
>
> When I moved the legs from the northern facing backyard to the
> southern facing front yard, the antenna did not work very well at all.
> Probably because of the many obstructions around it when situated in
> that direction.
>
> It's cheap, easy to assemble and try, if it doesn't work, you still
> have your two 130 feet sections of wire to try something else.

OK, thanks for the clarifications Gary.

> TTUL
> Gary

w3rv

1044. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 12:14:37 UTC
From: Ready Kilowatt <Ready@none.org>
Message-ID: <bc36ecb32b465ea62ae20499db1aa0a0@news.teranews.com>
Source record: 96446
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Wouldn't that be illegal?

"WA3MOJ" <WA3MOJ@home.com> wrote in message
news:c60cuk02d43@drn.newsguy.com...
> Hi all, I'm looking for a good reference manual, pdf file, or web site's
that
> will assist me in converting used UHF gear to operate on 11 meters. I'm
finding
> there is a substantial market for such gear and I'll need some references
for
> various solid state and tube conversions.
>
> Thanks in advance for any help.
>
> WA3MOJ
>

1045. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 12:14:44 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0404190414.7c0bf9f1@posting.google.com>
Source record: 96444

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40796a2b_6@corp.newsgroups.com>...
> N2EY wrote:
> > Dipole dimensions:
> > Innermost section (not a stub; shorted at both ends): 8'
> > Next section (stub; open at inner end): 6' 11" [resonant at 10 meters?]
> > Next section (stub, open at inner end): 13' 10" [resonant at 20 meters?]
> > Outermost section (stub, open at inner end): 27' 5" [resonant at 40 meters?]
>
> Is this just an attempt at a trapped antenna using stubs for traps?

That's exactly what it looks like to me, Cecil. That's also how its
operation is explained in the article. Why a stub that is excited
along its length should behave as a trap is not explained, nor how the
shortened sections act as loading coils (the entire antenna is only
112' 4" long, plus connections).

Note that the antenna works as follows:

10 meters: 6'11" sections act as open circuits so that 8' sections
function as dipole.

20 meters: 13'10" sections act as open circuits so that 8' plus 6'11"
sections function as dipole.

40 meters: 27'5" sections act as open circuits so that 8' plus 6'11"
plus 13'10" sections function as dipole.

80 meters: Entire antenna functions as dipole.

15 meters: 27'5" sections act as open circuits so that 8' plus 6'11"
plus 13'10" sections function as dipole on 3/2 wavelength resonance.

> It doesn't seem to model out to be very functional.

Modeling the thing looks like a real challenge for a whole bunch of
reasons. The gaps between sections may be important, for example.

> The outermost
> stub on 40m needs to have a very high impedance, i.e. 1/4WL shorted.
> That works well to resonate the vertical on 40m, but 1/8WL on 80m
> makes the antenna resonant at 3 MHz according to EZNEC.

Lattin's results prove that it is *possible*, so your model obviously
needs work to agree with physical reality. But whether the Lattin
antenna is worth all the effort and mechanical troubles is another
story.

The antenna described is a dipole rather than a vertical, but the same principles apply.

I suspect that a key element to the antenna's operation is the use of the tubular Twin-Lead, with its 0.8 velocity factor. This stuff is probably close to being unobtanium these days. Another point is the extreme narrowness of resonance on most bands.

The W5GI antenna seems to be a variation on the Lattin theme.

For all that trouble, it seems to me that a better choice (if you want direct coax feed on the non-WARC HF bands) is the classic W3DZZ trap dipole. With only two traps and mechanically robust construction it is possible to achieve direct coax feed and low SWR on 80/40/20/15/10, and the cut-and-try is much easier.

73 de Jim, N2EY

1046. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 12:20:12 UTC
From: Duane Allen <computeruser@sprintmail.com>
Message-ID: <0uPgc.2233$e4.767@newsread2.news.pas.earthlink.net>
Source record: 96445

Mike Luther wrote:

> But, as the respected Mother's noted ..
>
> Duane Allen wrote:
>
>> From cartalk.com
>>
>> Two antennas meet on a roof, fall in love and get married. The
>> ceremony wasn't much, but the reception was excellent.
>>
>>
>> Duane
>> N6JPO
>
>
>
> It's still a matter of propagation!
>
>
> ;)
>
>
Nicely done.

1047. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 12:34:21 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <oGPgc.6039$CO3.335444@news20.bellglobal.com>
Source record: 96450

Yeah right, it's all fun and games until you have a roof full of whippersnapin' in the wind...

And scanning endless hours a day finding signals to feed them...

(Duane, thanks for the morning chuckle!)

1048. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 12:38:32 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <dYOdnesxgte1VR7dRVn-jA@comcast.com>
Source record: 96447

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c60bjb$gl7$1@hercules.btinternet.com...
> > A loop should be cut at approx. lambda/10, so with a circumference of
16m
> or
> > a radius of 5m !
> > Too bulky for a small garden
> ==============================
>
> What prevents it being cut with a circumference LESS than 16m.

Indeed, there isn't anything on 160M that's going to NOT be a compromise
here.

1049. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 12:40:04 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <Zb6dnd2KW9kZVR7d4p2dnA@comcast.com>
Source record: 96448

"Duane Allen" <computeruser@sprintmail.com> wrote in message
news:0uPgc.2233$e4.767@newsread2.news.pas.earthlink.net...
> Mike Luther wrote:
>
> > But, as the respected Mother's noted ..
> >
> > Duane Allen wrote:
> >
> >> From cartalk.com
> >>
> >> Two antennas meet on a roof, fall in love and get married. The
> >> ceremony wasn't much, but the reception was excellent.
> >>
> >>
> >> Duane
> >> N6JPO
> >
> > It's still a matter of propagation!
> >
> > ;)
> >
> Nicely done.

Unfortunately, they later found out they were oppositely polarized, and the
husband had been looking up the skirt of a discone down the block.

1050. Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 12:45:27 UTC
From: prjames@mindspring.com
Message-ID: <65a4e370.0404190445.2bdcaa99@posting.google.com>
Source record: 96449
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

Greetings all,

I am planning to move to the western suburbs of Minneapolis soon, and would like to know if there are any communities that I should specifically "look at" or "avoid" due to restrictions on ham radio antennas or other issues.

Even apart from ham radio issues, I prefer rural to urban, but commute time to the areas on the west side of downtown is an issue preventing me from being too far out. Mound is probably the western limit of what I am willing to consider.

Right now I am looking at Mound, Champlin, and Maple Grove. My realtor is generally helpful, but amateur radio is a mystery to her and I do not think she is used to getting such requests.

73,

Cathy (N5WVR)

1051. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 13:03:13 UTC
From: exray <dontspamme-exray@coqui.net>
Message-ID: <1087jeasabg29f4@corp.supernews.com>
Source record: 96451
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

WA3MOJ wrote:

> Hi all, I'm looking for a good reference manual, pdf file, or web site's that
> will assist me in converting used UHF gear to operate on 11 meters. I'm finding
> there is a substantial market for such gear and I'll need some references for
> various solid state and tube conversions.
>
> Thanks in advance for any help.
>
> WA3MOJ
>

George,
Are you wanting to convert them to AM or SSB?

-BM

1052. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 13:03:51 UTC
From: Stephen Cowell <scowell@sbcglobal.net>
Message-ID: <X6Qgc.18544$JE7.16765@newssvr22.news.prodigy.com>
Source record: 96452
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"WA3MOJ" <WA3MOJ@home.com> wrote in message
news:c60cuk02d43@drn.newsguy.com...
> Hi all, I'm looking for a good reference manual, pdf file, or web site's
that
> will assist me in converting used UHF gear to operate on 11 meters. I'm
finding
> there is a substantial market for such gear and I'll need some references
for
> various solid state and tube conversions.

Kinda late for April 1, isn't it?

--
Steve
KI5YG
.

1053. Re: RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 13:15:18 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c60jd6pcn1@titan.btinternet.com>
Source record: 96453
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> Does anyone recall seeing an article for constructing a return loss bridge
> in RF Design in late 80s or early 90s? I'd like to see if I can get a
> scan, I've been bitten by the RLB bug.
==========

Isn't a return-loss bridge electrically exactly the same as the
common-or-garden SWR meter with the meter scale calibrated in something
different from SWR = 1 to infinity?

Same applies to reflection coefficient bridge.

1054. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 13:35:14 UTC
From: mi-oldradios <wa8x@yahoo.com>
Message-ID: <4083d5f1_5@newsfeed.slurp.net>
Source record: 96454
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

I guess an Extra should be able to figure it out. I would say it would be a
lot of work to put UHF FM gear on 11 meters AM/SSB. Too much work in fact.
Now if he was going to use them on GMRS FM I would say go for it BUT it
would still be illegal as they won't be FCC type accepted. Get caught
selling these things, lose your Ham ticket.

--

Please reply to:
mi_oldradios at yahoo dot com

" Stephen Cowell" <scowell@sbcglobal.net> wrote in message
news:X6Qgc.18544$JE7.16765@newssvr22.news.prodigy.com...
>
> "WA3MOJ" <WA3MOJ@home.com> wrote in message
> news:c60cuk02d43@drn.newsguy.com...
> > Hi all, I'm looking for a good reference manual, pdf file, or web site's
> that
> > will assist me in converting used UHF gear to operate on 11 meters. I'm
> finding
> > there is a substantial market for such gear and I'll need some
references
> for
> > various solid state and tube conversions.
>
> Kinda late for April 1, isn't it?
> __
> Steve
> KI5YG
> .
>
>

1055. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 13:49:36 UTC
From: Chuck Harris <cfharris@erols.com>
Message-ID: <4083d8f1$0$16477$61fed72c@news.rcn.com>
Source record: 96455
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

That doesn't make any sense. UHF gear is suited to the 400-600MHz
region. 11 meters is 27MHz. You would have to completely gut the
unit and replace all of the tuned circuits.

Besides, it is very ILLEGAL to run any non type accepted gear on the
11m CB band (unless the power is in the milliwatt region.. Even in
today's relaxed enforcement environment, running funny gear on 11m can
get your ham ticket pulled.

-Chuck Harris

OBTW, you are 18 days late for an april fools joke.

WA3MOJ wrote:
> Hi all, I'm looking for a good reference manual, pdf file, or web site's that
> will assist me in converting used UHF gear to operate on 11 meters. I'm finding
> there is a substantial market for such gear and I'll need some references for
> various solid state and tube conversions.
>
> Thanks in advance for any help.
>
> WA3MOJ
>

1056. Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 14:01:08 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <EYQgc.20857$G_.20472@nwrddc02.gnilink.net>
Source record: 96456

I'd like to build an antenna for receiving 137 MHz signals from polar orbiting NOAA weather satellites. I would like to get some information from any of the readers of this group who might have thought about designing an antenna for this application.

Jerry

1057. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 14:12:19 UTC
From: WA3MOJ <WA3MOJ@home.com>
Message-ID: <c60mo308em@drn.newsguy.com>
Source record: 96458
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

In article <1087jeasabg29f4@corp.supernews.com>, exray says...
>
>WA3MOJ wrote:
>
>> Hi all, I'm looking for a good reference manual, pdf file, or web site's that
>>will assist me in converting used UHF gear to operate on 11 meters. I'm finding
>> there is a substantial market for such gear and I'll need some references for
>> various solid state and tube conversions.
>>
>> Thanks in advance for any help.
>>
>> WA3MOJ
>>
>
>George,
>Are you wanting to convert them to AM or SSB?
>
>-BM
>
SSB. Also, I should of posted HF gear in my OP.

1058. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 14:19:29 UTC
From: Larry Gagnon <lagagnon@fakeuniserve.com>
Message-ID: <1087nvhstvdh354@corp.supernews.com>
Source record: 96457

On 19 Apr 2004 05:45:27 -0700, Cathy James <prjames@mindspring.com> wrote:
> Greetings all,
>
> I am planning to move to the western suburbs of Minneapolis soon, and
> would like to know if there are any communities that I should
> specifically "look at" or "avoid" due to restrictions on ham radio
> antennas or other issues.
>
> Even apart from ham radio issues, I prefer rural to urban, but commute
> time to the areas on the west side of downtown is an issue preventing
> me from being too far out. Mound is probably the western limit of
> what I am willing to consider.
>
> Right now I am looking at Mound, Champlin, and Maple Grove. My
> realtor is generally helpful, but amateur radio is a mystery to her
> and I do not think she is used to getting such requests.
>
>
> 73,
>
> Cathy (N5WVR)

Cathy: this doesn't answer your question, but might give you some food for thought. If amateur radio and antennas are very important to you then I think you are making the wrong decision about suburbs. I moved from a city into the country a few years back; not only did I not have any hassles putting up antennas but I could not believe the difference in how QUIET all the bands were. Cities are full of QRN: in fact, it is unbelievable how much QRN is generated by thousands of appliances, power lines, computers and cars. I went from a continuous S4-5 background noise level to maybe S1 on 160-20 metres. It made a HUGE difference to the pleasure of amateur radio. I was able to work stations I could not even hear in the city. It was a revelation. You could test this for yourself with a mobile HF setup if you have access to one.

These days it matters little what suburb you move into - there will always be someone who does not like tall "ugly" structures "in their neighbourhood".

Good luck with your decision.

Larry VE7EA

--
****
to reply via email remove "fake"

1059. Help! Can't find trunk

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 14:40:10 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <4xRgc.25846$pk5.7850@fe03.usenetserver.com>
Source record: 96459

I recently posted a question concerning mounting a glass-mount antenna on my 2000 Ford Taurus station wagon.

Some people responded saying that I should use a mag mount antenna on the trunk lid. Since I have a mag mount sitting here not doing anything, I thought I would give it a try. However, I looked all over and have been unable to find the trunk lid.

Does anyone know where it is located on a 2000 Ford Taurus station wagon?

Jim
N8EE

1060. Re: RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 14:56:37 UTC
From: wa0goz@arrl.net
Message-ID: <4083E8A4.75B8@arrl.net>
Source record: 96464
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Here is a newsgroup article I saved. I downloaded all of the RFD
programs from this site. Go here. Unwrap the URL.

Henry
==========
http://communities.msn.com/ElectricalEngineering/files.msnw?fc_p=%2FRF%20Design%20Legacy%2
0Software&fc_a=0

Date: Tue, 24 Apr 2001 13:30:11 -0700
From: "Neil" <neil@aade.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [96966] Re: MSDOS BASIC software archive and RF Design Mag
software archive

For all those who asked about the RF design files:

Click on the "Join Now" icon in upper right corner of page and go from
there.
Involves getting MSN passport which is just e-mail address at
hotmail.com
and password of your choice.

There are nearly a hundred files so can't forward them but could any
single
file from list on that page. they are named RFDXXYY.ZIP where XXis month
and
YY is year.

I downloaded them by right clicking on each and chosing "save target
as".
Some reason it insisted on saving it as xxxx.ZIP.zip so I edited out the
..ZIP from each save as so it became xxxx.zip.

Neil
http://www.aade.com
mailto:neil@aade.com
Almost All Digital Electronics
1412 Elm St. SE
Auburn, WA 98092
253-351-9316

1061. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 14:57:15 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <4083e644.224389718@news.galilei.com>
Source record: 96460

Hi Yuri

I lived in my last house for slightly over 20 years.

Although a high percentage of the welded wire fabric decomposed over that time, leaving iron in the soil, evidenced by all of my hydrangeas turning bright blue, the areas of aluminum fencing never did deteriorate.

In fact, the fencing I will be using is the same fencing that surrounded my property for those 20 years, with the lower ends buried over a foot into the ground. Not the actual fence, but a partial roll I had left over after constructing the fence. That had been in storage all this time.

If I could find a company that makes this same small weave aluminum fencing I would have them do my whole yard at my new house. But I have not found it available anywhere. Perhaps as you pointed out, it don't hold up under certain conditions.

My aunt lived in Florida for awhile, she had the same type awnings installed, by the same manufacturer even, that she had installed some 25 years earlier in St. Loo, they didn't hold up but only 4 years and were full of holes. Assumably from the salt air.

TTUL
Gary

1062. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:01:36 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <4083E9D0.8000208@psu.edu>
Source record: 96461
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

Cathy James wrote:
> Greetings all,
>
> I am planning to move to the western suburbs of Minneapolis soon, and
> would like to know if there are any communities that I should
> specifically "look at" or "avoid" due to restrictions on ham radio
> antennas or other issues.
>
> Even apart from ham radio issues, I prefer rural to urban, but commute
> time to the areas on the west side of downtown is an issue preventing
> me from being too far out. Mound is probably the western limit of
> what I am willing to consider.
>
> Right now I am looking at Mound, Champlin, and Maple Grove. My
> realtor is generally helpful, but amateur radio is a mystery to her
> and I do not think she is used to getting such requests.

She should understand covenants. Have her look into that. Other than that, there can be township restrictions on antenna towers. Those usually don't prohibit them, but put limits on height. And you can often get allowances or exceptions.

Your requests are reasonable and to be expected. Other people make requests to find out if dogs are allowed in the neighborhood, etc, so the realtor needs to do their job. You are paying them a lot of money when you buy your house, so if they can't seem to find covenant and zoning laws, you might want to mention about finding a realtor that can.

Remember - Mr or Ms Realtor is NOT your friend.

- Mike KB3EIA -

1063. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:04:48 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <4083ea6e_2@127.0.0.1>
Source record: 96462

N2EY wrote:
> The W5GI antenna seems to be a variation on the Lattin theme.

He says nobody has been able to model or explain why the
antenna works. KA8NCR over on qrz.com says it's lossy
on receive compared to a resonant dipole and about the
same as a trap dipole. I think this is the thread:

http://www.qrz.com/cgi-bin/ikonboard.cgi?s=4083e6f2738bffff;act=ST;f=5;t=60158;st=10

Looking at the W5GI antenna, it would seem that reflections
from the ends of the antenna would flow towards the feedpoint
on the coax braid due to skin effect and encounter an open
circuit. If one sent a TDR pulse toward the end of the antenna
from the feedpoint, what do you suppose one would see coming
back?
--
73, Cecil http://www.qsl.net/w5dxp

1064. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:06:15 UTC
From: kludge@panix.com
Message-ID: <c60pt7$mp9$1@panix2.panix.com>
Source record: 96463
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

In article <c60cuk02d43@drn.newsguy.com>, WA3MOJ <WA3MOJ@home.com> wrote:
>Hi all, I'm looking for a good reference manual, pdf file, or web site's that
>will assist me in converting used UHF gear to operate on 11 meters. I'm finding
>there is a substantial market for such gear and I'll need some references for
>various solid state and tube conversions.

No, you need plutonium to do this right, and that's becoming more and more
difficult to get these days.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

1065. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:22:16 UTC
From: K&#65533;HB <groupk0hb@earthlink.net>
Message-ID: <I8Sgc.2334$e4.1466@newsread2.news.pas.earthlink.net>
Source record: 96465
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

"Cathy James" <prjames@mindspring.com> wrote

| Greetings all,
|
| I am planning to move to the western suburbs of Minneapolis soon, and
| would like to know if there are any communities that I should
| specifically "look at" or "avoid" due to restrictions on ham radio
| antennas or other issues.

The city of Plymouth should be on your list of candidates. We have a very ham-friendly antenna ordinance which I wrote. You can put up a 70-foot antenna support structure without any variance needed.

Regardless of which city you select, be aware that a particular developer or homeowners association may have restrictive covenants in the property deed. Your realtor should be able to uncover those on properties which interest you.

73, and welcome to Minnesota,

de Hans, K0HB

1066. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:30:59 UTC
From: Lou <FFSTA17NO@SPAMACCESS995.COM>
Message-ID: <TgSgc.2852$WC3.24831@ord-read.news.verio.net>
Source record: 96467
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

I seem to recall a "CB" class of operation IN the UHF region way back when.
Long before MURS and such came into play. Actually I think the new stuff
such as MURS replaced the UHF CB band. Maybe he is confusing the two bands?
IF NOT, WOW..... that is a task and a half. As others have stated,
legality will be out the window. Lou

"Chuck Harris" <cfharris@erols.com> wrote in message
news:4083d8f1$0$16477$61fed72c@news.rcn.com...
> That doesn't make any sense. UHF gear is suited to the 400-600MHz
> region. 11 meters is 27MHz. You would have to completely gut the
> unit and replace all of the tuned circuits.
>
> Besides, it is very ILLEGAL to run any non type accepted gear on the
> 11m CB band (unless the power is in the milliwatt region.. Even in
> today's relaxed enforcement environment, running funny gear on 11m can
> get your ham ticket pulled.
>
> -Chuck Harris
>
> OBTW, you are 18 days late for an april fools joke.
>
> WA3MOJ wrote:
> > Hi all, I'm looking for a good reference manual, pdf file, or web site's
that
> > will assist me in converting used UHF gear to operate on 11 meters. I'm
finding
> > there is a substantial market for such gear and I'll need some
references for
> > various solid state and tube conversions.
> >
> > Thanks in advance for any help.
> >
> > WA3MOJ
> >

1067. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:38:25 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4083F26C.C0138E31@sonic.net>
Source record: 96468

Dave VanHorn wrote:

> "Duane Allen" <computeruser@sprintmail.com> wrote in message
> news:0uPgc.2233$e4.767@newsread2.news.pas.earthlink.net...
> > Mike Luther wrote:
> >
> > > But, as the respected Mother's noted ..
> > >
> > > Duane Allen wrote:
> > >
> > >> From cartalk.com
> > >>
> > >> Two antennas meet on a roof, fall in love and get married. The
> > >> ceremony wasn't much, but the reception was excellent.
> > >>
> > >>
> > >> Duane
> > >> N6JPO
> > >
> > > It's still a matter of propagation!
> > >
> > > ;)
> > >
> > Nicely done.
>
> Unfortunately, they later found out they were oppositely polarized, and the
> husband had been looking up the skirt of a discone down the block

and the wife, in graphic terms, threatens to choke him......

1068. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:42:38 UTC
From: kludge@panix.com
Message-ID: <c60s1e$813$1@panix2.panix.com>
Source record: 96319
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Lou <FFSTA17NO@SPAMACCESS995.COM> wrote:
>I seem to recall a "CB" class of operation IN the UHF region way back when.
>Long before MURS and such came into play. Actually I think the new stuff
>such as MURS replaced the UHF CB band. Maybe he is confusing the two bands?

There used to be something called Class A citizens band, which was AM modulation... I think on 460 MHz. There were a bunch of tube transmitters built for that band, most notably the Vocaline, and some of those can be sort of tweaked to kind of run on 440 MHz if you don't really care much about stability. A lot of them used bend-until-it-works capacitor and inductor technology.

I do not think this is a currently usable band. Although if it WERE currently usable, Fair Radio has a bunch of UHF AM aircraft transceivers for the military air band, which they are practically giving away right now. Not type-accepted of course...

>IF NOT, WOW..... that is a task and a half. As others have stated,
>legality will be out the window. Lou

The 11M crowd has never been one for worrying about legality. Which is kind of a shame since there's clearly a need being met there.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

1069. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:43:04 UTC
From: tnom@mucks.net
Message-ID: <qps780dq12h069hml0t6g1is4as8gdhu2a@4ax.com>
Source record: 96320
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

On 19 Apr 2004 04:25:08 -0700, WA3MOJ <WA3MOJ@home.com> wrote:

>Hi all, I'm looking for a good reference manual, pdf file, or web site's that
>will assist me in converting used UHF gear to operate on 11 meters. I'm finding
>there is a substantial market for such gear and I'll need some references for
>various solid state and tube conversions.
>
>Thanks in advance for any help.
>
>WA3MOJ

I think the below link will accommodate your needs quite well.

http://www.opengroup.com/hubooks/089/0898048044.shtml

1070. Re: Help! Can't find trunk

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:49:10 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c60sdg$6a4g8$1@ID-225206.news.uni-berlin.de>
Source record: 96321

The Mag Mount manual says " if the trunk lid cannot be found, that the roof can be used (outside), and the engine hood (center is best) may be used as a last resort for vertical polarization. Other vehicle surfaces must be used for horizontal polarization with the mag mount antenna,tend to yield distorted pattern, and may cause mechanical interference with objects."

"JLB" <IHateSpam@nospam.net> wrote in message news:4xRgc.25846$pk5.7850@fe03.usenetserver.com...
> I recently posted a question concerning mounting a glass-mount antenna on my
> 2000 Ford Taurus station wagon.
>
> Some people responded saying that I should use a mag mount antenna on the
> trunk lid. Since I have a mag mount sitting here not doing anything, I
> thought I would give it a try. However, I looked all over and have been
> unable to find the trunk lid.
>
> Does anyone know where it is located on a 2000 Ford Taurus station wagon?
>
> Jim
> N8EE
>
>
>

1071. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 15:58:01 UTC
From: maxfoo <maxfooHeadFromButt@punkass.com>
Message-ID: <7it780hves5b4dqllejfmt3130eihj2voc@4ax.com>
Source record: 96322

On Mon, 19 Apr 2004 15:38:25 GMT, zeno <zeno@sonic.net> wrote:

>
>
>Dave VanHorn wrote:
>
>> "Duane Allen" <computeruser@sprintmail.com> wrote in message
>> news:0uPgc.2233$e4.767@newsread2.news.pas.earthlink.net...
>> > Mike Luther wrote:
>> >
>> > > But, as the respected Mother's noted ..
>> > >
>> > > Duane Allen wrote:
>> > >
>> > >> From cartalk.com
>> > >>
>> > >> Two antennas meet on a roof, fall in love and get married. The
>> > >> ceremony wasn't much, but the reception was excellent.
>> > >>
>> > >>
>> > >> Duane
>> > >> N6JPO
>> > >
>> > > It's still a matter of propagation!
>> > >
>> > > ;)
>> > >
>> > Nicely done.
>>
>> Unfortunately, they later found out they were oppositely polarized, and the
>> husband had been looking up the skirt of a discone down the block
>
>and the wife, in graphic terms, threatens to choke him......

and soon to be terminated, OHMy.

Remove "HeadFromButt", before replying by email.

1072. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 16:27:45 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <10v78010r6oiem11cjc5d3vb1f29v6cpns@4ax.com>
Source record: 96323

On 19 Apr 2004 05:45:27 -0700, prjames@mindspring.com (Cathy James)
wrote:

>Greetings all,
>
>I am planning to move to the western suburbs of Minneapolis soon, ... My
>realtor is generally helpful, but amateur radio is a mystery to her
>and I do not think she is used to getting such requests.
>
>
>73,
>
>Cathy (N5WVR)

You might start by getting the ARRL book, "Antenna Zoning for the
Radio Amateur." And then hire a Minneapolis attorney who specializes
in real estate issues.

Bob
k5qwg

1073. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 16:29:35 UTC
From: Minnie Bannister <GoonButNotForgotten@myob.net>
Message-ID: <4083FE6F.8010804@myob.net>
Source record: 96466
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

I don't know anything about Minneapolis in particular (except for MSP, with which I am too well acquainted), but I recommend that you *insist* on getting information about any CC&Rs and/or Home Owners' Associations that pertain to the particular subdivision or lot in which you are interested.

We bought a house in W. Michigan last year in a 30-yr old subdivision with minimal CC&Rs (with no mention of antennas or transmitters), no HOA, and underground utilities. Although most municipalities around here exempt amateur radio towers/antennas up to 70ft from any zoning ordinances (and the township in which we bought does not even require a building permit for a tower to ensure that it is safe), all the newer properties we looked at had draconian CC&Rs specifically outlawing anything more than a small satellite dish mounted no more than a few feet above the roof. You *must* check out the CC&Rs before signing anything, as they typically "run with the land," are recorded at the local "Registry of Deeds" (or whatever), and are enforceable even if you have never seen them -- the CC&Rs for the property we bought were not even made available at the closing (and even if they had been, that would have been a little late to back out of the deal).

Alan AB2OS

On 04/19/04 08:45 am Cathy James put fingers to keyboard and launched the following message into cyberspace:

> I am planning to move to the western suburbs of Minneapolis soon, and
> would like to know if there are any communities that I should
> specifically "look at" or "avoid" due to restrictions on ham radio
> antennas or other issues.
>
> Even apart from ham radio issues, I prefer rural to urban, but commute
> time to the areas on the west side of downtown is an issue preventing
> me from being too far out. Mound is probably the western limit of
> what I am willing to consider.
>
> Right now I am looking at Mound, Champlin, and Maple Grove. My
> realtor is generally helpful, but amateur radio is a mystery to her
> and I do not think she is used to getting such requests.

1074. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 16:56:54 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c610gg$p1v$1@newshost.mot.com>
Source record: 96324

"Duane Allen" <computeruser@sprintmail.com> wrote in message
news:rPOgc.213$eZ5.52@newsread1.news.pas.earthlink.net...
> From cartalk.com
>
> Two antennas meet on a roof, fall in love and get married. The ceremony
> wasn't much, but the reception was excellent.
>
>
> Duane
> N6JPO

If they have too many little 'uns, at meal time they'll have to set up a
feed line.

--
Steve N, K,9;d, c. i My email has no u's.

1075. Re: Micro Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 17:14:48 UTC
From: Tom S <nobody@home.com>
Message-ID: <c60vg6gom1@avnika.corp.mot.com>
Source record: 96327

I have built a few of these and they do work. As always, smaller means some compromise. I have a 17M, 40M CW, and a 40M Phone Microvert in my attic. They are pretty easy to build (if you know a little math) and not all that hard to tune. I would recomend playing with one. My 40M antennas are about 3 feet tall and I have no real problem working most stations I hear. I usually run PSK at 20-30 Watts and have worked some DX and lots of stateside. It won't beat a 30 ft vertical in the yard but it does work.

Some pictures of my first attempt can be found here:
http://home.comcast.net/~ac9ts/40m_mvert.html

Tom - AC9TS

>
> http://www.antennex.com/preview/archive4/Apr601/microvert.htm
>
> 73!
> VE3UKR
>

1076. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 17:18:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <408409b3$1_2@127.0.0.1>
Source record: 96325

Steve Nosko wrote:

> "Duane Allen" <computeruser@sprintmail.com> wrote:
>>From cartalk.com
>>Two antennas meet on a roof, fall in love and get married. The ceremony
>>wasn't much, but the reception was excellent.
>
> If they have too many little 'uns, at meal time they'll have to set up a
> feed line.

Unless they just consider them to be parasitic.

1077. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 17:21:15 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c611qj$6ro8r$1@ID-225206.news.uni-berlin.de>
Source record: 96326

Helical Beam is great at 400 MHz, could be too big for 137. Nasa, mil have them. About 1 wavelength in circumference, 2.5 foot diameter, 5-6 turns, circular polarization, and can be pointed at satellite. Circular pol needed usually as most satellites tumble.

other signals out there at:
http://nssdc.gsfc.nasa.gov/spacewarn/spx545-catiradiobeacon.html

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:EYQgc.20857$G_.20472@nwrddc02.gnilink.net...
> I'd like to build an antenna for receiving 137 MHz signals from polar
> orbiting NOAA weather satellites. I would like to get some information
from
> any of the readers of this group who might have thought about designing an
> antenna for this application.
>
> Jerry
>
>

1078. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 17:22:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <n12880pnqimvrpdbcjjniqi6ths0rvupem@4ax.com>
Source record: 96328

On 19 Apr 2004 05:14:44 -0700, N2EY@AOL.COM (N2EY) wrote:

>Why a stub that is excited
>along its length should behave as a trap is not explained, nor how the
>shortened sections act as loading coils (the entire antenna is only
>112' 4" long, plus connections).

Hi Jim,

Simply because the so-called explanations are more wish than reality.
I've not slackened my study of this design. I've done thirty or forty
measurements that have interest in their own right, but show the
"theory" is sheer fantasy. These notions of tuned stubs as traps are
so far off the mark in practice that no one notices they don't make
sense electrically either.

>
>Modeling the thing looks like a real challenge for a whole bunch of
>reasons. The gaps between sections may be important, for example.

...

>I suspect that a key element to the antenna's operation is the use of
>the tubular Twin-Lead, with its 0.8 velocity factor. This stuff is
>probably close to being unobtanium these days. Another point is the
>extreme narrowness of resonance on most bands.

These apologies ring false. The issue of gaps is desperate and the
selection of tubular has no basis in special characteristics. All
such considerations MUST yield to simple scaling. For instance, if
you need 0.8 and have 0.9, there is no magic formula beyond
proportions necessary to achieve "what should be."

The difficulty lies in the supposed explanations.

>The W5GI antenna seems to be a variation on the Lattin theme.

And it is even more gauche. It approaches antenna design as an allied
art of Palmistry.

73's
Richard Clark, KB7QHC

1079. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 17:44:08 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <zdUgc.26405$pk5.25509@fe03.usenetserver.com>
Source record: 96329

Do a web search for "Turnstile Antenna".

Jim
N8EE
"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:EYQgc.20857$G_.20472@nwrddc02.gnilink.net...
> I'd like to build an antenna for receiving 137 MHz signals from polar
> orbiting NOAA weather satellites. I would like to get some information
from
> any of the readers of this group who might have thought about designing an
> antenna for this application.
>
> Jerry
>
>

1080. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 17:51:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <d44880t7ivq3b8pprvc50e7521rite4a8k@4ax.com>
Source record: 96330
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

On Mon, 19 Apr 2004 12:14:37 GMT, "Ready Kilowatt" <Ready@none.org>
wrote:
>Wouldn't that be illegal?

Hi OM,

Yes it would. It is against the law to sell Transmitters that are not
type-accepted for the band they are intended.

On the other hand, the Amateur radio service is the ONLY exception to
the rule. We CAN design, build, and operate non type-accepted gear.

On the third hand, the 11 Meter band is not Amateur radio service.
Even tho' we can work there, we must abide by all rules and
regulations for that service (all restrictions apply in spite of our
"privileges").

73's
Richard Clark, KB7QHC

1081. Re: Using a metal roof as a ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 18:09:01 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <1BUgc.42944$yv.838391@twister.southeast.rr.com>
Source record: 96331

"Larry Gagnon" <lagagnon@fakeuniserve.com> wrote in message
news:107qko9ns1390ff@corp.supernews.com...
> On Wed, 14 Apr 2004 06:41:32 -0500, H. Adam Stevens, NQ5H <NQ5H@ARRL.net>
wrote:
> >
> > "Rick Frazier" <rick@rickfrazier.com> wrote in message
> > news:407CE747.6B6E5531@rickfrazier.com...
> >> Hello:
> >>
> >> I've just received a 5BTV, 5 band trap vertical (75-10M), and as with
> >> most of them, I would suppose the instructions suggest that ground
> >> mounted is ok, but elevated it would be better to use radials.
> >>
> >> I am planning on mounting it on the peak, near the center of a rather
> >> large metal roof. The roof is approximately 58x38 feet and has a
pitch
> >> of 4" per foot down from the peak. The roof is composed of 39" strips
> >> of metal roofing, and isn't quite solid metal, but has three sections
> >> three feet wide that use fiberglas panels for the top 35 feet of each
> >> section on each side. (These perform the function of skylights). The
> >> only "bonding" of the roof panels to one another are the stainless
steel
> >> screws that hold the panels to the roof substructure, which are placed
> >> about every two feet along each edge, and in three or four places at
the
> >> top of each strip of metal roofing where they connect to the ridge.
> >> Each run (except for the fiberglas panels) is a single section
> >> approximately 3ft wide and 19+ feet long. There is a connector panel
> >> about 3 feet long at the bottom of each of the fiberglass strips, so
the
> >> bottom edge of the roof is continuous along the 58 foot length.
(Think
> >> of it as a nearly solid roof with three strips missing on each side,
> >> making a 3 foot by 16 foot slot in each of the three skylight locations
> >> on each half of the roof.)
> >>
> >> After this description, if you're not completely confused, what I'm
> >> wondering is whether the roof will provide a decent ground plane for
the
> >> vertical antenna, or whether I should add specific ground radials....
> >
> > Yes, it should, even with the fact that it is not continuous sheet metal
> > it will probably still have a LOT more surface area than a few radials.
> > I would ground the vertical well to the roof, test the sheet panels are

> electrically connected and go for it. If the antenna doesn't seem to
> perform well you can always add radials later. I used a metal roof once
> with a vertical and it worked very well indeed.
>
> Larry VE7EA
>
Considering the GP that is normally used with this antenna for elevated mounting it should work quite well with what you have. I would probably want to mount it in the center of the roof and run 4 wires from the antenna to the corners of the roof bonding the wire to each metal panel it crosses. One problem with doing this is that bad connections with adjacent panels could cause noise on recption and intermitent changes in tunning during transmit. Just be aware of what you may have to do to fix some strange intermittent problems.

1082. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 18:11:52 UTC
From: dplatt@radagast.org
Message-ID: <10885j8k6d2kn8a@corp.supernews.com>
Source record: 96332
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

In article <d44880t7ivq3b8pprvc50e7521rite4a8k@4ax.com>,
Richard Clark <kb7qhc@comcast.net> wrote:
>>Wouldn't that be illegal?
>
>Hi OM,
>
>Yes it would. It is against the law to sell Transmitters that are not
>type-accepted for the band they are intended.

Quite right. Converting existing equipment to 11-meter use would
probably require individual certification of every unique piece or
type. Sure sounds expensive.

Issue 2: external power amplifiers are not allowed in the 11-meter
band... conversion of higher-powered UHF amps would not be legal.

Issue 3: equipment originally designed for UHF operation (1 meter and
shorter wavelengths) seems to me to be a less-than-wonderful choice
for conversion to 11-meter operation.

Issue 4: there's plenty of cheap 11-meter gear already on the market
(both legal-type-certificated, and outside-the-pale). Doesn't seem
like there'd be much of a [legal] market for converted UHF gear.

All in all, this idea sounds like a great way to lose lots of money,
and risk big fines and the loss of an amateur-radio license. As folks
may have noted, the FCC has recently raised their level of enforcement
against companies and individuals who have been playing loose-and-easy
with the rules about 11-meter operation and equipment sales.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1083. Re: Never mind mercury - Plasma antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 18:14:15 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <XFUgc.42945$yv.838857@twister.southeast.rr.com>
Source record: 96333

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:107t2mhef3rk5a8@corp.supernews.com...
> Have used "plasma" as a noise source to measure RF systems. Use as, or
> even near, a receiving antenna is problematic.
> "One is born every minute."
> 73 Mac N8TT
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>
Sounds like a Titanium hammer to me

1084. W3DZZ trap dipole (was Re: Lattin antenna.....more info sources.....experiences)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 18:29:50 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86fzazstwh.fsf_-_@duchess.twilley.org>
Source record: 96334

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "N2EY" == N2EY <N2EY@aol.com> writes:

N2EY> For all that trouble, it seems to me that a better choice (if
N2EY> you want direct coax feed on the non-WARC HF bands) is the
N2EY> classic W3DZZ trap dipole. With only two traps and mechanically
N2EY> robust construction it is possible to achieve direct coax feed
N2EY> and low SWR on 80/40/20/15/10, and the cut-and-try is much
N2EY> easier.

Wow. This might work in my limited space, providing that it deals
well with the short height above ground. Now I just have to learn how
to make traps. Any recommended resources for this sort of thing?

N2EY> 73 de Jim, N2EY

Jack.
(always looking for something new)
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAhBqiGPFSfAB/ezgRAnVwAJ9zNi7yN9R7ItWYFOy7qPgUwCU5eQCg9vNN
GOthFgo/2rYNy6izXP1vWEg=
=1Fwb
-----END PGP SIGNATURE-----
```

1085. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 18:30:47 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40841AD2.8B7F1E56@sonic.net>
Source record: 96336

Bob Miller wrote:

>
> Zeno, all of your suggestions would increase the weight of the
> feedline, and possibly stretch the antenna. FYI, a 500-ft. spool of
> #14 or #12 insulated, stranded copper wire from Lowe's Home
> Improvement (or Home Depot) runs about $15.00
>
> Bob
> k5qwg

Hi Bob,

I did pick up a 500' roll of #12 insulated from the Home Depot here (current price here is about $32), but it seems like this braided copper will require too many spacers to keep it straight. I am thinking about returning it for some solid copper #12. I think the solid will hold shape better as a ladder-line with a minimum of spacers. Also I see no reason not to go with bare wire instead of insulated.

Can anyone run down the pros and cons of bare vs. insulated for ladder-line. I understand there is ever so slightly less loss with bare wire.

Bill

1086. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 18:32:29 UTC
From: K&#65533;HB <groupk0hb@earthlink.net>
Message-ID: <1XUgc.2518$e4.320@newsread2.news.pas.earthlink.net>
Source record: 96335
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"WA3MOJ" <WA3MOJ@home.com> wrote

| Hi all, I'm looking for a good reference manual, pdf file, or web
site's that
| will assist me in converting used UHF gear to operate on 11 meters.
I'm finding
| there is a substantial market for such gear and I'll need some
references for
| various solid state and tube conversions.

The Armenian judges gave this a 9.8 on the Olympic Troll-O-Meter, but they were over-ruled by the umpires in instant replay, who award it a 1.4.

The Armenian judges lodged a formal protest!

It was sufficiently trollish, of course, but way too obvious. It was poorly written, poorly executed, and was so incredibly lame as to lack the true drawing power of a really masterful troll.

Maybe as high as a 1.6 for the intense stupidity of the premise, but a 9.8? Never!

The Armenian judges tear their hair out, throw their balalaikas down in dismay, and perform the traditional Armenian Dismay Chant!

They demand a recount!

73, de Hans, K0HB

1087. G5RV.... feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 18:42:27 UTC
From: TonyWard <tonester1@cbuk.freeserve.co.uk>
Message-ID: <c616immrd1@newsg3.svr.pol.co.uk>
Source record: 96337

Hi There,
I wonder if there is a better way to feed my 1/2 size G5RV......

At the moment I am using it portable with the apex at 30 feet and the ends sloping down to 3 feet above ground .....the DX location is around 250 mtrs ASL.

It is fed by 300ohm ladder connected to 20 feet of 50 ohm coax.

is this the best way to feed it I have heard that just using ladder line is better/more eficient...

I would be gratefull for any plans or suggestions on how to feed this or plans of other more efficient/easy set ups for portable "WIRE" antenna set ups as I like to make my own antennas ....

I would like to over come the qrp operating by hight and antenna eficiency...

Thxs for any suggestions......

Tony
M3TOE.

1088. FYI antenna links

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 18:46:08 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c616p7$6m4mg$1@ID-225206.news.uni-berlin.de>
Source record: 96338

many antenna links here

http://uarl.com.ua/antlinks2.html

1089. Re: G5RV.... feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 18:57:57 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <bj7880d2qupugd42dpe5358rno5acqib0t@4ax.com>
Source record: 96339

On Mon, 19 Apr 2004 19:42:27 +0100, "TonyWard"
<tonester1@cbuk.freeserve.co.uk> wrote:

>Hi There,
>I wonder if there is a better way to feed my 1/2 size G5RV......
>
>At the moment I am using it portable with the apex at 30 feet and the ends
>sloping down to 3 feet above ground .....the DX location is around
>250 mtrs ASL.
>
>It is fed by 300ohm ladder connected to 20 feet of 50 ohm coax.
>
>is this the best way to feed it I have heard that just using ladder line is
>better/more eficient...
>
>I would be gratefull for any plans or suggestions on how to feed this or
>plans of other more efficient/easy set ups for portable "WIRE" antenna set
>ups as I like to make my own antennas ....
>
>I would like to over come the qrp operating by hight and antenna
>eficiency...
>
>Thxs for any suggestions......
>
>Tony
>M3TOE.
>

I recently lengthened my 44-ft dipole to 51 feet, so it is a 1/2-size
"g5rv". I feed it with 42 feet of 450-ohm line, because that is what
it takes to get to my window. To transition to my tuner, I have a coax
choke balun at the window. With the tuner, I can work all bands from
40 thru 10, except for 15 meters, where the swr is a little high.

Whether this is better or worse than what you have, I couldn't say,
but it does work.

I suspect your antenna would work fine, fed entirely with 300-ohm
line.

Bob
k5qwg

1090. Re: G5RV.... feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:05:00 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <c617sv$1t3q$1@news1.tribune.com>
Source record: 96340

Reg has a program called "Dipole 3" that will show you the relative
efficiencies of each set up.

http://www.btinternet.com/~g4fgq.regp/

JD

"TonyWard" <tonester1@cbuk.freeserve.co.uk> wrote in message
news:c616immrd1@newsg3.svr.pol.co.uk...
> Hi There,
> I wonder if there is a better way to feed my 1/2 size G5RV......
>
> At the moment I am using it portable with the apex at 30 feet and the ends
> sloping down to 3 feet above ground ....the DX location is around
> 250 mtrs ASL.
>
> It is fed by 300ohm ladder connected to 20 feet of 50 ohm coax.
>
> is this the best way to feed it I have heard that just using ladder line
is
> better/more eficient...
>
> I would be gratefull for any plans or suggestions on how to feed this or
> plans of other more efficient/easy set ups for portable "WIRE" antenna set
> ups as I like to make my own antennas ....
>
> I would like to over come the qrp operating by hight and antenna
> eficiency...
>
> Thxs for any suggestions......
>
> Tony
> M3TOE.
>
>

1091. Re: FYI antenna links

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:13:18 UTC
From: Incognito <BLB@sero.net>
Message-ID: <jxVgc.12942$432.1143@fed1read01>
Source record: 96341

Good link John

Also see Homebrew antennas at URL:
http://ac6v.com/antprojects.htm
100's of projects to peruse, also antenna theory and calculators

Commercial antennas are separate at URL:
http://ac6v.com/antdealer.htm
Listed alphabetically

--
Incognito By Necessity (:-(

If you can't convince them, confuse them.
- - -Harry S Truman

"John Smith" <pani@yahoo.com> wrote in message
news:c616p7$6m4mg$1@ID-225206.news.uni-berlin.de...
> many antenna links here
>
> http://uarl.com.ua/antlinks2.html
>
>

1092. Re: Using a metal roof as a ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:24:10 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c6194jscq1@newshost.mot.com>
Source record: 96343

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:1BUgc.42944$yv.838391@twister.southeast.rr.com...
> "Larry Gagnon" <lagagnon@fakeuniserve.com> wrote in message
> news:107qko9ns1390ff@corp.supernews.com...
> > On Wed, 14 Apr 2004 06:41:32 -0500, H. Adam Stevens, NQ5H
<NQ5H@ARRL.net>
> wrote:
> > > "Rick Frazier" <rick@rickfrazier.com> wrote in message
> > > news:407CE747.6B6E5531@rickfrazier.com...
> > >> I've just received a 5BTV, 5 band trap vertical (75-10M...
> > >>
> > >> I am planning on mounting it on the peak, near the center of a rather
> > >> large metal roof. ...
> > >
> > .... mount it in the center of the roof and run 4 wires from the antenna
to
> the corners of the roof bonding the wire to each metal panel it crosses.
One
> problem with doing this is that bad connections with adjacent panels could
> cause noise on recption and intermitent changes in tunning during
transmit.
> Just be aware of what you may have to do to fix some strange intermittent
> problems.
>
>

I agree that any intermittent contacts in the roof metal CAN make noise.
Even if the wire is routed as suggested. Receive is covered above... During
transmit there are two effects to watch for.

Any noise caused by bad connections in the wind WILL *modulate*
your transmitter with the same noise. Most likely, this won't cause a
problem for you except to other radios close by. However, the frequency
range can be extensive. On Apollo communication ships the HF transmitters
caused interference to the on-board *radars* because of the junk caused by
the deck railing chain links. Whatever the noise spectrum looks like, this
can cause an AM on your signal with the same shape sidebands. Because your
transmitter is right there and part of the antenna current is flowing in the
roof, the effect can be rather strong. On sideband I think this could sound
like splatter. Bottom line, I think is increased possibility of TVI or BCI
for the nearest neighbors.

The other is increased ability to make Intermodulation (IM). This
should only be a problem if you have two transmitters operating. This is
the sum / difference and 2A-B type of IM caused by partly rectifying

junctions in the corroded metal.

--
Steve N, K,9;d, c. i My email has no u's.

1093. Re: RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:28:12 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <gLVgc.9115$%J5.1921@newssvr24.news.prodigy.com>
Source record: 96342
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I'm just learning so here's what I know. A RLB is a directional coupler with directivity, isolation and a bridge. Return loss is the reciprocal of the reflection coefficient. A basic RLB has 3 ports, source or input, output or DUT, and coupled or reflected. Connect a piece of coax to the DUT port, a sig gen to source and a meter to reflected. A shorted or unterminated coax will reflect 100% less round trip line loss so the meter will read launch signal less 2 time line loss. If the coax is properly terminated the meter can read anywhere from 30 to 60 dB down, depending on how well terminated in relation to the coax impedance. If you use a tracking generator for the source and a spectrum analyzer on reflected for the meter you can sweep a filter, antenna or whatever you're interested in. Retrun loss is the fraction of power that isn't absorbed by the load. See QST April 1959 pp 24-28 for Warren Bruene's article, "An Inside Picture of Directional Wattmeters."
A retrun loss 1 dB is a VSWR of 17.4, 6db RL is VSWR of 3, 10 dB RL is VSWR of1.93, while a RL of 30 dB is a VSWR of 1.06 and this can be done at low power which is quite difficult with SWR bridges.
Two hams have told me that they've made RLBs that achieved 60 dB. That's my project if I can get the article.
Hank WD5JFR
"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message news:c60jd6pcn1@titan.btinternet.com...
> > Does anyone recall seeing an article for constructing a return loss bridge
> > in RF Design in late 80s or early 90s? I'd like to see if I can get a
> > scan, I've been bitten by the RLB bug.
> ================================
>
> Isn't a return-loss bridge electrically exactly the same as the
> common-or-garden SWR meter with the meter scale calibrated in something
> different from SWR = 1 to infinity?
>
> Same applies to reflection coefficient bridge.
>
>

1094. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:33:01 UTC
From: WA3MOJ <WA3MOJ@home.com>
Message-ID: <c619hd024bp@drn.newsguy.com>
Source record: 96346
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

In article <1XUgc.2518$e4.320@newsread2.news.pas.earthlink.net>, K&#65533;HB says...
>
>
>"WA3MOJ" <WA3MOJ@home.com> wrote
>
>| Hi all, I'm looking for a good reference manual, pdf file, or web
>site's that
>| will assist me in converting used UHF gear to operate on 11 meters.
>I'm finding
>| there is a substantial market for such gear and I'll need some
>references for
>| various solid state and tube conversions.
>
>The Armenian judges gave this a 9.8 on the Olympic Troll-O-Meter, but
>they were over-ruled by the umpires in instant replay, who award it a
>1.4.
>
>The Armenian judges lodged a formal protest!
>
>It was sufficiently trollish, of course, but way too obvious. It was
>poorly written, poorly executed, and was so incredibly lame as to lack
>the true drawing power of a really masterful troll.
>
>Maybe as high as a 1.6 for the intense stupidity of the premise, but a
>9.8? Never!
>
>The Armenian judges tear their hair out, throw their balalaikas down in
>dismay, and perform the traditional Armenian Dismay Chant!
>
>They demand a recount!
>
>73, de Hans, K0HB
>
>
>
Hans, sind Sie absolut keine Hilfe gewesen. Zuk&#65533;nftig entfernen Sie bitte Ihren
Kopf von Ihrem Esel, bevor Sie zu mir sprechen.

Danke.

1095. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:39:27 UTC
From: Robert Spooner <rls19@psu.edu>
Message-ID: <c619ti$s1q$1@f04n12.cac.psu.edu>
Source record: 96344
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

Cathy,

From experience, I would advise you not to depend on realtors, or anyone else who has an interest in the sale, to inform you concerning restrictive covenants. It's really not in their interest. The best thing to do when you find a property in which you are interested is to go to the courthouse and look up the information yourself.

73,
Bob AD3K

Kï¿œHB wrote:

> ... Your realtor should be able to uncover those on
> properties which interest you.
>
> 73, and welcome to Minnesota,
>
> de Hans, K0HB
>
>
>

--
Robert L. Spooner
Registered Professional Engineer
Associate Research Engineer
Intelligent Control Systems Department

Applied Research Laboratory Phone: (814) 863-4120
The Pennsylvania State University FAX: (814) 863-7841
P. O. Box 30
State College, PA 16804-0030 rls19@psu.edu

1096. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:45:56 UTC
From: mcalhoun@ksu.edu
Message-ID: <c61a9k$blo@unix2.cc.ksu.edu>
Source record: 96348
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

>>Hi all, I'm looking for a good reference manual, pdf file, or web site's that
>>will assist me in converting used UHF gear to operate on 11 meters. I'm
>>finding there is a substantial market for such gear ....

Am I mis-understanding or mis-interpreting something, or
doesn't 11-meter stuff have to be "type accepted"?

I can't imagine homebrew conversions being "type acceptable"!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTXS). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1097. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:46:23 UTC
From: kludge@panix.com
Message-ID: <c61aaf$f6m$1@panix2.panix.com>
Source record: 96345
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Richard Clark <kb7qhc@comcast.net> wrote:
>
>Yes it would. It is against the law to sell Transmitters that are not
>type-accepted for the band they are intended.
>
>On the other hand, the Amateur radio service is the ONLY exception to
>the rule. We CAN design, build, and operate non type-accepted gear.

No, the experimental service is also available for people who want to
run non-type-accepted equipment.

I _think_ there might still be a provision under Part 73 to allow broadcast
stations to operate non-type accepted transmitters under certain circumstances
if they can provide measurements that the equipment meets the standards of
the type requirement, and they affix a label to the equipment. I seem to
recall that it only applies to equipment built by the station itself. This
may have been removed from the rule book since I took my First Phone test.

>On the third hand, the 11 Meter band is not Amateur radio service.
>Even tho' we can work there, we must abide by all rules and
>regulations for that service (all restrictions apply in spite of our
>"privileges").

11M is a funny thing. It's not really one thing and it's not really another.
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."

1098. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:47:51 UTC
From: Jon <wa3mtc@qsl.com>
Message-ID: <cbd5106f00b97b101158d0dea9bdff53@news.teranews.com>
Source record: 96349
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.cb

"Duke Of Windsor" <duke@hen.com> wrote in message
news:Xns94D0A03E427FC1234567890@216.196.97.136...
> "Lou" <FFSTA17NO@SPAMACCESS995.COM> wrote in
> news:TgSgc.2852$WC3.24831@ord-read.news.verio.net:
>
> > I seem to recall a "CB" class of operation IN the UHF region way back
> > when. Long before MURS and such came into play. Actually I think the
> > new stuff such as MURS replaced the UHF CB band. Maybe he is confusing
> > the two bands? IF NOT, WOW..... that is a task and a half. As others
> > have stated, legality will be out the window. Lou
>
> Lou that is a troll post that is not WA3MOJ

i called him and ask him, he said it was him

1099. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:52:09 UTC
From: Lou <FFSTA17NO@SPAMACCESS995.COM>
Message-ID: <J5Wgc.2858$WC3.25476@ord-read.news.verio.net>
Source record: 96347
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

"Duke Of Windsor" <duke@hen.com> wrote in message
news:Xns94D0A03E427FC1234567890@216.196.97.136...
> "Lou" <FFSTA17NO@SPAMACCESS995.COM> wrote in
> news:TgSgc.2852$WC3.24831@ord-read.news.verio.net:
>
> > I seem to recall a "CB" class of operation IN the UHF region way back
> > when. Long before MURS and such came into play. Actually I think the
> > new stuff such as MURS replaced the UHF CB band. Maybe he is confusing
> > the two bands? IF NOT, WOW..... that is a task and a half. As others
> > have stated, legality will be out the window. Lou
>
> Lou that is a troll post that is not WA3MOJ

I see this..... not that it would matter.. I wouldn't know a true post from WA3MOJ even if I did see one. "I" am not one to decipher headers. Well, thanks for the heads up just the same.

Lou

1100. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 19:59:13 UTC
From: Ready Kilowatt <Ready@none.org>
Message-ID: <4d18f9fcdc729ac74ecd7dc12cebcda5@news.teranews.com>
Source record: 96350
Cross-posted to: rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna

"Duke Of Windsor" <duke@hen.com> wrote in message
news:Xns94D09FC92FF651234567890@216.196.97.136...
> "mi-oldradios" <wa8x@yahoo.com> wrote in
> news:4083d5f1_5@newsfeed.slurp.net:
>
> > I guess an Extra should be able to figure it out. I would say it would
> > be a lot of work to put UHF FM gear on 11 meters AM/SSB. Too much work
> > in fact. Now if he was going to use them on GMRS FM I would say go for
> > it BUT it would still be illegal as they won't be FCC type accepted.
> > Get caught selling these things, lose your Ham ticket.
> >
> > --
> >
> > Please reply to:
> > mi_oldradios at yahoo dot com
> >
> >
> > " Stephen Cowell" <scowell@sbcglobal.net> wrote in message
> > news:X6Qgc.18544$JE7.16765@newssvr22.news.prodigy.com...
> >>
> >> "WA3MOJ" <WA3MOJ@home.com> wrote in message
> >> news:c60cuk02d43@drn.newsguy.com...
> >> > Hi all, I'm looking for a good reference manual, pdf file, or web
> >> > site's
> >> that
> >> > will assist me in converting used UHF gear to operate on 11 meters.
> >> > I'm
> >> finding
> >> > there is a substantial market for such gear and I'll need some
> > references
> >> for
> >> > various solid state and tube conversions.
> >>
> >> Kinda late for April 1, isn't it?
> >> __
> >> Steve
> >> KI5YG
>
> that is a forge he is not wa3moj just a troll.... looking to >get his
> kicks.
>
Um, I just spoke to George Busch on the phone and he assured me he is in the
radio resale business. You better check your info.

1101. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 20:19:53 UTC
From: Bada Bing <BadaBing@implant.com>
Message-ID: <593c44cb380a2e625b7ff6e9a906f44b@news.teranews.com>
Source record: 96352
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"K&#65533;HB" <groupk0hb@earthlink.net> wrote in message
news:1XUgc.2518$e4.320@newsread2.news.pas.earthlink.net...
>
> "WA3MOJ" <WA3MOJ@home.com> wrote
>
> | Hi all, I'm looking for a good reference manual, pdf file, or web
> site's that
> | will assist me in converting used UHF gear to operate on 11 meters.
> I'm finding
> | there is a substantial market for such gear and I'll need some
> references for
> | various solid state and tube conversions.
>
> The Armenian judges gave this a 9.8 on the Olympic Troll-O-Meter, but
> they were over-ruled by the umpires in instant replay, who award it a
> 1.4.
>
> The Armenian judges lodged a formal protest!
>
> It was sufficiently trollish, of course, but way too obvious. It was
> poorly written, poorly executed, and was so incredibly lame as to lack
> the true drawing power of a really masterful troll.
>
> Maybe as high as a 1.6 for the intense stupidity of the premise, but a
> 9.8? Never!
>
> The Armenian judges tear their hair out, throw their balalaikas down in
> dismay, and perform the traditional Armenian Dismay Chant!
>
> They demand a recount!
>
> 73, de Hans, K0HB
>
>
I don't know, Hans, I just did a quick google search on WA3MOJ and he seems
to be quite the character. I'm not sure I would put anything past him.

`http://groups.google.com/groups?q=wa3moj`

1102. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 20:21:24 UTC
From: prjames@mindspring.com
Message-ID: <65a4e370.0404191221.188267c3@posting.google.com>
Source record: 96351

Larry Gagnon wrote:
> Cathy: this doesn't answer your question, but might give you some food
> for thought. If amateur radio and antennas are very important to you
> then I think you are making the wrong decision about suburbs. I moved
> from a city into the country a few years back; not only did I not have
> any hassles putting up antennas but I could not believe the difference
> in how QUIET all the bands were.

I have lived in the countryside (1 acre lot, well, septic system, yagi
on roof for TV reception) for years and loved it, but I fear that the
commute time in the Twin Cities will be significantly longer per mile,
and I am not willing to buy into 1 hour+ commutes each way. What
good does it do to get quieter living space (both radio and sound)
if all my free time gets taken up by the commute?

> These days it matters little what suburb you move into - there will
> always be someone who does not like tall "ugly" structures "in their
> neighbourhood".

Well, I wasn't planning to put towers up. But I am hearing horror
stories of people who have been hassled just for stringing a few wires
around their yards. I also have personal memories of causing QRN
to the neighbors back when I lived in an apartment, and that experience
was negative enough to push me out of the HF spectrum for a few years.
I am just now getting back in. (Those consumer lamps that are switched
on and off by touching them think that a passing wave on 15 meters
is a hand touching them and telling them to turn on...makes CW very
interesting to the lamp owner. I fixed that problem by putting chokes
on the neighbor's lamp cords, but I'd hate to do that for every neighbor,
and the problem still existed on 40 meters.)

Getting back to Minneapolis: I would appreciate it if someone
living in the area could give me some very specific guidance on
issues such as "how far west do I have to go to escape the worst QRN",
"how far do I have to go before the area feels rural," and "can I
get a rural feel with a commute to downtown of less than 1 hour
each way". I am in a position where I will probably end up buying a
home without living in the Minneapolis first (coming in from out of
state), and I do not want to make a mistake.

Cathy (N5WVR)

1103. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 20:49:28 UTC
From: Bada Bing <BadaBing@implant.com>
Message-ID: <da358619d09585b312270193464e0a06@news.teranews.com>
Source record: 96353
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"WA3MOJ" <WA3MOJ@home.com> wrote in message
news:c60cuk02d43@drn.newsguy.com...
> Hi all, I'm looking for a good reference manual, pdf file, or web site's
that
> will assist me in converting used UHF gear to operate on 11 meters. I'm
finding
> there is a substantial market for such gear and I'll need some references
for
> various solid state and tube conversions.
>
> Thanks in advance for any help.
>
> WA3MOJ
>
Do you really think people are stupid enough to buy illegal gear from the
likes of you? Your online character leaves much to be desired according to
google, George.

http://groups.google.com/groups?q=wa3moj

1104. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 21:03:51 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0404191303.4d24bb3d@posting.google.com>
Source record: 96354
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

prjames@mindspring.com (Cathy James) wrote in message
news:<65a4e370.0404190445.2bdcaa99@posting.google.com>...
> Greetings all,
>
> I am planning to move to the western suburbs of Minneapolis soon, and
> would like to know if there are any communities that I should
> specifically "look at" or "avoid" due to restrictions on ham radio
> antennas or other issues.
>
> Even apart from ham radio issues, I prefer rural to urban, but commute
> time to the areas on the west side of downtown is an issue preventing
> me from being too far out. Mound is probably the western limit of
> what I am willing to consider.
>
> Right now I am looking at Mound, Champlin, and Maple Grove. My
> realtor is generally helpful, but amateur radio is a mystery to her
> and I do not think she is used to getting such requests.
>
Cathy:

First off, you need the services of a good *real estate* attorney. Not just any lawyer will do; you need someone who does RE as a specialty and who deals with CC&Rs (codes, covenants and restrictions) on a daily basis. Make sure the attorney understands that his/her job is to dig up any and all restrictions on any property you might be interested in *before* you sign anything.

Second, require that you and your attorney be provided with a complete and up-to-date set of the deed, title and all covenants and deed restrictions *before* you make an offer, and read them thoroughly. Sometimes they are part of the deed/title itself but often they are not. States differ widely and you may need to be a bit insistent on what you want to see. Almost all properties built in the past 40-50 years have some sort of restrictions, and those built in the last 30 years often have lots and lots of restrictions of various types. Note that most restrictions are intentionally designed to be *impossible* to change, and that by signing on the dotted line you agree to abide by *all* of them.

Third, try to educate the realtor. Show her some typical amateur antenna installations so she has a better idea of what it is you want to put up. Terms like "antenna tower" mean different things to different people.

Fourth, realize that most but not all of the people involved in a real estate transaction only get paid if you actually buy a house. No sale = no comission/fees/taxes.

In my case the realtor and attorney were able to get me a complete copy of the restrictions fairly easily. They were *not* part of the deed/title documents - instead, those documents referred to the restrictions, which had to be retrieved from the county courthouse records. I had to ask specifically to see them early on in the transaction - if I hadn't insisted, I would never have seen them at all. Until somebody complained.

Even though my house is over 50 years old and there has never been any sort of home owner's association, there were a page and a half of restrictions. Most of them seem a bit comical today (no raising livestock on a property that is 60 x 120 feet) or have been superseded by more-restrictive township ordinances (setbacks, advertising signage, noise). No mention of antennas but I can't have a freestanding tower (or a shed) with a concrete base because that would constitute a "structure" and only the house and garage structures are permitted.
Doesn't matter to me because there's no room for a tower anyway but that's the sort of thing to look for.

Good luck!

73 de Jim, N2EY

1105. Re: RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 21:14:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1088g8r6ra4a93a@corp.supernews.com>
Source record: 96355
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

You'll also find information about return loss bridges and how to construct and use them in Hayward, Campbell, and Larkin's _Experimental Methods in RF Design_ (ARRL) and its now out-of-print predecessor _Solid State Design for the Radio Amateur_ by Hayward and DeMaw (ARRL).

Roy Lewallen, W7EL

1106. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 21:31:28 UTC
From: Robert Casey <wa2ise@ix.netcom.com>
Message-ID: <4084452D.7050107@ix.netcom.com>
Source record: 96356
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Richard Clark wrote:

>On Mon, 19 Apr 2004 12:14:37 GMT, "Ready Kilowatt" <Ready@none.org>
>wrote:
>
>
>>Wouldn't that be illegal?
>>
It would violate various laws of physics (really major mods are
required) as well
as FCC rules.....

>>
>>
>
>Hi OM,
>
>Yes it would. It is against the law to sell Transmitters that are not
>type-accepted for the band they are intended.
>
>On the other hand, the Amateur radio service is the ONLY exception to
>the rule. We CAN design, build, and operate non type-accepted gear.
>
I think the rules say "no more than 5 (or is it 10) copies of the same
design per year.
Manufacturers who want to make more than that *do* have to get
certificated. That's
what the FCC calls "type acceptance" nowadays.....

>
>On the third hand, the 11 Meter band is not Amateur radio service.
>Even tho' we can work there, we must abide by all rules and
>regulations for that service (all restrictions apply in spite of our
>"privileges").
>
On CB, hams are just like other civilians.

>
>
>

1107. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 21:34:00 UTC
From: Robert Casey <wa2ise@ix.netcom.com>
Message-ID: <408445C7.50807@ix.netcom.com>
Source record: 96357
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

>
>
>>
>>
>
>11M is a funny thing. It's not really one thing and it's not really another.
>--scott
>
>
Well, there are several different allocations there. There's the
infamous CB band, and various
forest ranger, mil and other such where the "freebanders" operate
illegally.

1108. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 21:41:00 UTC
From: kludge@panix.com
Message-ID: <c61h1c$t7k$1@panix2.panix.com>
Source record: 96358
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Robert Casey <wa2ise@ix.netcom.com> wrote:
Scott writes:
>>
>>11M is a funny thing. It's not really one thing and it's not really another.
>>
>Well, there are several different allocations there. There's the
>infamous CB band, and various
>forest ranger, mil and other such where the "freebanders" operate
>illegally.

Sad to say, the legitimate users of those latter bands are being driven
out by the FCC's refusal to do anything about the freebanders. God knows
that the auxiliary broadcast channels at 26 MHz are constantly being trashed.
I've had to move some government comms to 33 MHz where things are a bit
quieter.
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."

1109. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 21:46:49 UTC
From: kashe@sonic.net
Message-ID: <n1h880hlt1g96536iee5rlqd015i4i5kgm@4ax.com>
Source record: 96360
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

On 19 Apr 2004 14:03:51 -0700, N2EY@AOL.COM (N2EY) wrote:

>Cathy:
>
>
>Third, try to educate the realtor. Show her some typical amateur
>antenna installations so she has a better idea of what it is you want
>to put up. Terms like "antenna tower" mean different things to
>different people.

Just as an aside, it might be worthwhile to drive around a prospective purchase area and just look for antennas. A couple of polite questions might tell you a lot about what is possible.

It might also be worthwhile to Google for amateur radio clubs in the area to see if they have a feel for local conditions. While neither of these will necessarily be binding on your particular property, they might give you a general clue to the area.

For what it's worth, I live in Daly City, a suburb of San Francisco. This area was built across the 60s. I'm not aware of any local restrictions, but I have two ham friends within a few blocks, one of whom has a few slopers and verticals on his roof and the other of which has about a 60 foot crank-up tower in his back yard with a yagi that barely fits within his own property lines (maybe a 25' x 150' lot).

Westlake, an area closer to San Francisco, maybe even part of Daly City for all I know, has extensive CC&Rs, including requirements to keep your house painted in an acceptable color and to keep a living palm tree on your living green (grass only) lawn (even those whose houses are sliding into the Pacific Ocean, aided by pumping all that water into the ground. Some of the earlier restrictions, like those restricting sales to certain ethnic groups have been overturned by courts and some sections of that subdivision are now easing or abandoning some of the restrictions as the opportunity for the residents to re-vote on them comes up.

All of which is to say that conditions may vary greatly within short distances, whether in urban or rural areas. So I have to agree with the earlier posts which note that the Realtor (tm) -- yes it is a restricted term than just anyone may not use -- is working for the seller and that involving a knowledgeabla local real estate attorney is your only guarantee.

1110. Re: Help! Can't find trunk

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 21:49:45 UTC
From: Marty <NOSPAM_vk2umj@yahoo.com.au_NOSPAM>
Message-ID: <c61hju$8rf$1@austar-news.austar.net.au>
Source record: 96359

"JLB" <IHateSpam@nospam.net> wrote in message
news:4xRgc.25846$pk5.7850@fe03.usenetserver.com...
> I recently posted a question concerning mounting a glass-mount antenna on
my
> 2000 Ford Taurus station wagon.
>
> Some people responded saying that I should use a mag mount antenna on the
> trunk lid. Since I have a mag mount sitting here not doing anything, I
> thought I would give it a try. However, I looked all over and have been
> unable to find the trunk lid.
>
> Does anyone know where it is located on a 2000 Ford Taurus station wagon?
>
> Jim
> N8EE
>

Just goes to show that people should READ the entire post before giving
advice!!!!!

>
>

1111. Re: Help! Can't find trunk

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 21:58:28 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <_XXgc.26876$pk5.18898@fe03.usenetserver.com>
Source record: 96361

Congrats, Marty!

You win the prize (that is, if there was one)!

I find it amusing (and at times agrivating) that people do not read a post before answering, and thought I would get my point across with a bit of humor.

Jim
N8EE

1112. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 22:54:46 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <WMYgc.173537$JO3.101093@attbi_s04>
Source record: 96362
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"WA3MOJ" <WA3MOJ@home.com> wrote in message
news:c60cuk02d43@drn.newsguy.com...
> Hi all, I'm looking for a good reference manual, pdf file, or web site's
> that
> will assist me in converting used UHF gear to operate on 11 meters. I'm
> finding
> there is a substantial market for such gear and I'll need some references
> for
> various solid state and tube conversions.
>
> Thanks in advance for any help.
>
> WA3MOJ

Troll

1113. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 23:46:38 UTC
From: WA3MOJ <WA3MOJ@home.com>
Message-ID: <c61ocu0o49@drn.newsguy.com>
Source record: 96366
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

In article <WMYgc.173537$JO3.101093@attbi_s04>, G.Beat says...
>
>"WA3MOJ" <WA3MOJ@home.com> wrote in message
>news:c60cuk02d43@drn.newsguy.com...
>> Hi all, I'm looking for a good reference manual, pdf file, or web site's
>> that
>> will assist me in converting used UHF gear to operate on 11 meters. I'm
>> finding
>> there is a substantial market for such gear and I'll need some references
>> for
>> various solid state and tube conversions.
>>
>> Thanks in advance for any help.
>>
>> WA3MOJ
>
>Troll
>
>
Why is it a troll? It is on topic.

1114. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 23:48:18 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <1088pabi6i833@corp.supernews.com>
Source record: 96364
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

Dear Ms. Cathy:
I ran a township zoning board for 18 years. My experience is that real estate agents (by whatever name) will tell a buyer anything! to make a sale. Most of the serious problems dealt with by the board came from buyers believing "their" agents. The agent is not your friend.
[The only honest agents that I encountered were involved with million dollar sales with several lawyers (on each side) keeping them honest, and one other agent who became so appalled at the lack of ethics that she quit.]
A lawyer with experience in real estate is your best defense. Even so, check and double check. You have been provided with some good advice.
Consider the long term benefits of a slightly longer commute time.
In Michigan, 10+ A. is a farm and is treated better than a lot. Raising antennas is best done on a farm.
Good luck. Remember that the agent, as friendly as she or he may seem, is not working in your interest. Verify.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Robert Spooner" <rls19@psu.edu> wrote in message
news:c619ti$s1q$1@f04n12.cac.psu.edu...
> Cathy,
>
> From experience, I would advise you not to depend on realtors, or
> anyone else who has an interest in the sale, to inform you concerning
> restrictive covenants. It's really not in their interest. The best
thing
> to do when you find a property in which you are interested is to go to
> the courthouse and look up the information yourself.
>
> 73,
> Bob AD3K
>
> Kï¿œHB wrote:
>

1115. Re: G5RV.... feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-19 23:49:08 UTC
From: Dan/W4NTI <w4nti@get>
Message-ID: <UzZgc.1168$gH6.471@newsread3.news.atl.earthlink.net>
Source record: 96365

There is no such thing as a half sized G5RV.

Dan/W4NTI

"TonyWard" <tonester1@cbuk.freeserve.co.uk> wrote in message
news:c616immrd1@newsg3.svr.pol.co.uk...
> Hi There,
> I wonder if there is a better way to feed my 1/2 size G5RV......
>
> At the moment I am using it portable with the apex at 30 feet and the ends
> sloping down to 3 feet above ground .....the DX location is around
> 250 mtrs ASL.
>
> It is fed by 300ohm ladder connected to 20 feet of 50 ohm coax.
>
> is this the best way to feed it I have heard that just using ladder line
is
> better/more eficient...
>
> I would be gratefull for any plans or suggestions on how to feed this or
> plans of other more efficient/easy set ups for portable "WIRE" antenna set
> ups as I like to make my own antennas ....
>
> I would like to over come the qrp operating by hight and antenna
> eficiency...
>
> Thxs for any suggestions......
>
> Tony
> M3TOE.
>
>

1116. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 00:15:23 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <vYZgc.22792$G_.4548@nwrddc02.gnilink.net>
Source record: 96367

Jim

I'd like to get RHCP on the horizon so I could "pick up" the satelite as
early as possible.

Jerry

"JLB" <IHateSpam@nospam.net> wrote in message
news:zdUgc.26405$pk5.25509@fe03.usenetserver.com...
> Do a web search for "Turnstile Antenna".
>
> Jim
> N8EE
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> news:EYQgc.20857$G_.20472@nwrddc02.gnilink.net...
> > I'd like to build an antenna for receiving 137 MHz signals from polar
> > orbiting NOAA weather satellites. I would like to get some information
> from
> > any of the readers of this group who might have thought about designing
an
> > antenna for this application.
> >
> > Jerry
> >
> >
>
>
>

1117. Re: G5RV.... feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 00:19:16 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <h1r880thrs18mae0ue81jvtnomum7thr2q@4ax.com>
Source record: 96368

On Mon, 19 Apr 2004 23:49:08 GMT, "Dan/W4NTI" <w4nti@get rid of this
mindspring.com> wrote:

>There is no such thing as a half sized G5RV.
>
>Dan/W4NTI

You haven't read Mr. Varney's article. He talks about not only a
half-size, but a double size.

Bob
k5qwg

1118. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 00:29:49 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <C-KdnRBEjIlm8xndRVn-sw@adelphia.com>
Source record: 96269
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

N2EY wrote:
> prjames@mindspring.com (Cathy James) wrote in message
news:<65a4e370.0404190445.2bdcaa99@posting.google.com>...
>
>>Greetings all,
>>
>>I am planning to move to the western suburbs of Minneapolis soon, and
>>would like to know if there are any communities that I should
>>specifically "look at" or "avoid" due to restrictions on ham radio
>>antennas or other issues.
>>
>>Even apart from ham radio issues, I prefer rural to urban, but commute
>>time to the areas on the west side of downtown is an issue preventing
>>me from being too far out. Mound is probably the western limit of
>>what I am willing to consider.
>>
>>Right now I am looking at Mound, Champlin, and Maple Grove. My
>>realtor is generally helpful, but amateur radio is a mystery to her
>>and I do not think she is used to getting such requests.
>>
>
> Cathy:
>
> First off, you need the services of a good *real estate* attorney. Not
> just any lawyer will do; you need someone who does RE as a specialty
> and who deals with CC&Rs (codes, covenants and restrictions) on a
> daily basis. Make sure the attorney understands that his/her job is to
> dig up any and all restrictions on any property you might be
> interested in *before* you sign anything.

I don't know about hiring an attorney first off, Jim. Over the course
of buying a hous, I looked at maybe 30 or more. Sorry, I just don't have
the money to pay an attorney to investigate every house I looked at.

When the field got really, really narrow, then perhaps

> Second, require that you and your attorney be provided with a complete
> and up-to-date set of the deed, title and all covenants and deed
> restrictions *before* you make an offer, and read them thoroughly.
> Sometimes they are part of the deed/title itself but often they are
> not. States differ widely and you may need to be a bit insistent on
> what you want to see. Almost all properties built in the past 40-50
> years have some sort of restrictions, and those built in the last 30
> years often have lots and lots of restrictions of various types. Note

> that most restrictions are intentionally designed to be *impossible*
> to change, and that by signing on the dotted line you agree to abide
> by *all* of them.
>
> Third, try to educate the realtor. Show her some typical amateur
> antenna installations so she has a better idea of what it is you want
> to put up. Terms like "antenna tower" mean different things to
> different people.

Maybe for a little kickback? Seriously, that is the job they are
supposed to do, and considering th eamount of commission they get, they
are supposed to find out things you need to know.

Mind you, I don't think very highly of most of them. I could tell you
about the time that we took a tour of a house that was already sold. Or
the time we put a down payment on a house that the agent "neglected" to
tell us was in a flood plain until the day after the check was cashed. I
told him he had exactly 30 minutes to repay us the money. Took 15.

> Fourth, realize that most but not all of the people involved in a real
> estate transaction only get paid if you actually buy a house. No sale
> = no comission/fees/taxes.

Sure enough. That isn't an excuse for incompetence tho'.

> In my case the realtor and attorney were able to get me a complete
> copy of the restrictions fairly easily. They were *not* part of the
> deed/title documents - instead, those documents referred to the
> restrictions, which had to be retrieved from the county courthouse
> records. I had to ask specifically to see them early on in the
> transaction - if I hadn't insisted, I would never have seen them at
> all. Until somebody complained.

Part of their job, like asking to see only green houses. Or not green
houses.

> Even though my house is over 50 years old and there has never been any
> sort of home owner's association, there were a page and a half of
> restrictions. Most of them seem a bit comical today (no raising
> livestock on a property that is 60 x 120 feet) or have been superseded
> by more-restrictive township ordinances (setbacks, advertising
> signage, noise). No mention of antennas but I can't have a
> freestanding tower (or a shed) with a concrete base because that would
> constitute a "structure" and only the house and garage structures are
> permitted.
> Doesn't matter to me because there's no room for a tower anyway but
> that's the sort of thing to look for.

I got lucky when I bought my house. I could put up a 40 foot tower
without a problem, and no restrictions on wire antennas. I say lucky,
because I didn't become interested in the ARS until after we were in the
place for 5 years or so.

- Mike KB3EIA -

1119. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 00:43:36 UTC
From: Ron H <123456@attbi.com>
Message-ID: <Ym_gc.29718$0b4.40867@attbi_s51>
Source record: 96270
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

The FCC recently rescinded the ban on power amps that work in the 11 meter band. See the arrl web site for details...

Ron H.

"Dave Platt" <dplatt@radagast.org> wrote in message news:10885j8k6d2kn8a@corp.supernews.com...
> In article <d44880t7ivq3b8pprvc50e7521rite4a8k@4ax.com>,
> Richard Clark <kb7qhc@comcast.net> wrote:
> >>Wouldn't that be illegal?
> >
> >Hi OM,
> >
> >Yes it would. It is against the law to sell Transmitters that are not
> >type-accepted for the band they are intended.
>
> Quite right. Converting existing equipment to 11-meter use would
> probably require individual certification of every unique piece or
> type. Sure sounds expensive.
>
> Issue 2: external power amplifiers are not allowed in the 11-meter
> band... conversion of higher-powered UHF amps would not be legal.
>
> Issue 3: equipment originally designed for UHF operation (1 meter and
> shorter wavelengths) seems to me to be a less-than-wonderful choice
> for conversion to 11-meter operation.
>
> Issue 4: there's plenty of cheap 11-meter gear already on the market
> (both legal-type-certificated, and outside-the-pale). Doesn't seem
> like there'd be much of a [legal] market for converted UHF gear.
>
> All in all, this idea sounds like a great way to lose lots of money,
> and risk big fines and the loss of an amateur-radio license. As folks
> may have noted, the FCC has recently raised their level of enforcement
> against companies and individuals who have been playing loose-and-easy
> with the rules about 11-meter operation and equipment sales.
>
> --
> Dave Platt <dplatt@radagast.org> AE6EO
> Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
> I do _not_ wish to receive unsolicited commercial email, and I will
> boycott any company which has the gall to send me such ads!

1120. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 00:54:45 UTC
From: dplatt@radagast.org
Message-ID: <1088t6lodu2tna7@corp.supernews.com>
Source record: 96271
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

In article <Ym_gc.29718$0b4.40867@attbi_s51>, Ron H <123456@attbi.com> wrote:

>The FCC recently rescinded the ban on power amps that work in the 11 meter
>band. See the arrl web site for details...

Not entirely accurate... at least, not yet.

They have proposed rescinding the Part 97 rule which places a whole bunch of restrictions on the manufacture and sale of amplifiers which can be used between 24 MHz and 35 MHz (the 10- and 12-meter amateur bands, and the 11-meter CB band). This change has not actually been enacted - they're inviting comments on whether it's a Good Idea or a Bad Idea.

They have _not_ proposed making any change to the Part 95 rules, which currently make it illegal to actually _use_ any such amplifier with an 11-meter (CB) transmitter.

So - if their proposed rule change is adopted, it'll be easier for amateurs to buy amps that can be used on 10 and 12 meters. General-purpose HF-band amplifier designs will probably be revised, to "open them up" to the higher frequencies.

It will still remain illegal to use any such amplifier on the 11-meter CB band.

Whether this illegality will stop anyone... well, that's another question entirely!

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

1121. Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 01:15:06 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <uQ_gc.3027$e4.2108@newsread2.news.pas.earthlink.net>
Source record: 96272

Good evening, Gentlemen.

A thought experiment:

Start with a regular 1/4-wave monopole ground plane. The literature says it looks like half the value of a dipole, about 35 Ohms, when resonant. It would be nice to have the resistance at the terminals be a bit higher, and I very much value a grounded element anyway, so let's let it evolve into a folded monopole. The literature says it should now have about 4 times the terminal resistance of the original 1/4-wave we started with (about 140 Ohms). Huh. Now it's a bit high.

They tell me that shortening the antenna below resonance will lower the resistance and introduce capacitance. But I think I have also seen in the literature that the antenna can be viewed as a transmission line. A shorted portion of parallel conductor transmission line (the folded monopole) less than 1/4-wave long looks inductive. But wait! Which will win? Will the shortness of the antenna look capacitive or will the transmission line dominate and the antenna will look inductive?

Even better, is there some choice of the folded section wire diameters and spacing that will give an inductance that will exactly offset the capacitance due to shortness? So, then, is there a folded monopole of such dimensions that the resistance is 50 Ohms (due to being shorter than 1/4 wave) with no terminal reactance (due to the inductive design of the "transmission line" cancelled by the shortness of the antenna's capacitance)?

Brain hurts.

John, KD5YI

1122. Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 01:15:07 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <vQ_gc.3028$e4.2689@newsread2.news.pas.earthlink.net>
Source record: 96273

Good evening, Gentlemen.

A thought experiment:

Start with a regular 1/4-wave monopole ground plane. The literature says it looks like half the value of a dipole, about 35 Ohms, when resonant. It would be nice to have the resistance at the terminals be a bit higher, and I very much value a grounded element anyway, so let's let it evolve into a folded monopole. The literature says it should now have about 4 times the terminal resistance of the original 1/4-wave we started with (about 140 Ohms). Huh. Now it's a bit high.

They tell me that shortening the antenna below resonance will lower the resistance and introduce capacitance. But I think I have also seen in the literature that the antenna can be viewed as a transmission line. A shorted portion of parallel conductor transmission line (the folded monopole) less than 1/4-wave long looks inductive. But wait! Which will win? Will the shortness of the antenna look capacitive or will the transmission line dominate and the antenna will look inductive?

Even better, is there some choice of the folded section wire diameters and spacing that will give an inductance that will exactly offset the capacitance due to shortness? So, then, is there a folded monopole of such dimensions that the resistance is 50 Ohms (due to being shorter than 1/4 wave) with no terminal reactance (due to the inductive design of the "transmission line" cancelled by the shortness of the antenna's capacitance)?

Brain hurts.

John, KD5YI

1123. Re: Folded monopole dilemma - Oops! Sorry for double post...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 01:28:52 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <o1%gc.3063$e4.1566@newsread2.news.pas.earthlink.net>
Source record: 96274

Sorry!

"The other John Smith" <jocjo-john@yooha.com> wrote in message
news:vQ_gc.3028$e4.2689@newsread2.news.pas.earthlink.net...

1124. Re: G5RV.... feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 02:06:39 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40848606_4@corp.newsgroups.com>
Source record: 96275

Bob Miller wrote:
> On Mon, 19 Apr 2004 23:49:08 GMT, "Dan/W4NTI" <w4nti@get rid of this
> mindspring.com> wrote:
>>There is no such thing as a half sized G5RV.
>>Dan/W4NTI
>
> You haven't read Mr. Varney's article. He talks about not only a
> half-size, but a double size.

As does the G5RV Application Note from Antennas West.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1125. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 02:13:19 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40848797$1_4@corp.newsgroups.com>
Source record: 96276

The other John Smith wrote:
> Even better, is there some choice of the folded section wire diameters and
> spacing that will give an inductance that will exactly offset the
> capacitance due to shortness?

Unfortunately, a folded monopole goes the opposite direction to a
monopole, impedance-wise.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1126. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 02:24:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10892fqqfas8p01@corp.supernews.com>
Source record: 96277

The short answer to your question is no, with practical impedances. It turns out you'd need a very low impedance transmission line (on the order of a few ohms, if I recall correctly) to track very well.

The easiest way to analyze a folded dipole is as two separate circuits, common-mode (or "antenna") and differential-mode (or "transmission line"). Superposition applies, so the two can be analyzed separately.

First consider the "antenna". Its contribution to the feedpoint impedance is the same as a conventional monopole made from the two wires in parallel, but multiplied by 4 due to the transforming action of the "folding" process. (Other ratios are possible -- 4 is what you get if the conductors are the same diameter.) This "antenna" does all the radiating.

In parallel with the "antenna" at the feedpoint is the "transmission line". This is the short-circuited transmission line made from the two conductors, with transmission line velocity factor taken into account. The "transmission line" part does no radiating.

Now, if you shorten the antenna, two things will happen. The reactance of the "antenna" will become more negative, and its resistance will drop some. This will show up at the feedpoint just like it would for an unfolded monopole, but multiplied by 4. But you're also shortening the transmission line, whose impedance also appears at the feedpoint, in parallel with the transformed "antenna's". Assuming negligible loss in the feedline, this will cause a change only in parallel reactance at the feedpoint. Because of the relatively high impedance of the transmission line, and the relative sharpness of the impedance change of the "antenna" compared to the transmission line, there's very little compensation in the case of most practical antennas. Remember that the two impedances are in parallel, not series, so the high Z contribution of the transmission line has little overall effect. As I recall from doing an analysis some time ago, you get more broadening compared to a conventional monopole from having a fatter equivalent "antenna" conductor than you do from the transmission line stub.

The reactance of the "antenna" can be a bit tricky to calculate accurately, but a number of modern programs (such as the free EZNEC demo) do a good job of it. The transmission line part of the effect is easy, either with a scientific calculator or one of the transmission line programs which are readily available. So overall, it's not difficult to find the actual impedances you'll see in practice.

Roy Lewallen, W7EL

The other John Smith wrote:
> Good evening, Gentlemen.
>
> A thought experiment:
>
> Start with a regular 1/4-wave monopole ground plane. The literature says it
> looks like half the value of a dipole, about 35 Ohms, when resonant. It
> would be nice to have the resistance at the terminals be a bit higher, and I
> very much value a grounded element anyway, so let's let it evolve into a
> folded monopole. The literature says it should now have about 4 times the
> terminal resistance of the original 1/4-wave we started with (about 140
> Ohms). Huh. Now it's a bit high.
>
> They tell me that shortening the antenna below resonance will lower the
> resistance and introduce capacitance. But I think I have also seen in the
> literature that the antenna can be viewed as a transmission line. A shorted
> portion of parallel conductor transmission line (the folded monopole) less
> than 1/4-wave long looks inductive. But wait! Which will win? Will the
> shortness of the antenna look capacitive or will the transmission line
> dominate and the antenna will look inductive?
>
> Even better, is there some choice of the folded section wire diameters and
> spacing that will give an inductance that will exactly offset the
> capacitance due to shortness? So, then, is there a folded monopole of such
> dimensions that the resistance is 50 Ohms (due to being shorter than 1/4
> wave) with no terminal reactance (due to the inductive design of the
> "transmission line" cancelled by the shortness of the antenna's
> capacitance)?
>
> Brain hurts.
>
> John, KD5YI
>
>
>

1127. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 03:14:42 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <4084975a_2@news1.prserv.net>
Source record: 96278

John:

Andrew Corp. made a good living back in the dark ages (40s-60s)
manufacturing and selling 50 ohm folded monopoles. I can go measure the
element diameters on mine if you are interested. If I can recall where it
is stored. It uses a small inductance at the feed point for matching.

--
Crazy George
Remove N O and S P A M imbedded in return address
"The other John Smith" <jocjo-john@yooha.com> wrote in message
news:uQ_gc.3027$e4.2108@newsread2.news.pas.earthlink.net...
> Good evening, Gentlemen.
>
> A thought experiment:
>
> Start with a regular 1/4-wave monopole ground plane. The literature says
it
> looks like half the value of a dipole, about 35 Ohms, when resonant. It
> would be nice to have the resistance at the terminals be a bit higher, and
I
> very much value a grounded element anyway, so let's let it evolve into a
> folded monopole. The literature says it should now have about 4 times the
> terminal resistance of the original 1/4-wave we started with (about 140
> Ohms). Huh. Now it's a bit high.
>
> They tell me that shortening the antenna below resonance will lower the
> resistance and introduce capacitance. But I think I have also seen in the
> literature that the antenna can be viewed as a transmission line. A
shorted
> portion of parallel conductor transmission line (the folded monopole) less
> than 1/4-wave long looks inductive. But wait! Which will win? Will the
> shortness of the antenna look capacitive or will the transmission line
> dominate and the antenna will look inductive?
>
> Even better, is there some choice of the folded section wire diameters and
> spacing that will give an inductance that will exactly offset the
> capacitance due to shortness? So, then, is there a folded monopole of such
> dimensions that the resistance is 50 Ohms (due to being shorter than 1/4
> wave) with no terminal reactance (due to the inductive design of the
> "transmission line" cancelled by the shortness of the antenna's
> capacitance)?
>
> Brain hurts.
>

> John, KD5YI
>
>
>

1128. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 03:21:15 UTC
From: Phil Kane <Phil.Kane@nov.shmovz.ka.pop>
Message-ID: <xnfcneeyarg.hwg07zf.pminews@netnews.comcast.net>
Source record: 96279
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.policy

On Mon, 19 Apr 2004 21:46:49 GMT, kashe@sonic.net wrote:

> For what it's worth, I live in Daly City, a suburb of San
>Francisco. This area was built across the 60s. I'm not aware of any
>local restrictions, but I have two ham friends within a few blocks,
>one of whom has a few slopers and verticals on his roof and the other
>of which has about a 60 foot crank-up tower in his back yard with a
>yagi that barely fits within his own property lines (maybe a 25' x
>150' lot).

I lived in Daly City (St, Francis Heights area) from 1977 to 1985
and there were no restrictions on the 1960-era house and lot.

>Westlake, an area closer to San Francisco, maybe even part of
>Daly City for all I know,

Yes, the Westlake District is an integral part of Daly City that was
the first tract development by Henry Doelger post WW-II (in fact
when one says "Daly City" one thinks of Westlake first).

>has extensive CC&Rs, including requirements
>to keep your house painted in an acceptable color and to keep a living
>palm tree on your living green (grass only) lawn

That requirement was overturned as unreasonable by a court case in
the early 1970s.

My kids, OTOH, live in one of the condos up near the water tanks in
the foothills of San Bruno Mountain (still in Daly City) and there
are CC&Rs up the wazoo. For obvious reasons they did not seek my
legal advice or assistance before they bought the (obscenely-priced)
property - no big deal, neither of them are hams.

> All of which is to say that conditions may vary greatly within
>short distances, whether in urban or rural areas. So I have to agree
>with the earlier posts which note that the Realtor (tm) -- yes it is a
>restricted term than just anyone may not use -- is working for the
>seller and that involving a knowledgeabla local real estate attorney
>is your only guarantee.

Now for Cathy -

Make your receiving, examination, and acceptance of all the
restrictions (CC&Rs and any Homeowners' Association Regulations)
a contingency of any offer, and get some advice from a local
ARRL Volunteer Counsel who can give you local information of the

sort that Hans gave you about Plymouth. VCs are listed on the ARRL web site - you should touch base with one first.

Also it would not be a bad idea to touch base with Jay Bellows, K0QB, the ARRL Dakota Division Director who lives in St. Paul. Jay is one of a handful of us attorneys who deal in zoning, permit, and legal issues involving amateur stations on a regular basis, and was the attorney who was successful in getting the key U S Court of Appeals ruling in _Pentel v Mendota Heights_ upholding the FCC's requirement that a municipality must give "reasonable accomodation" to amateur antenna structure applicants.

I can only wish you good fortune in finding a place that suits your needs.

--
73 de K2ASP - Phil Kane
ARRL Volunteer Counsel

From a Clearing in the Silicon Forest
Beaverton (Washington County) Oregon

1129. Re: Help! Can't find trunk

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 03:24:23 UTC
From: Allan Butler <ka0ies@hotmail.com>
Message-ID: <GJ0hc.30367$0b4.43734@attbi_s51>
Source record: 96280

Nice reply.:)

It is frustrating seeing long reply trees where people have not read the original post.

1130. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 03:58:11 UTC
From: dt <NOSPAM@nospam.net>
Message-ID: <5l79809ood80nieb451dg8bmncnevsn0n4@4ax.com>
Source record: 96281

On Mon, 19 Apr 2004 19:48:18 -0400, "J. McLaughlin"
<JCM@Power-Net.Net> wrote:

>Dear Ms. Cathy:
>I ran a township zoning board for 18 years. My experience is that real
>estate agents (by whatever name) will tell a buyer anything! to make a
>sale. Most of the serious problems dealt with by the board came from
>buyers believing "their" agents. The agent is not your friend.
> [The only honest agents that I encountered were involved with
>million dollar sales with several lawyers (on each side) keeping them
>honest, and one other agent who became so appalled at the lack of ethics
>that she quit.]
> A lawyer with experience in real estate is your best defense. Even
>so, check and double check. You have been provided with some good
>advice.
> Consider the long term benefits of a slightly longer commute time.
>In Michigan, 10+ A. is a farm and is treated better than a lot. Raising
>antennas is best done on a farm.
> Good luck. Remember that the agent, as friendly as she or he may
>seem, is not working in your interest. Verify.
> 73 Mac N8TT

You will save yourself a lot of grief by visiting the city or county
planning and zoning (P&Z) office, and or maybe the codes enforcement
office if there is one. Ask them what restrictions are in the
ordinances. Keep in mind that if the neighborhood you are in has
protective covenants, those may be a matter of law (ie the developer
submitted them to the city/county and when his development was
approved, the covenants became part of the zoning or plat). Even if
the covenants are not part of the city/county zoning/code, by signing
the did you may be signing compliance with any restrictions/covenants.
These could amount to a legal contract, and herein is where only an
attorney can tell you how hooked you are and/or what your options are.
Good luck!
73
dt

1131. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 04:05:58 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <Gk1hc.1324$eZ5.164@newsread1.news.pas.earthlink.net>
Source record: 96282

"Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
news:4084975a_2@news1.prserv.net...
> John:
>
> Andrew Corp. made a good living back in the dark ages (40s-60s)
> manufacturing and selling 50 ohm folded monopoles. I can go measure the
> element diameters on mine if you are interested. If I can recall where it
> is stored. It uses a small inductance at the feed point for matching.
>
> --
> Crazy George

Thanks, George, but the inductor at the feed point is disqualified. The idea was to learn if everything could be done by just clever design. It appears not.

But, thanks for your offer.

John

1132. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 04:13:10 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <qr1hc.1347$eZ5.676@newsread1.news.pas.earthlink.net>
Source record: 96283

Okay. Thanks, Roy. This is getting too difficult for me so I'll go back to something more traditional.

John

"Roy Lewallen" <w7el@eznec.com> wrote in message news:10892fqqfas8p01@corp.supernews.com...
> The short answer to your question is no, with practical impedances. It
> turns out you'd need a very low impedance transmission line (on the
> order of a few ohms, if I recall correctly) to track very well.
>
> The easiest way to analyze a folded dipole is as two separate circuits,
> common-mode (or "antenna") and differential-mode (or "transmission
> line"). Superposition applies, so the two can be analyzed separately.
>
> First consider the "antenna". Its contribution to the feedpoint
> impedance is the same as a conventional monopole made from the two wires
> in parallel, but multiplied by 4 due to the transforming action of the
> "folding" process. (Other ratios are possible -- 4 is what you get if
> the conductors are the same diameter.) This "antenna" does all the
> radiating.
>
> In parallel with the "antenna" at the feedpoint is the "transmission
> line". This is the short-circuited transmission line made from the two
> conductors, with transmission line velocity factor taken into account.
> The "transmission line" part does no radiating.
>
> Now, if you shorten the antenna, two things will happen. The reactance
> of the "antenna" will become more negative, and its resistance will drop
> some. This will show up at the feedpoint just like it would for an
> unfolded monopole, but multiplied by 4. But you're also shortening the
> transmission line, whose impedance also appears at the feedpoint, in
> parallel with the transformed "antenna's". Assuming negligible loss in
> the feedline, this will cause a change only in parallel reactance at the
> feedpoint. Because of the relatively high impedance of the transmission
> line, and the relative sharpness of the impedance change of the
> "antenna" compared to the transmission line, there's very little
> compensation in the case of most practical antennas. Remember that the
> two impedances are in parallel, not series, so the high Z contribution
> of the transmission line has little overall effect. As I recall from
> doing an analysis some time ago, you get more broadening compared to a
> conventional monopole from having a fatter equivalent "antenna"
> conductor than you do from the transmission line stub.
>
> The reactance of the "antenna" can be a bit tricky to calculate

> accurately, but a number of modern programs (such as the free EZNEC
> demo) do a good job of it. The transmission line part of the effect is
> easy, either with a scientific calculator or one of the transmission
> line programs which are readily available. So overall, it's not
> difficult to find the actual impedances you'll see in practice.
>
> Roy Lewallen, W7EL
>
>
> The other John Smith wrote:
> > Good evening, Gentlemen.
> >
> > A thought experiment:
> >
> > Start with a regular 1/4-wave monopole ground plane. The literature says
it
> > looks like half the value of a dipole, about 35 Ohms, when resonant. It
> > would be nice to have the resistance at the terminals be a bit higher,
and I
> > very much value a grounded element anyway, so let's let it evolve into a
> > folded monopole. The literature says it should now have about 4 times
the
> > terminal resistance of the original 1/4-wave we started with (about 140
> > Ohms). Huh. Now it's a bit high.
> >
> > They tell me that shortening the antenna below resonance will lower the
> > resistance and introduce capacitance. But I think I have also seen in
the
> > literature that the antenna can be viewed as a transmission line. A
shorted
> > portion of parallel conductor transmission line (the folded monopole)
less
> > than 1/4-wave long looks inductive. But wait! Which will win? Will the
> > shortness of the antenna look capacitive or will the transmission line
> > dominate and the antenna will look inductive?
> >
> > Even better, is there some choice of the folded section wire diameters
and
> > spacing that will give an inductance that will exactly offset the
> > capacitance due to shortness? So, then, is there a folded monopole of
such
> > dimensions that the resistance is 50 Ohms (due to being shorter than 1/4
> > wave) with no terminal reactance (due to the inductive design of the
> > "transmission line" cancelled by the shortness of the antenna's
> > capacitance)?
> >
> > Brain hurts.
> >
> > John, KD5YI
> >

> >
> >

1133. Re: RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 04:38:01 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404192038.56be3846@posting.google.com>
Source record: 96284
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:<gLVgc.9115$%J5.1921@newssvr24.news.prodigy.com>...
> Return loss is the
> fraction of power that isn't absorbed by the load. See QST April 1959 pp
> 24-28 for Warren Bruene's article, "An Inside Picture of Directional
> Wattmeters."

You can find lots of references on the web, too. I think Charles
Wenzel's pages are almost always quite good, and recommend
http://www.wenzel.com/documents/swr.html, but a simple search may well
turn up things that suit your learning style better.

Cheers,
Tom

PS...Hank...sending a scan-to-text of the annual indexes for about
1988-1992, for couplers and whatever else was close to them on those
pages. I suspect it may be Joel Dunsmore's "Simple SMT Bridge Circuit
Mimics Ultar-Broadband Coupler" that you are interested in. I have
that here and can scan it, but you might check out Neil's referenced
site too.

1134. Re: G5RV.... feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 06:03:27 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <4084BD2F.DFCA2FD7@cwis.net>
Source record: 96285

Tony,
What you heard about feeding a 'G5RV' more efficiently with
some type of 'ladder' line is correct. 'More efficient' is
relative though.
Just for 'grins', the 'ASL' height is sort of meaningless for
DX or local, makes little difference, in general. 'AGL' does
make a difference, since it is one of the factors which will
shape radiation pattern, impedance, etc. (If it's a choice
between a (+) ASL and a (-) ASL, I think I'd take the (+) one.)
'Doc

1135. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 06:14:03 UTC
From: richardharrison@webtv.net
Message-ID: <1707-4084BFAB-157@storefull-3253.bay.webtv.net>
Source record: 96286

Crazy George wrote:
"Andrew Corp. made a good living back in the dark ages (40-60s) manufacturing and selling 50 ohm folded monopoles."

They could be had in stainless steel and they were tough. Like Andrew cables and connectors, it was wrong to use anyything else.

I can attest, having used countless numbers of the above, that Andrew`s folded monopole when ordered for the precise frequency and mounted atop your tower gave a full forward power indication on your wattmeter with nearly zero indicated reflected power which meant a good 50-ohm match. All you had to do was install the antenna right and it would give optimum performance for many years. Your signal reached as far as the eye could see and then some. Your radio heard signals acutely.

Well grounded to the tower at the top and with proper grounding of the tower and transmission line at tower top and bottom, lightning is routed to ground and not to the inside of the attached radio. The antenna just shook off the lightning strikes with small pits as calling cards. No harm done.

Best regards, Richard Harrison, KB5WZI

1136. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 06:23:13 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4084C1CC.B71390C9@sonic.net>
Source record: 96287

I tried practicing making some diy ladder line with a couple of spacers and a variety of wire: stranded #12, and solid #12, and then solid #14 (all insulated).

I think I am going to pass on this process. The only way I can see this homebrew ladder line holding its shape (spacing configuration) is to keep it under quite a bit of tension, a situation which may not actually be appropriate to my specific installation parameters here.

I am now thinking: how bad could those commercially manufactured window lines be?

Any recommendations on a specific type of commercially made window (ladder) line? I see that it comes in a variety of configurations and slight differences in Z.

This feed line will be for a full wave 160m loop.

I am not all that convinced that the effects of weather on this commercially available balanced line would be that much more negative than what it would be with any homebrew line I could construct.

I am under the impression that homebrewed ladder line should strive to have as few spacers as possible, eg. 3' for straight runs, 1-2' for curves. Using these guidelines it seems like what I would come up with would not maintain a precise spacing and the temptation would be to use a spacer at every foot. Wouldn't it be undesireable to use so many spacers?

Somebody out there must like commercial window ladder line?

Bill

'Doc wrote:

> Larry,
> Boy, are you gonna have fun! As Cecil said, spacing isn't
> all that critical. Use whatever you can find enough of, to make
> the 'spreaders', as long as it's not conductive it should work.
> The simplest way to feed ladder line through a window is to
> make a 'spacer' board to fit in the window. Drill a couple of
> holes in the board, the correct distance apart, feed the line
> through the holes, 'hot glue' in place (or however you can get
> it to stay put. Have to remove the screen...
> 'Doc

>
> PS - The real 'trick' is to keep the line from 'swarming' on
> you when you finish.

1137. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 06:32:27 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4084C3F6.9B12A358@sonic.net>
Source record: 96288

How close do the spacers need to be placed in reality?

http://www.w7fg.com/ant.htm

How close do these spacers appear to be.

Bill

zeno wrote:

> I tried practicing making some diy ladder line with a couple of
> spacers and a variety of wire: stranded #12, and solid #12, and
> then solid #14 (all insulated).
>
> I think I am going to pass on this process. The only way I can see
> this homebrew ladder line holding its shape (spacing configuration)
> is to keep it under quite a bit of tension, a situation which may
> not actually be appropriate to my specific installation parameters
> here.
>
> I am now thinking: how bad could those commercially manufactured
> window lines be?
>
> Any recommendations on a specific type of commercially made window
> (ladder) line? I see that it comes in a variety of configurations
> and slight differences in Z.
>
> This feed line will be for a full wave 160m loop.
>
> I am not all that convinced that the effects of weather on this
> commercially available balanced line would be that much more
> negative than what it would be with any homebrew line I could
> construct.
>
> I am under the impression that homebrewed ladder line should strive
> to have as few spacers as possible, eg. 3' for straight runs, 1-2'
> for curves. Using these guidelines it seems like what I would come
> up with would not maintain a precise spacing and the temptation
> would be to use a spacer at every foot. Wouldn't it be undesireable
> to use so many spacers?
>
> Somebody out there must like commercial window ladder line?
>
> Bill
>
> 'Doc wrote:

>
> > Larry,
> > Boy, are you gonna have fun! As Cecil said, spacing isn't
> > all that critical. Use whatever you can find enough of, to make
> > the 'spreaders', as long as it's not conductive it should work.
> > The simplest way to feed ladder line through a window is to
> > make a 'spacer' board to fit in the window. Drill a couple of
> > holes in the board, the correct distance apart, feed the line
> > through the holes, 'hot glue' in place (or however you can get
> > it to stay put. Have to remove the screen...
> > 'Doc
> >
> > PS - The real 'trick' is to keep the line from 'swarming' on
> > you when you finish.

1138. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 06:45:31 UTC
From: sideband <AINO8SPAMW@cac.net>
Message-ID: <fG3hc.10017$y84.1536@newssvr31.news.prodigy.com>
Source record: 96289

Why not try a double layered loop? Feed with a 4:1 balun about 1/4 of the way from the corner on the 40 ft side, make a spiral, and send the other side back to the balun. Separate the two layers by about 10 feet, get it at least 15 feet off the ground at the bottom, and it should work.

In that small of a garden, you're going to have to compromise.. might as well get as much wire in the air as you can.

-SSB

M3 wrote:
> Hi,
>
> Any designs for a small antenna to work on 160M? My garden is approx 40ft x
> 17ft.
>
> Post links here.
>
> Thanks.
>
>
>

1139. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 06:54:38 UTC
From: Duane Allen <computeruser@sprintmail.com>
Message-ID: <OO3hc.3463$e4.196@newsread2.news.pas.earthlink.net>
Source record: 96290

Bob wrote:
> (Duane, thanks for the morning chuckle!)
>

My pleasure. I enjoyed the joke on Car Talk. It seemed worthy of the news group. And, wow, what creative posts followed in the thread.

Best regards for a good week to all,

Duane
N6JPO

1140. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 07:34:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <m3k980hombjs7ors6jaoncl3fn5cnichku@4ax.com>
Source record: 96291

On Tue, 20 Apr 2004 06:23:13 GMT, zeno <zeno@sonic.net> wrote:

>Any recommendations on a specific type of commercially made window
>(ladder) line? I see that it comes in a variety of configurations
>and slight differences in Z.
>
>This feed line will be for a full wave 160m loop.

Hi Bill,

You repeatedly characterize this as 160M and given the size and height - Why do you think you need ladder line when it will in all probability fit quite nicely into a coax?

In free space, it may show as much as 140 Ohms R; however, within the cold embrace of earth only 50 feet away, you will barely muster 35 Ohms at resonance.

73's
Richard Clark, KB7QHC

1141. How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 07:35:50 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4084D2D1.D8080F08@sonic.net>
Source record: 96292

When transmitting what effect does moisture and/or precipitation have on various kinds of antennas, also what is the effect of rain on say uninsulated ladder line.

What is the general effect of moisture on antennas and feed lines as power is increased?

Bill

1142. Re: RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 10:58:11 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <40850343$0$16598$5a62ac22@freenews.iinet.net.au>
Source record: 96293
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I have built a design out the ARRL handbook using a toroid transformer, and SM 100 ohm resistors in parallel to make up the 50 ohm sections. I could get 40 dB return loss to about 50 MHz, when matching a 50 ohm load. This gives an idea of the accuracy of your bridge, ie the higher the return loss in this situation, the better the bridge, assuming an accurate 50 ohm load. I used a spectrum analyser as the detector and the venerable HP8640B for the source.
You can even measure small inductances (I got reasonable accuracy to about 100nH) using a series RLC combination on the end of a length of coax as the unknown load. (ie do it remotely!) R=50, C=is known, L is unknown
At some frequency there is a max return loss. At this freq XL=XC and X(LC)~0, assuming perfect components. Thus the load is 50 ohms. You can work out L knowing C

Richard

Henry Kolesnik wrote:
> Does anyone recall seeing an article for constructing a return loss bridge
> in RF Design in late 80s or early 90s? I'd like to see if I can get a
> scan, I've been bitten by the RLB bug.
> tnx
> Hank WD5JFR
>
>

1143. Re: RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 13:01:31 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <l5XVTQJr8RhAFAVP@ifwtech.co.uk>
Source record: 96301
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Richard Hosking wrote:
>I have built a design out the ARRL handbook using a toroid transformer,
>and SM 100 ohm resistors in parallel to make up the 50 ohm sections. I
>could get 40 dB return loss to about 50 MHz, when matching a 50 ohm
>load. This gives an idea of the accuracy of your bridge, ie the higher
>the return loss in this situation, the better the bridge, assuming an
>accurate 50 ohm load. I used a spectrum analyser as the detector

That also answers most of Reg's question about the difference between an RLB and an SWR bridge.

As Reg has often pointed out, the so-called "SWR bridge" is actually a reflection coefficient meter and it generally includes its own RF voltmeter.

An RLB generally doesn't, but has an RF output port for the reflected signal. That port is intended to be connected to a sensitive external RF power detector - such as Richard's spectrum analyser - which can accurately measure reflected signals down to -40dB... or even lower if you consider such readings meaningful.

Another difference from the normal SWR bridge is that an RLB is always a true bridge, with separate 'unknown' and 'reference' ports.

Normally your standard Zo load lives on the reference port, but if you remove it, you can then use the RLB to compare *any* two impedances that are intended to be the same (for example the two halves of a stacked yagi array). You can see how alike the two impedances are, without actually having to measure the value of either one... a very handy feature.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)

http://www.ifwtech.co.uk/g3sek

1144. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 13:12:45 UTC
From: richardharrison@webtv.net
Message-ID: <15153-408521CD-78@storefull-3251.bay.webtv.net>
Source record: 96294

Gary Deutshmann, Sr. wrote:
"If I could find a company that makes this same small weave aluminum fencing I would have them do my whole yard at my new house."

Copper radials could be better.

Ed Laport who worked with Brown, Lewis, and Epstein at RCA wrote on page 121 of "Radio Antenna Engineering":

"The radial disposition of wires in a buried or surface ground system is dictated by the natural paths for returning ground currents. Meshes opf crossed wires which were once widely used, should not be used with vertical radiators because the return paths are not direct and eddy-current losses in the closed loop circuits of the mesh can be appreciable."

Best regards, Richard Harrison, KB5WZI

1145. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 13:30:06 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <KIGdnZgSzNZAuBjdRVn-sA@comcast.com>
Source record: 96295
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"Keith" <kilo_watt_radio@spam.82d59834> wrote in message
news:108a80cb2eelsee@corp.supernews.com...
> On 19 Apr 2004 04:25:08 -0700,
> WA3MOJ <WA3MOJ@home.com> wrote:
> > Hi all, I'm looking for a good reference manual, pdf file, or web site's
that
> > will assist me in converting used UHF gear to operate on 11 meters. I'm
finding
> > there is a substantial market for such gear and I'll need some
references for
> > various solid state and tube conversions.
> >
> > Thanks in advance for any help.
> >
> > WA3MOJ
> >
>
>
> Yes, The conversion of a UHF FM transceiver is
> a simple four step process.
>
> 1. Remove the top cover of the UHF FM transceiver.
> 2. Inspect the board for any coils
> 3. Inspecting the board for any capacitors
> 4. Stand up and click your heels together three times
> and chant
> "There is no place like a CB with AM and SSB."
>
> Thanks for trolling.
>
>
> --
> Best Regards, Keith
> NW Oregon Radio http://kilowatt-radio.org/
> Pax melior est quam iustissimum bellum.
> Replace spam.82d59834 with wvi dot com & del

There may actually be a market for converted UHF gear for CB. The key here
is CB, NOT 11 METERS. Some countries in Europe have FM CB. I don't know what
the frequencies are, but quite likely VHF or UHF.

Other than that, for anybody still reading this thread - ever hear of a non
amateur UHF SSB radio?

In general, this thread is in the same line as converting old black/white TVs to color.

Tam/WB2TT

1146. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 13:41:42 UTC
From: Speedy <memorex@hotmail.com>
Message-ID: <30ebac4466cedc590ab09a501be86d7a@news.bubbanews.com>
Source record: 96296
Cross-posted to: rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.equipment

"Concerned Citizen" <phuqqoff@xzz.com> wrote in message
news:Xns94D0D5AAD9BE51234567890@216.196.97.136...
> WA3MOJ <WA3MOJ@home.com> wrote in news:c61ocu0o49@drn.newsguy.com:
>
> > In article <WMYgc.173537$JO3.101093@attbi_s04>, G.Beat says...
> >>
> >>"WA3MOJ" <WA3MOJ@home.com> wrote in message
> >>news:c60cuk02d43@drn.newsguy.com...
> >>> Hi all, I'm looking for a good reference manual, pdf file, or web
> >>> site's that
> >>> will assist me in converting used UHF gear to operate on 11 meters.
> >>> I'm finding
> >>> there is a substantial market for such gear and I'll need some
> >>> references for
> >>> various solid state and tube conversions.
> >>>
> >>> Thanks in advance for any help.
> >>>
> >>> WA3MOJ
> >>
> >>Troll
> >>
> >>
> > Why is it a troll? It is on topic.
>
> On topic for what? You are not wa3moj, and are posting in amatuer NG's
> with a federal issued call sign. Seems you may have more problems then
> you care to admit. You want peopl to think you are the amatuer radio
> operator wa3moj, that could lead you into serious problems. take it for
> what it is worth. That is only if george want's to pursue the matter.

since no one claiming to be wa3moj has disputed
the post,it stands to reason that it is a valid post.

I have sent a couple of e-mails to the F.C.C. pointing out that
he is selling illegal equipment. everyone else should send
e-mails to the F.C.C.
maybe we can get his ham ticket pulled.

1147. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 14:05:03 UTC
From: kludge@panix.com
Message-ID: <c63amfijb1@panix2.panix.com>
Source record: 96297
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Dave Platt <dplatt@radagast.org> wrote:
>
>They have proposed rescinding the Part 97 rule which places a whole
>bunch of restrictions on the manufacture and sale of amplifiers which
>can be used between 24 MHz and 35 MHz (the 10- and 12-meter amateur
>bands, and the 11-meter CB band). This change has not actually been
>enacted - they're inviting comments on whether it's a Good Idea or a
>Bad Idea.

I'm feeling it's a good idea. It's a good idea first of all because it
will now make it legal to sell a lot of those military surplus wideband
DC-to-daylight amplifier systems.

And it's a good idea secondly, because the CB crowd already has bootleg
linears and there is already a substantial underground selling the things.
If it's legal, maybe at least more of those guys will be using clean
linear amps that aren't bandsplatter machines. If the FCC can't stop
the sale, they can at least try to reduce the sale of the worst amps out
there.

>They have _not_ proposed making any change to the Part 95 rules, which
>currently make it illegal to actually _use_ any such amplifier with an
>11-meter (CB) transmitter.
>
>So - if their proposed rule change is adopted, it'll be easier for
>amateurs to buy amps that can be used on 10 and 12 meters.
>General-purpose HF-band amplifier designs will probably be revised, to
>"open them up" to the higher frequencies.

This is a good idea.

>It will still remain illegal to use any such amplifier on the 11-meter
>CB band.

This is also a good idea. It might be nice if it were enforced, but we
can't have everything.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

1148. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 14:05:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40852e88$1_3@corp.newsgroups.com>
Source record: 96298

zeno wrote:
> Any recommendations on a specific type of commercially made window
> (ladder) line? I see that it comes in a variety of configurations
> and slight differences in Z.

I use Wireman #554, #14, stranded, copper-clad steel. It's
virtually indestructible. http://www.thewireman.com
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1149. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 14:08:50 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40852f4c$1_3@corp.newsgroups.com>
Source record: 96299

zeno wrote:
> http://www.w7fg.com/ant.htm
>
> How close do these spacers appear to be.

Using a tape measure, they appear to be 21 inches apart.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1150. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 15:01:12 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0404200701.c31ef2d@posting.google.com>
Source record: 96300
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

Mike Coslo <mcoslo@adelphia.net> wrote in message
news:<C-KdnRBEjIlm8xndRVn-sw@adelphia.com>...
> N2EY wrote:
> >
> > First off, you need the services of a good *real estate* attorney. Not
> > just any lawyer will do; you need someone who does RE as a specialty
> > and who deals with CC&Rs (codes, covenants and restrictions) on a
> > daily basis. Make sure the attorney understands that his/her job is to
> > dig up any and all restrictions on any property you might be
> > interested in *before* you sign anything.
>
> I don't know about hiring an attorney first off, Jim. Over the course
> of buying a hous, I looked at maybe 30 or more. Sorry, I just don't have
> the money to pay an attorney to investigate every house I looked at.

Mike & Cathy,

Sorry if I wasn't clear about the attorney's role. My point was that
the thing to do is to line up a good RE attorney right away, with the
understanding that when you are seriously considering a particular
house you'll have the attorney research it.

In my local RE market, things move so fast that you need to have all
your people ready to go beforehand. MN may be different, though.
>
> When the field got really, really narrow, then perhaps
>
> > Second, require that you and your attorney be provided with a complete
> > and up-to-date set of the deed, title and all covenants and deed
> > restrictions *before* you make an offer, and read them thoroughly.
> > Sometimes they are part of the deed/title itself but often they are
> > not. States differ widely and you may need to be a bit insistent on
> > what you want to see. Almost all properties built in the past 40-50
> > years have some sort of restrictions, and those built in the last 30
> > years often have lots and lots of restrictions of various types. Note
> > that most restrictions are intentionally designed to be *impossible*
> > to change, and that by signing on the dotted line you agree to abide
> > by *all* of them.
> >
> > Third, try to educate the realtor. Show her some typical amateur
> > antenna installations so she has a better idea of what it is you want
> > to put up. Terms like "antenna tower" mean different things to
> > different people.
>

> Maybe for a little kickback? Seriously, that is the job they are
> supposed to do, and considering th eamount of commission they get, they
> are supposed to find out things you need to know.

In a perfect world, yes. But fewer than 1 in 100 Americans is a ham,
and many hams are in the same family, so the chances are good that a
given RE agent will have little or no experience with antenna
restriction covenants and such.
>
> Mind you, I don't think very highly of most of them. I could tell you
> about the time that we took a tour of a house that was already sold. Or
> the time we put a down payment on a house that the agent "neglected" to
> tell us was in a flood plain until the day after the check was cashed. I
> told him he had exactly 30 minutes to repay us the money. Took 15.

Was this *your* agent or *their* agent?
>
> > Fourth, realize that most but not all of the people involved in a real
> > estate transaction only get paid if you actually buy a house. No sale
> > = no comission/fees/taxes.
>
> Sure enough. That isn't an excuse for incompetence tho'.

'Course not. But it happens nonetheless. Laws differ by state - I only
know PA and I'm not an attorney.
>
> > In my case the realtor and attorney were able to get me a complete
> > copy of the restrictions fairly easily. They were *not* part of the
> > deed/title documents - instead, those documents referred to the
> > restrictions, which had to be retrieved from the county courthouse
> > records. I had to ask specifically to see them early on in the
> > transaction - if I hadn't insisted, I would never have seen them at
> > all. Until somebody complained.
>
> Part of their job, like asking to see only green houses. Or not green
> houses.

Point is you have to tell them about the green and how you define
"green".
>
> > Even though my house is over 50 years old and there has never been any
> > sort of home owner's association, there were a page and a half of
> > restrictions. Most of them seem a bit comical today (no raising
> > livestock on a property that is 60 x 120 feet) or have been superseded
> > by more-restrictive township ordinances (setbacks, advertising
> > signage, noise). No mention of antennas but I can't have a
> > freestanding tower (or a shed) with a concrete base because that would
> > constitute a "structure" and only the house and garage structures are
> > permitted.
> > Doesn't matter to me because there's no room for a tower anyway but
> > that's the sort of thing to look for.

>
> I got lucky when I bought my house. I could put up a 40 foot tower
> without a problem, and no restrictions on wire antennas. I say lucky,
> because I didn't become interested in the ARS until after we were in the
> place for 5 years or so.
>
Someday I will have the proverbial couple of unrestricted acres in the
country with the antenna farm. Right now other considerations govern.
That's the spot most hams are in when house hunting.

73 de Jim, N2EY

1151. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 15:10:48 UTC
From: Landshark <s3buell@sbcglobal.net>
Message-ID: <Y3bhc.24551$mB4.19249@newssvr27.news.prodigy.com>
Source record: 96302
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"Keith" <kilo_watt_radio@spam.911384f8> wrote in message
news:108ad9dfo8irhe0@corp.supernews.com...

>
> It is a troll posted by some guy trying to embarrassing Geroge. ;-)
>
> >
> > Tam/WB2TT
> >
> >
>
> --
> Best Regards, Keith
> NW Oregon Radio http://kilowatt-radio.org/
> Pax melior est quam iustissimum bellum.
> Replace spam.911384f8 with wvi dot com & del _

Yes it's a troll post, but George by no
means needs any help on embarrassing himself.
He's been a troll in Rec.Radio.CB for years now,
using thousands of different screen nics and an AOL
account, so he really doesn't need any help to
embarrass himself.

Watch by his reply, you'll see either from
his Comcast account or AOL account.

Landshark

--
Courage is what it takes to stand up
and speak; courage is also what it
takes to sit down and listen.

1152. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 15:14:31 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40853E5E.8F103CC@shaw.ca>
Source record: 96303

zeno wrote:
>
> I tried practicing making some diy ladder line...

> I am now thinking: how bad could those commercially manufactured
> window lines be?
>
> Any recommendations on a specific type of commercially made window
> (ladder) line?

I used 300 ohm TV twin lead for years. Why the concern about 600 ohms? It really doesn't matter unless you have a 600 Ohm feedpoint. The losses are still very low regardless of conditions, and as for dirty or rain, I had some up from 1983 to 1996 -- and never noticed any changes. When I took the antenna down the twinlead was as good as new and I used it for other things.

Irv VE6BP

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1153. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 15:19:43 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40853F96.535B3A29@shaw.ca>
Source record: 96304

Irv Finkleman wrote:
>
I should have added that the Twin Lead was the cheapest stuff available as
I just tried it for an experiment! It was a 60 foot run as well!

Irv

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1154. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 16:06:35 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0404200806.61dbd31d@posting.google.com>
Source record: 96305

Richard Clark <kb7qhc@comcast.net> wrote in message
news:<n12880pnqimvrpdbcjjniqi6ths0rvupem@4ax.com>...
> On 19 Apr 2004 05:14:44 -0700, N2EY@AOL.COM (N2EY) wrote:
>
> >Why a stub that is excited
> >along its length should behave as a trap is not explained, nor how the
> >shortened sections act as loading coils (the entire antenna is only
> >112' 4" long, plus connections).
>
> Hi Jim,
>
> Simply because the so-called explanations are more wish than reality.
> I've not slackened my study of this design. I've done thirty or forty
> measurements that have interest in their own right, but show the
> "theory" is sheer fantasy. These notions of tuned stubs as traps are
> so far off the mark in practice that no one notices they don't make
> sense electrically either.
> >Modeling the thing looks like a real challenge for a whole bunch of
> >reasons. The gaps between sections may be important, for example.
>
> ...
>
> >I suspect that a key element to the antenna's operation is the use of
> >the tubular Twin-Lead, with its 0.8 velocity factor. This stuff is
> >probably close to being unobtanium these days. Another point is the
> >extreme narrowness of resonance on most bands.
>
> These apologies ring false. The issue of gaps is desperate and the
> selection of tubular has no basis in special characteristics. All
> such considerations MUST yield to simple scaling. For instance, if
> you need 0.8 and have 0.9, there is no magic formula beyond
> proportions necessary to achieve "what should be."

I disagree! In the QST article, Lattin describes an 80/40 dipole using
his method. It has wires dangling from the stub junctions to get 40
meter resonance.
>
> The difficulty lies in the supposed explanations.
>
Agreed. They are oversimplified at best and just plain wrong at worst.
However, I take it as a given that W4JRW got the results he claimed
from the antennas he built.

The fact that people report so much trouble duplicating and modeling
the W4JRW antennas indicates to me that there is more to it than meets

the eye - and maybe more than met W4JRW's eye, as well.

Most important to me is that the antenna offers no real advantages over, say, a conventional trap dipole. Yet it offers many disadvantages, such as mechanical frailty and difficulty of duplication.

> >The W5GI antenna seems to be a variation on the Lattin theme.
>
> And it is even more gauche. It approaches antenna design as an allied
> art of Palmistry.

HAW!

And again - what advantages does it have over, say, a W3DZZ trap dipole?

73 de Jim, N2EY

1155. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 16:16:58 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40854d54$1_1@corp.newsgroups.com>
Source record: 96306

Irv Finkleman wrote:
> I used 300 ohm TV twin lead for years. Why the concern about 600 ohms? It
> really doesn't matter unless you have a 600 Ohm feedpoint. The losses are
> still very low regardless of conditions, and as for dirty or rain, I had
> some up from 1983 to 1996 -- and never noticed any changes. When I took
> the antenna down the twinlead was as good as new and I used it for other
> things.

Here's the 600 ohm concern. A dipole's feedpoint is likely to vary from
about 60 ohms min to about 6000 ohms max. With 300 ohm line, the SWR varies
from 5:1 to 20:1. With 600 ohm line, the SWR is relatively constant
at 10:1, i.e. 600 ohm line gives more consistent SWRs over the entire
HF range than does 300 ohm line - just my two cents.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1156. Re: RF Design 90s RLB article ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 16:22:10 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <S6chc.9541$2v4.1700@newssvr24.news.prodigy.com>
Source record: 96307
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I now have what may be better info, apparently Ihad it wron as far as RLB.
It was RF Design May and June 1982 titled "Low Cost Wideband Directional
Coupler" by Robert S. McDonald.

73
Hank WD5JFR
"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:cIAgc.18390$fQ1.3296@newssvr22.news.prodigy.com...
> Does anyone recall seeing an article for constructing a return loss bridge
> in RF Design in late 80s or early 90s? I'd like to see if I can get a
> scan, I've been bitten by the RLB bug.
> tnx
> Hank WD5JFR
>
>

1157. Re: W3DZZ trap dipole (was Re: Lattin antenna.....more info sources.....experiences)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 16:38:39 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0404200838.b025119@posting.google.com>
Source record: 96308

Jack Twilley <jmt+usenet@twilley.org> wrote in message
news:<86fzazstwh.fsf_-_@duchess.twilley.org>...
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> >>>>> "N2EY" == N2EY <N2EY@aol.com> writes:
>
> N2EY> For all that trouble, it seems to me that a better choice (if
> N2EY> you want direct coax feed on the non-WARC HF bands) is the
> N2EY> classic W3DZZ trap dipole. With only two traps and mechanically
> N2EY> robust construction it is possible to achieve direct coax feed
> N2EY> and low SWR on 80/40/20/15/10, and the cut-and-try is much
> N2EY> easier.
>
> Wow. This might work in my limited space, providing that it deals
> well with the short height above ground.

How short?

There's nothing magic about a trap dipole of any flavor, be it W3DZZ
or W9INN or whatever. At their very best they're *almost as good* as a
plain vanilla half-wave coax-fed dipole. Their main advantages are:

- they can be made mechanically rugged

- they can be directly fed with coax and yield reasonable SWR

- they can be built and adjusted with relatively simple tools and
materials

> Now I just have to learn how
> to make traps. Any recommended resources for this sort of thing?
>
W4RNL's site, of course. Some time back I did posts describing
coaxial-cable traps which you can google up.

The main trouble with trap construction is the materials. Ideally we
would use fixed vacuum capacitors and big Miniductor-like coils of
heavy wire or tubing. In practice we often settle for something
less...

1) Conventional LC traps - These are usually made from transmitting
capacitors like the 850 series and Miniductor coils. An alternative to
the Miniductor is to wind heavy wire on a piece of PVC pipe, which can
also serve as an insulator. Main problems with this construction is

getting theparts and weatherproofing.

2) Coaxial-cable traps - These are made from a piece of coax (RG-58 is probably best) wound on a piece of PVC. Articles by N4UU (QST December 1984, IIRC) and W8NX describe various flavors of coaxial-cable traps, as do the posts I made here some years back. The main problem with this method is that the results are highly variable, depending on the coax used. Depending on the loss of the outer coax jacket, one builder may have much more loss in a trap than another. Adjusting these traps isn't easy. Their main advantages are ruggedness and
low cost.

3) Bifilar or "twintraps" - These are similar to coax-cable traps, but are made by bifilar-winding a pair of wires and connecting the ends series-aiding. The internal distributed capacitance makes the C and gthe coil is the L. If wire with low loss insulation is used, these should be better than coax-cable traps.

Note that not all trap dipoles are "W3DZZ" trap dipoles. That designation belongs to a specific design, which works as follows:

Each dipole half consists of an outer section (about 22 feet), a parallel LC trap resonant on 40 meters, and an inner section (about 33 feet) which is also resonant on 40 meters. Direct coax feed or 1:1 balun.

The "trick" is in the LC ratio of the traps.

On 80 meters, the traps are below resonance, and act as loading coils so that the ~110 foot long antenna is resonant on 80

On 40 meters, the traps resonate and are essentially open circuits. Thus the middle 66 feet operates as a 40 meter dipole.

On 20 meters, the traps are above resonance and act as capacitors so that the entire antenna is 3/2 wave resonant.

On 15 meters, the traps are above resonance and act as capacitors so that the entire antenna is 5/2 wave resonant.

On 10 meters, the traps are above resonance and act as capacitors so that the entire antenna is 7/2 wave resonant.

The problem is that there are 5 resonance points to hit but only 3 variables to play with (inner section length, outer section length, LC ratio of trap). So in real life the antenna can only be truly optimized on 3 bands unless you are very very lucky, or use methods such as extra "dangle wires" to establish resonance on certain bands, as is sometimes recommended for getting a 40 meter dipole to work on 15.

If I had my druthers, I'd just use a plain dipole fed with ladder line (the real stuff, not "Twin Lead with holes" and a true balanced tuner. But mechanical considerations at my present QTH make coax feed a must,

so I make do with a homebrew trapper.

73 de Jim, N2EY

1158. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 16:48:44 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404200848.4b3cd510@posting.google.com>
Source record: 96309

zeno <zeno@sonic.net> wrote in message news:<4084D2D1.D8080F08@sonic.net>...
> When transmitting what effect does moisture and/or
> precipitation have on various kinds of antennas, also what is
> the effect of rain on say uninsulated ladder line.

I'm sure it could vary to freq being used, but overall, very little.
Rain will not have much effect on ladder line, unless there is a way
for water to bridge the gap between wires. You will see increased loss
with twin leads, but very little with ladder line that has mostly air
between the wires.
>
> What is the general effect of moisture on antennas and feed
> lines as power is increased?

Well, again could vary, but overall not a whole lot in general. With
my coax fed dipoles, it doesn't matter if it's raining or not up to
1500w. There is no difference in performance. I could see water maybe
having more of an effect on say real high freq antennas. UHF, etc..
HF, there is little difference unless you have a problem caused by
water. IE: waterlogged coax, twin lead that is wet, etc. MK

1159. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 16:58:10 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404200858.3d229b28@posting.google.com>
Source record: 96310

sideband <AINO8SPAMW@cac.net> wrote in message
news:<fG3hc.10017$y84.1536@newssvr31.news.prodigy.com>...
> Why not try a double layered loop? Feed with a 4:1 balun about 1/4 of
> the way from the corner on the 40 ft side, make a spiral, and send the
> other side back to the balun. Separate the two layers by about 10
> feet, get it at least 15 feet off the ground at the bottom, and it
> should work.
>
> In that small of a garden, you're going to have to compromise.. might
> as well get as much wire in the air as you can.
>
> -SSB

I don't think double layering will have much change, except for where
it's resonant. It should still act pretty much the same as a single
turn loop of that size.
Myself, I think he would be best off going with a very high
performance short vertical. A loop is gonna be a skywarmer, and a
lukewarm one at best. I would layer the garden with almost solid
metal, preferably copper wires, or whatever, and run the best,
tallest, lowest loss vertical he could get away with. I'd top load it
if at all possible. That will greatly improve the current
distribution.
With a good vertical, he would at least have a chance of having a
decent signal.
For long haul, nothing else he could install would touch it. I like
the inv L idea, but I assume he can't do that for some reason.
>
> M3 wrote:
> > Hi,
> >
> > Any designs for a small antenna to work on 160M? My garden is approx 40ft x
> > 17ft.

If you line that garden with a lot of radials under the ground, you
could have acceptable losses for what you have to work with. Most loss
is directly at the base of the vertical. Plant a lot of radials lining
the garden, and you will do ok. MK

1160. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 17:26:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <57ma809tnr71pgn7b3hke1rd4nhs5jlttp@4ax.com>
Source record: 96311

On 20 Apr 2004 09:06:35 -0700, N2EY@AOL.COM (N2EY) wrote:
>> These apologies ring false. The issue of gaps is desperate and the
>> selection of tubular has no basis in special characteristics. All
>> such considerations MUST yield to simple scaling. For instance, if
>> you need 0.8 and have 0.9, there is no magic formula beyond
>> proportions necessary to achieve "what should be."
>
>I disagree! In the QST article, Lattin describes an 80/40 dipole using
>his method. It has wires dangling from the stub junctions to get 40
>meter resonance.

Hi Jim,

OK, you disagree, but with what? Scaling will ALWAYS answer
everything but the mystical apologies.

>
>Most important to me is that the antenna offers no real advantages
>over, say, a conventional trap dipole. Yet it offers many
>disadvantages, such as mechanical frailty and difficulty of
>duplication.

This is more pilot error than design error (which has its own
problems, of course).

>And again - what advantages does it have over, say, a W3DZZ trap
>dipole?

I see no such issues if the theory were hammered out. It is plainly
these readings of tea leaves that frustrate construction, because when
a design is described, it is most clear and concise - it just doesn't
work is all.

Like I said, I've done some measures and added a dozen more since.
The results are interesting. I can come up with a four band antenna
without too much trouble; however, getting those bands into Ham
regions (all of them) is another matter. I can do this with a simple
run of twin lead, and one strategically placed short between them.

This antenna (usefully resonant or otherwise) is no worse than any
wire strung between poles - just two wires instead of one, hardly what
I would call fragile. If it has an advantage over your W3DZZ trap
dipole, I leave that strictly in the eye of the beholder as I have
full faith it won't be any worse.

Any way, such work offers a step towards an antenna with MORE gain
(and more wire, a third one) by constructing a Franklin Array style of

antenna. True, not a multi bander, but I am not particularly nailed to the floor over that.

73's
Richard Clark, KB7QHC

1161. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 17:41:55 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c63ngrplj1@newshost.mot.com>
Source record: 96314

Most certainly idle minds will play...

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ioh580dchrv0oimgpb05u5a7uonh5ihl07@4ax.com...
>
> Hi Jimmy,
>
> There are so many things wrong with this sentiment....

Well, since I have a rather large container of the stuff (a couple of
lbs) looking at me all the time on top of my o-scope, it sure is tempting
... just to say it was done...
>
> ...You could never support the column within it as it
> would draw a vacuum in its collapse under the influence of gravity
> (AKA barometer).

OOPS. Tilt... Er...uh. Don't build it like that. Cap the bottom to fix
this. Leave a little air/vacuum/(a.k.a. mercury vapor) on top if you must
use a glass tube.

... I wonder what kind of tubing I have around here...
--
Steve N, K,9;d, c. i My email has no u's.

1162. PLEASE READ Re: Radio Conversion: THIS THREAD STARTED AS A FORGERY

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 17:42:59 UTC
From: iamnotgeorge2004@yahoo.com
Message-ID: <c034bd2.0404200942.1ff6fe8c@posting.google.com>
Source record: 96312
Cross-posted to: rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.equipment

"Speedy" <memorex@hotmail.com> wrote in message
news:<30ebac4466cedc590ab09a501be86d7a@news.bubbanews.com>...
> "Concerned Citizen" <phuqqoff@xzz.com> wrote in message
> news:Xns94D0D5AAD9BE51234567890@216.196.97.136...
> > WA3MOJ <WA3MOJ@home.com> wrote in news:c61ocu0o49@drn.newsguy.com:
> >
> > > In article <WMYgc.173537$JO3.101093@attbi_s04>, G.Beat says...
> > >>
> > >>"WA3MOJ" <WA3MOJ@home.com> wrote in message
> > >>news:c60cuk02d43@drn.newsguy.com...
> > >>> Hi all, I'm looking for a good reference manual, pdf file, or web
> > >>> site's that
> > >>> will assist me in converting used UHF gear to operate on 11 meters.
> > >>> I'm finding
> > >>> there is a substantial market for such gear and I'll need some
> > >>> references for
> > >>> various solid state and tube conversions.
> > >>>
> > >>> Thanks in advance for any help.
> > >>>
> > >>> WA3MOJ
> > >>
> > >>Troll
> > >>
> > >>
> > > Why is it a troll? It is on topic.
> >
> > On topic for what? You are not wa3moj, and are posting in amatuer NG's
> > with a federal issued call sign. Seems you may have more problems then
> > you care to admit. You want peopl to think you are the amatuer radio
> > operator wa3moj, that could lead you into serious problems. take it for
> > what it is worth. That is only if george want's to pursue the matter.
>
> since no one claiming to be wa3moj has disputed
> the post,it stands to reason that it is a valid post.
>
> I have sent a couple of e-mails to the F.C.C. pointing out that
> he is selling illegal equipment. everyone else should send
> e-mails to the F.C.C.
> maybe we can get his ham ticket pulled.

FYI as any one reading this can guess WA3MOJ, is being forged.. It is being done by a group of anonymous out law CBers from rec.radio.cb. Thier goal is to punish licensed hams who have spoken out against freeband, mod'ed radios, and, illegal power in that newsgroup. Operating outside the rules means a lot to these CBers. Anyone that disaproves of it is seen as a threat. A licensed ham who does not 'go along with the program" and is foolish enough to use his callsign in that group gets harrased. Recently, one, of the out law CBers rang door bells, left notes, and took photos at the residences of hams N8WWM and KC8LDO for the purpose of stalking them. This is now a court matter. Also these same CB out laws are so ignorant they get mixed up and latch on to call signs of hams who do not even post there which is the case with WA3MOJ, N7VCF, and, others. It may be best to let them forge away so that the ISPs involved can shut them down.

1163. Re: G5RV.... feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 17:51:30 UTC
From: TonyWard <tonester1@cbuk.freeserve.co.uk>
Message-ID: <c63nv2$1lb$1@news8.svr.pol.co.uk>
Source record: 96313

cheers for that link sir its very usefull.....

"KA9CAR" <ka9car@a_r_r_l_.net> wrote in message
news:c617sv$1t3q$1@news1.tribune.com...
> Reg has a program called "Dipole 3" that will show you the relative
> efficiencies of each set up.
>
> http://www.btinternet.com/~g4fgq.regp/
>
> JD
>
>
> "TonyWard" <tonester1@cbuk.freeserve.co.uk> wrote in message
> news:c616immrd1@newsg3.svr.pol.co.uk...
> > Hi There,
> > I wonder if there is a better way to feed my 1/2 size G5RV......
> >
> > At the moment I am using it portable with the apex at 30 feet and the
ends
> > sloping down to 3 feet above ground .....the DX location is
around
> > 250 mtrs ASL.
> >
> > It is fed by 300ohm ladder connected to 20 feet of 50 ohm coax.
> >
> > is this the best way to feed it I have heard that just using ladder line
> is
> > better/more eficient...
> >
> > I would be gratefull for any plans or suggestions on how to feed this or
> > plans of other more efficient/easy set ups for portable "WIRE" antenna
set
> > ups as I like to make my own antennas ....
> >
> > I would like to over come the qrp operating by hight and antenna
> > eficiency...
> >
> > Thxs for any suggestions......
> >
> > Tony
> > M3TOE.
> >
> >
>

>

1164. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 18:06:25 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4085669B.A6FEC65@sonic.net>
Source record: 96315

Hi Richard,

My beginner's understanding is that I would have a better multi-band antenna utilizing a balanced feedline than with coax. I had seen a couple of recommendations by doing internet searches. Several operators spoke highly of the ~540' loop with balanced feed. I have a nice old 250W Johnson matchbox on hand. Again, my beginner's understanding, the more wire=the better, so I figured this long loop would be a good antenna for "all" bands.

I am just now setting up a station for the first time. I need to think I know what I am doing long enough to simply put something into action for fear I will spend forever in a complex endless decision making matrix. I enjoy trips to the hardware store and the junkyard, I haven't even been on the air yet......(or at least since 1953....).

I figure antenna concerns are first, a good ground, then I need to think about some serious equipment. This can be a bit overwhelming. Ihis next Sat. I will be going to a local hamfest (my first one), hopefully to meet some locals and make friends (mentor's, Elmers, etc.), also to track down the guy with the bow and arrow who can get a line up my Eucalyptus tree (165'+) for another possible antenna in an alternate shack on the property......

actually, now that I think of it, my whole involvement in ham radio at this moment (besides the fun of studying for the exams last month) is dreaming of antenna farm.

just the other night while listening to some local maniacs on 3840, now I realize I need to get my Extra if I want to be able to chime in at that frequency.....those guys last night almost shattered my naive expectation that hams are always gentlmen, a pursuit of integrity I personaly fully intend to promote in my own operating demeanor. Apparently there is some "famous" AM talk show host involved with that little late night net..... shame on them....

Great, now I have a shopping mission.....go out and buy the Extra exam book.....I do actually enjoy studying and learning.....

Now....a trip to the junk yard to find an old fashion DPDT Knife switch I can mount on the wall so I can switch my incoming balanced line from the Johnson to the Kenwood tuner....

help!.....

73

Bill (KG6UHM)

Richard Clark wrote:

> On Tue, 20 Apr 2004 06:23:13 GMT, zeno <zeno@sonic.net> wrote:
>
> >Any recommendations on a specific type of commercially made window
> >(ladder) line? I see that it comes in a variety of configurations
> >and slight differences in Z.
> >
> >This feed line will be for a full wave 160m loop.
>
> Hi Bill,
>
> You repeatedly characterize this as 160M and given the size and height
> - Why do you think you need ladder line when it will in all
> probability fit quite nicely into a coax?
>
> In free space, it may show as much as 140 Ohms R; however, within the
> cold embrace of earth only 50 feet away, you will barely muster 35
> Ohms at resonance.
>
> 73's
> Richard Clark, KB7QHC

1165. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 18:09:34 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40856759.E80F8F@sonic.net>
Source record: 96316

Hi Cecil,

I will check that out.

While playing around with wire last night, seriously, the diy that looked like it would work best was the sample I put together with some #10 bare copper!

I have been known to end up doing things the hard way, and overdoing things....

so why not this #10 bare copper ladder line?

73,

Bill

Cecil Moore wrote:

> zeno wrote:
> > Any recommendations on a specific type of commercially made window
> > (ladder) line? I see that it comes in a variety of configurations
> > and slight differences in Z.
>
> I use Wireman #554, #14, stranded, copper-clad steel. It's
> virtually indestructible. http://www.thewireman.com
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1166. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 18:17:15 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40856926.AA5DA72F@sonic.net>
Source record: 96317

Hi Irv,

The 300 ohm TV line I am sure works, but it does not appeal to my tendency to want to make everything "industrial strength" as if we were all going to live for ever. I am finding it difficult at the moment to resist the idea of making my ladder line out of #10 bare copper, thus insuring I will have a *&^%$#@!!!!! time up on top of a ladder yelling and screaming things like ("why do I always make things so difficult) hi hi. Actually I think that the #10 bare copper ladder line with my secret hardware store insight spacers will look impressive.... (who am I trying to impress is the question) I need to get my butt on the air otherwise I be only a "theoretical" ham.....

Secret hardware store spacer insight: the 4" uv/pvc ferrules that come with the gutter spikes!....no I didn't say gutter snipes.....hi

73

everyone was working this guy in Lithuania on 20m this morning....can't wait to get in there..... fun.....

Bill

Irv Finkleman wrote:

> zeno wrote:
> >
> > I tried practicing making some diy ladder line...
>
> > I am now thinking: how bad could those commercially manufactured
> > window lines be?
> >
> > Any recommendations on a specific type of commercially made window
> > (ladder) line?
>
> I used 300 ohm TV twin lead for years. Why the concern about 600 ohms? It
> really doesn't matter unless you have a 600 Ohm feedpoint. The losses are
> still very low regardless of conditions, and as for dirty or rain, I had
> some up from 1983 to 1996 -- and never noticed any changes. When I took
> the antenna down the twinlead was as good as new and I used it for other
> things.
>
> Irv VE6BP
>
> --
> ------------------------------------
> Diagnosed Type II Diabetes March 5 2001

> Beating it with diet and exercise!
> 297/215/210 (to be revised lower)
> 58"/43"(!)/44" (already lower too!)
> ---------------------------------------
> Visit my HomePage at http://members.shaw.ca/finkirv/
> Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
> Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/
> --------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

1167. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 18:19:36 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408569B2.55E4ABCF@sonic.net>
Source record: 96318

Hi Mark,

Thanks for the response. Good, I won't worry about it. But I do know about coax seal, rubberized electricians tape, and being throrough with my connections.

tnx agn.

73

Bill

Mark Keith wrote:

> zeno <zeno@sonic.net> wrote in message news:<4084D2D1.D8080F08@sonic.net>...
> > When transmitting what effect does moisture and/or
> > precipitation have on various kinds of antennas, also what is
> > the effect of rain on say uninsulated ladder line.
>
> I'm sure it could vary to freq being used, but overall, very little.
> Rain will not have much effect on ladder line, unless there is a way
> for water to bridge the gap between wires. You will see increased loss
> with twin leads, but very little with ladder line that has mostly air
> between the wires.
> >
> > What is the general effect of moisture on antennas and feed
> > lines as power is increased?
>
> Well, again could vary, but overall not a whole lot in general. With
> my coax fed dipoles, it doesn't matter if it's raining or not up to
> 1500w. There is no difference in performance. I could see water maybe
> having more of an effect on say real high freq antennas. UHF, etc..
> HF, there is little difference unless you have a problem caused by
> water. IE: waterlogged coax, twin lead that is wet, etc. MK

1168. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 18:23:05 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40856ae6$1_4@corp.newsgroups.com>
Source record: 96219

Steve Nosko wrote:

> Most certainly idle minds will play...
>
> "Richard Clark" <kb7qhc@comcast.net> wrote:
>>...You could never support the column within it as it
>>would draw a vacuum in its collapse under the influence of gravity
>>(AKA barometer).
>
> OOPS. Tilt... Er...uh. Don't build it like that.

"Tilt" is very good advice for a variable mercury column.
In fact, the tuning length of the column of mercury could
be controlled simply by tilting the tube of mercury at an
angle away from vertical in the direction of horizontal.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1169. Re: PLEASE READ Re: Radio Conversion: THIS THREAD STARTED AS A FORGERY

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 18:45:50 UTC
From: Speedy <memorex@hotmail.com>
Message-ID: <533c0439c3ae8ff946ffd3a0ca9be052@news.bubbanews.com>
Source record: 96220
Cross-posted to: rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.equipment

```
"I Am Not George" <iamnotgeorge2004@yahoo.com> wrote in message
news:c034bd2.0404200942.1ff6fe8c@posting.google.com...
> "Speedy" <memorex@hotmail.com> wrote in message
news:<30ebac4466cedc590ab09a501be86d7a@news.bubbanews.com>...
> > "Concerned Citizen" <phuqqoff@xzz.com> wrote in message
> > news:Xns94D0D5AAD9BE51234567890@216.196.97.136...
> > > WA3MOJ <WA3MOJ@home.com> wrote in news:c61ocu0o49@drn.newsguy.com:
> > >
> > > > In article <WMYgc.173537$JO3.101093@attbi_s04>, G.Beat says...
> > > >>
> > > >>"WA3MOJ" <WA3MOJ@home.com> wrote in message
> > > >>news:c60cuk02d43@drn.newsguy.com...
> > > >>> Hi all, I'm looking for a good reference manual, pdf file, or web
> > > >>> site's that
> > > >>> will assist me in converting used UHF gear to operate on 11
meters.
> > > >>> I'm finding
> > > >>> there is a substantial market for such gear and I'll need some
> > > >>> references for
> > > >>> various solid state and tube conversions.
> > > >>>
> > > >>> Thanks in advance for any help.
> > > >>>
> > > >>> WA3MOJ
> > > >>
> > > >>Troll
> > > >>
> > > >>
> > > > Why is it a troll? It is on topic.
> > >
> > > On topic for what? You are not wa3moj, and are posting in amatuer NG's
> > > with a federal issued call sign. Seems you may have more problems then
> > > you care to admit. You want peopl to think you are the amatuer radio
> > > operator wa3moj, that could lead you into serious problems. take it
for
> > > what it is worth. That is only if george want's to pursue the matter.
> >
> > since no one claiming to be wa3moj has disputed
> > the post,it stands to reason that it is a valid post.
> >
> > I have sent a couple of e-mails to the F.C.C. pointing out that
> > he is selling illegal equipment. everyone else should send
```

> > e-mails to the F.C.C.
> > maybe we can get his ham ticket pulled.
>
>
> FYI as any one reading this can guess WA3MOJ, is being forged.. It is
> being done by a group of anonymous out law CBers from rec.radio.cb.
> Thier goal is to punish licensed hams who have spoken out against
> freeband, mod'ed radios, and, illegal power in that newsgroup.
> Operating outside the rules means a lot to these CBers. Anyone that
> disaproves of it is seen as a threat. A licensed ham who does not 'go
> along with the program" and is foolish enough to use his callsign in
> that group gets harrased. Recently, one, of the out law CBers rang
> door bells, left notes, and took photos at the residences of hams
> N8WWM and KC8LDO for the purpose of stalking them. This is now a
> court matter. Also these same CB out laws are so ignorant they get
> mixed up and latch on to call signs of hams who do not even post there
> which is the case with WA3MOJ, N7VCF, and, others. It may be best to
> let them forge away so that the ISPs involved can shut them down.

maybe if the F.C.C gets enough complaints,they will investigate and
see if its really WA3MOJ or not.
if you care so much, get in contact
with him and ask him to quit selling illegal stuff.

1170. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 18:53:27 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <zkehc.27945$pk5.4733@fe03.usenetserver.com>
Source record: 96221

Precipitation in general, and snow in particular, can have another effect on the antenna. And that is static buildup. You can get static voltages large enough to damage sensitive semiconductors, such as MOS transistors. It is usually recommended that you have the antenna either DC grounded or have some type of sparc gap for the static to jump across. Of course, your antennas should be grounded when not in use but not everyone does this.

In the winter, don't forget, you can get ice buildup on your antenna and feedline

From personal experience---I was a memebe of the radio club at Ohio State (W8LT) many years ago when they were located in the OSU stadium. We had a genuine long wire run from the stadium over to a smoke stack on the power plant it was a few hundred feet long. In the winter when ever we had a dry snow there would be quite a static build up. There was a sparc gap inside the antenna tuner, and you could hear it going snap snap snap as the charge would build up and then arc over. I certainly wouldn't want to get my fingers across the thing under those conditions.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

"zeno" <zeno@sonic.net> wrote in message news:4084D2D1.D8080F08@sonic.net...
> When transmitting what effect does moisture and/or
> precipitation have on various kinds of antennas, also what is
> the effect of rain on say uninsulated ladder line.
>
> What is the general effect of moisture on antennas and feed
> lines as power is increased?
>
> Bill
>

1171. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 19:07:52 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <1yehc.28005$pk5.15199@fe03.usenetserver.com>
Source record: 96222

Well, after I replied to you post I remembered another antenna type. The reason I mentioned the Turnstile first is that it is easier to build. You are right. The pattern does fall apart when you get into the same horizontal plane as the antenna.

You have two choices. Either a highly directional antenna, for which you would have to have a tracking system to follow the satellite, and the appropriate software to run the thing (predicting when and where the bird will appear).

The other choice, which is what I would recommend, is the quadrifilar helix. It can be designed to have a hemispherical 180 degree beamwidth and still have the same RHCP over entire beam. I would even suggest making it a bit more than 180 degrees beamwidth, perhaps 200 degrees. The problem with the quadrifilar helix is that it is harder to build than a simple turnstile, but still easier than a directional antenna with two axis directional control. A Google search gave 2860 hits for "quadrifilar helix". One I looked at was http://web.ukonline.co.uk/phqfh/qfh.pdf . If you are not afraid of the metric system, it gives detailed construction notes for a 137 MHz antenna made from copper plumbing parts.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:vYZgc.22792$G_.4548@nwrddc02.gnilink.net...
>
> Jim
>
> I'd like to get RHCP on the horizon so I could "pick up" the satelite as
> early as possible.
>
> Jerry
>
>
>
> "JLB" <IHateSpam@nospam.net> wrote in message
> news:zdUgc.26405$pk5.25509@fe03.usenetserver.com...
> > Do a web search for "Turnstile Antenna".
> >
> > Jim
> > N8EE
> > "Jerry Martes" <j.jmartes@verizon.net> wrote in message

> > news:EYQgc.20857$G_.20472@nwrddc02.gnilink.net...
> > > I'd like to build an antenna for receiving 137 MHz signals from
polar
> > > orbiting NOAA weather satellites. I would like to get some
information
> > from
> > > any of the readers of this group who might have thought about
designing
> an
> > > antenna for this application.
> > >
> > > Jerry
> > >
> > >
> >
> >
> >
>
>

1172. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 19:09:13 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <c63sfq$69n$1@news.oregonstate.edu>
Source record: 96223

Richard Harrison <richardharrison@webtv.net> wrote:
> Ed Laport who worked with Brown, Lewis, and Epstein at RCA wrote on page
> 121 of "Radio Antenna Engineering":
>
> "The radial disposition of wires in a buried or surface ground system is
> dictated by the natural paths for returning ground currents. Meshes opf
> crossed wires which were once widely used, should not be used with
> vertical radiators because the return paths are not direct

With a fine enough ground spacing, though, I would think that the path is
'direct enough?'

> and
> eddy-current losses in the closed loop circuits of the mesh can be
> appreciable."

I thought the entire point of the ground plane was that the induced currents
are necessary to make up for the current sources that are 'supposed' to have
come from the 'missing' half of the antenna?

1173. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 19:14:36 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <kEehc.28042$pk5.27659@fe03.usenetserver.com>
Source record: 96224

The home page for this is
http://homepage.ntlworld.com/phqfh1/qfh_diy_guide.htm. Check it out. He is
doing WX satellite work like you are trying

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

1174. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 19:19:54 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40857614.326741609@news.galilei.com>
Source record: 96225

Hi Richard

Thanks for the advice!

However, I do use copper radials from each vertical.
From my Butternut HF9Vw/160 I used 3,500 feet of copper wire to make the radial bed. These were tied to an 8 foot grounding stake and connected to the antenna's grounded mast.

I have antennas that did not work well at all when placed in the front or side yard, but worked quite well in the back yard over all of that mesh of buried wire!

Because of this, I'm planning on trying to duplicate as closely as possible, what I had that worked so well for the last 20 years.

TTUL
Gary

1175. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 19:37:00 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <4085786b.327340625@news.galilei.com>
Source record: 96226

Hi Zeno

Some will say it don't affect it all, others will say it will affect
it a little bit and other will say it affects it alot.

I had several little 1/16th watt neon lights laying around doing
nothing. I would toy with them, lining them on dipoles to find the
highest area of RF on the dipoles, once found, I would solder these
little rascals to the dipole so they wouldn't move in the wind.

Besides looking cute, they offered a little bit of help too.
When it was raining, they wouldn't lite at all on a couple of
antennas, and on others were very dim.
This alone tells me that there is some affect of rain on the antennas.

But one question has always perplexed me to no end.
Why will the light light up if placed on the end of my 10 meter mobile
antenna, but not on the end of 10 meter ground plane. It lights up
just fine about 19 inches below the top on the ground plane and about
22 inches below the top on a vertical with an underground radial bed.

TTUL
Gary

1176. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 20:05:32 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <4085828C.44239BCE@uci.edu>
Source record: 96227

```
Cecil Moore wrote:
>
> Steve Nosko wrote:
>
> > Most certainly idle minds will play...
> >
> > "Richard Clark" <kb7qhc@comcast.net> wrote:
> >>...You could never support the column within it as it
> >>would draw a vacuum in its collapse under the influence of gravity
> >>(AKA barometer).
> >
> > OOPS. Tilt... Er...uh. Don't build it like that.
>
> "Tilt" is very good advice for a variable mercury column.
> In fact, the tuning length of the column of mercury could
> be controlled simply by tilting the tube of mercury at an
> angle away from vertical in the direction of horizontal.
> --
> 73, Cecil http://www.qsl.net/w5dxp

How much does the length change when you tilt it at 45 degrees?

ac6xg
```

1177. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 20:11:42 UTC
From: Richard Heindel <rheindel@neo.rr.com>
Message-ID: <2ufhc.15796$8k.15606@fe1.columbus.rr.com>
Source record: 96229

Hi Jerry,
Here's a few more sites for building the quadrafilar antenna
http://www.qsl.net/kf4cpj/qha/,
http://www.jcoppens.com/ant/qfh/index.en.php,
and there's a nice article in QST, August '96, by W3KH.
Richard WB8KRN

1178. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 20:15:50 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <408584f7$1@news.vallnet.com>
Source record: 96228

There's something called an EH-antenna... despite many claims it is not a wonder antenna, but it does get you on the air... it's not a substitute for a dipole or beam though (I saw a 160m 2 element quad.. that was a monster, but I digress).

www.eh-antenna.com

Somewhere I saw someone's test of one at some low band... 80 or 160m I forget which... It was pretty good sized, but tiny compared to say, a dipole. 2-3' in diameter, looked to be about 10-15' tall. no real good 'scale' photos.

I have seen a couple of 'how to build' articles on the web, but don't have them handy I'm afraid.

Unfortunately nothing is going to work really well... given your space limitations. I'd go for as much of a vertical as I could, and run ground radials in the garden, or maybe a <ehem> 'long' wire run around two sides of the property maybe?

--

"M3" <***> wrote in message news:4081ab53.0@entanet...
> Hi,
>
> Any designs for a small antenna to work on 160M? My garden is approx 40ft
x
> 17ft.
>
> Post links here.
>
> Thanks.
>
>
>

1179. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 20:51:49 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <g63b8098d0ema0to9sh1lmlp0k40flprrm@4ax.com>
Source record: 96230

On Tue, 20 Apr 2004 07:35:50 GMT, zeno <zeno@sonic.net> wrote:

>When transmitting what effect does moisture and/or
>precipitation have on various kinds of antennas, also what is
>the effect of rain on say uninsulated ladder line.

I've heard rain affects balanced line, but I use standard insulated
450 ohm ladderline to feed a dipole, and I can't detect any SWR
changes when the line is wet or dry.

Bob
k5qwg

>
>What is the general effect of moisture on antennas and feed
>lines as power is increased?
>
>Bill

1180. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 21:18:23 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <EJGdnT0hn5MDDhjdRVn-hQ@comcast.com>
Source record: 96231

"The other John Smith" <jocjo-john@yooha.com> wrote in message
news:Gk1hc.1324$eZ5.164@newsread1.news.pas.earthlink.net...
>
> "Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
> news:4084975a_2@news1.prserv.net...
> > John:
> >
> > Andrew Corp. made a good living back in the dark ages (40s-60s)
> > manufacturing and selling 50 ohm folded monopoles. I can go measure the
> > element diameters on mine if you are interested. If I can recall where
it
> > is stored. It uses a small inductance at the feed point for matching.
> >
> > --
> > Crazy George
>
>
> Thanks, George, but the inductor at the feed point is disqualified. The
idea
> was to learn if everything could be done by just clever design. It appears
> not.
>
> But, thanks for your offer.
>
> John
>
At the higher frequencies, one way to make a 50 Ohm antenna is to arrange it
as a full wave loop, but make it about twice as high as wide. That is, you
end up with an antenna that is 1/3 wavelength high, and 1/6 wavelength wide.
It's a balanced antenna, so you don't need ground, but the whole thing has
to be well up in the air.

Tam/WB2TT

1181. What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 21:33:53 UTC
From: Jeremy Becnel <desfox@cox-internyet.com>
Message-ID: <108b5gjspf2oefd@corp.supernews.com>
Source record: 96232

Guys and gals,

I'm working on assembling a groundplane antenna for my truck and am wondering what materials to use. I know copper is likely the best, but since I've got 1/8th inch steel rods laying around, I was wondering if I could use those for the ground radials? I'm using the whip off an old magmount for the transmitting element, but that's all of that material I have handy. I'm not terribly concerned with the rust as I plan on painting the whole assembly anyway.

I'm sure I can get some aluminum rod or brass/bronze rod at a local welding shop if they would be better materials, rf wise.

Jeremy Becnel
KC5TEK

1182. Re: Gold plating antenna elements?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 21:35:55 UTC
From: richardharrison@webtv.net
Message-ID: <23302-408597BB-760@storefull-3255.bay.webtv.net>
Source record: 96235

Joel Kolstad wrote:
"I thought the entire point of the ground plane was that the induced currents are necessary to make up for the current sources that are supposed to have come from the "missing" half of the antenna?"

The currents need to be induced in low-loss material for efficiency.

The performance is as if a vertical and its reflection made up a dipole in place of a monopole and its reflection. The equivalence is very good in most respects.

According to Laport, G.H. Brown, the inventor of the "ground plane antenna" and one of the famous "Brown, Lewis, and Epstein Trio" at RCA is responsible for using electrostatic principles for describing a ground or image plane and writing the equations to quantify the potentials due to the charges on a system of cylindrical conductors to be used as in a transmission line to determine characteristic impedance in terms of capacitance per unit length and the velocity of propagation of a TEM wave. See page 513 of "Radio Antenna Engineering" for details.

A vertical radiator driven against the earth or a ground plane needs to complete its electrical circuit between the radiator and ground through existing capacitance via capacitive (displacement) current. To minimize loss, ground current in the lossy earth is minimized by using enough radials of sufficient length to capture nearly all displacement current before it can flow through any significant length of earth.

If the vertical radiator is high above the earth and far away from ground, only a few radials suffice to capture nearly all displacement current. Earth far below is out of the current loop.

When the radials are near the surface of the earth, many radials are needed to hide the earth`s surface from displacement current with the vertical radiator. Fortunately, when the radials are closely spaced, any current induced in the earth doesn`t usually travel any significant distance before being collected by a nearby radial and this keeps the earth-current loss down. For the FCC, 120 radials of 1/4-wavelength evenly distributed around a 1/4-wave vertical radiator are just about perfect for the medium wave broadcast band.

Some of B, L.& E.`s performance charts are on page 119 of "Radio Antenna Engineering".

Best regards, Richard Harrison, KB5WZI

1183. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 21:38:09 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40859848.47870D82@shaw.ca>
Source record: 96233

Cecil Moore wrote:
>
> Irv Finkleman wrote:
> > I used 300 ohm TV twin lead for years. Why the concern about 600 ohms? It
> > really doesn't matter unless you have a 600 Ohm feedpoint. The losses are
> > still very low regardless of conditions, and as for dirty or rain, I had
> > some up from 1983 to 1996 -- and never noticed any changes. When I took
> > the antenna down the twinlead was as good as new and I used it for other
> > things.
>
> Here's the 600 ohm concern. A dipole's feedpoint is likely to vary from
> about 60 ohms min to about 6000 ohms max. With 300 ohm line, the SWR varies
> from 5:1 to 20:1. With 600 ohm line, the SWR is relatively constant
> at 10:1, i.e. 600 ohm line gives more consistent SWRs over the entire
> HF range than does 300 ohm line - just my two cents.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

Understood, Cecil, but when the SWR losses are of so little concern
then the SWR consistency becomes likewise, at least IMHO.

Irv

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1184. Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 21:39:16 UTC
From: Ron <rmrippy@hotmail.com>
Message-ID: <8Mghc.25538$6m4.1042660@twister.southeast.rr.com>
Source record: 96234

Can someone explain how a transmission line starts radiating as the separation between the center conductor and ground plane becomes greater and greater. Assume you out start with a wire over an infinite copper ground plane that forms a 50 ohm Zo transmission line. Then increase the distance between the wire and the ground plane until the wire becomes an end fed antenna. What happens to cause radiation to begin?

Ron

1185. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 21:47:10 UTC
From: jgboyles@aol.com
Message-ID: <20040420174710.11088.00000044@mb-m12.aol.com>
Source record: 96236

>I'm working on assembling a groundplane antenna for my truck

Hi Jeremy, I guess you are assembling a mobile antenna for your truck. The groundplane for it can be the metal body of the truck. No need to provide "ground radials", although a groundplane at VHF, mounted on a truck has been spotted by some folks.
Just use a simple 1/4 wavelength whip at the transmitting frequency, connect that to the center conductor of your coax, and securely bond the coax shield to the metal body of the truck. I would not paint. The mounting details are usually the most difficult.
73 Gary N4AST

1186. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 21:58:59 UTC
From: Jeremy Becnel <desfox@cox-internyet.com>
Message-ID: <108b6vob70i9i8b@corp.supernews.com>
Source record: 96237

Well, for the one I'm building it is designed to have the round radials so
I'm doing my best to follow the builder's plans.

Jeremy

1187. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 22:06:26 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <GIednfpS57D3AhjdRVn-jw@ctc.net>
Source record: 96238

You can use any material that will conduct . The main thing to look at is will it stand up and be mechanically sound. While you could use 1/4 inch copper rod, if it is more than about 6 inches long it would bend out of shape with a small ammount of wind.

"Jeremy Becnel" <desfox@cox-internyet.com> wrote in message news:108b5gjspf2oefd@corp.supernews.com...
> Guys and gals,
>
> I'm working on assembling a groundplane antenna for my truck and am
> wondering what materials to use. I know copper is likely the best, but
> since I've got 1/8th inch steel rods laying around, I was wondering if I
> could use those for the ground radials? I'm using the whip off an old
> magmount for the transmitting element, but that's all of that material I
> have handy. I'm not terribly concerned with the rust as I plan on painting
> the whole assembly anyway.
>
> I'm sure I can get some aluminum rod or brass/bronze rod at a local welding
> shop if they would be better materials, rf wise.
>
> Jeremy Becnel
> KC5TEK
>
>

1188. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 22:14:26 UTC
From: richardharrison@webtv.net
Message-ID: <5657-4085A0C2-758@storefull-3254.bay.webtv.net>
Source record: 96241

Jeremy, KC5TEK wrote:
"I`m not terribly concerned with rust as I plan on painting the whole assembly anyway."

My 2-meter groundplane uses a GM telescoping car antenna as a radiator and steel shelf-support channel from Home Depot as radials. These are solid rust after many years and they still work fine.

Groundplanes are best for fixed locations unless you are using a vehicle body or the like for your groundplane in a mobile application.

Commercially, the simple whip antenna worked against a car body has almost universal acceptance.

For workboats to get a little height for greater line-of-sight we used coaxial antennas. The vertical whip was half a diploe. A brass tube skirt served as the other 1/4-wave part of the vertical dipole. It could be elevated as high as convenient and worked as well as a groundplane but with no risk of poking out an eye on a tossing and turning boat. My ARRL Antenna Book has no construction article for the coaxial antenna. I wonder why?

Best regards, Richard Harrison, KB5WZI

1189. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 22:15:28 UTC
From: jgboyles@aol.com
Message-ID: <20040420181528.11088.00000046@mb-m12.aol.com>
Source record: 96239

>Can someone explain how a transmission line starts radiating as the
>separation
>between the center conductor and ground plane becomes greater and greater.

Ron, A transmission line, by definition does not have a center conductor, and a ground plane that it reacts with. A transmission line is two close parallel conductors carrying equal current, but 180 out of phase, so the EM fields created by each conductor cancels. A transmission line does not radiate. If you start increasing the spacing between the conductors, then the EM fields cannot cancel, and according to Maxwell and others, radiation occurs, you have an antenna. The most efficient radiator is a 1/2 wave dipole, almost 100%.
73 Gary N4AST

1190. Omni D

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 22:24:34 UTC
From: Paul <k4cvr@amsat.org>
Message-ID: <Cqhhc.74655$_g4.14927198@news4.srv.hcvlny.cv.net>
Source record: 96240

While I know this is an antenna forum I'm posting this anyway in hopes of a response. I recently inherited a Ten-Tec Omni D without a mic. I'm wondering what
might be the best mic to use with this radio? Tnx, and 73.

Paul K4CVR

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.659 / Virus Database: 423 - Release Date: 4/15/04

1191. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 22:30:45 UTC
From: jgboyles@aol.com
Message-ID: <20040420183045.11088.00000048@mb-m12.aol.com>
Source record: 96242

>Well, for the one I'm building it is designed to have the round radials so
>I'm doing my best to follow the builder's plans.

Jeremy, Just follow the builders plans. You have not provided enough
information to really get any informed help on the group. Not sure about
"round radials".
Good luck on your project, I would like to know how it turns out.
73 Gary N4AST

1192. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 22:38:27 UTC
From: jgboyles@aol.com
Message-ID: <20040420183827.11088.00000049@mb-m12.aol.com>
Source record: 96243

>Understood, Cecil, but when the SWR losses are of so little concern
>then the SWR consistency becomes likewise, at least IMHO

Hi Irv, Excellent point! Although I am sure Cecil put it in there as
Point/Counterpoint.
73 Gary N4AST

1193. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 22:52:46 UTC
From: Jeremy Becnel <desfox@cox-internyet.com>
Message-ID: <108ba4iris8oef9@corp.supernews.com>
Source record: 96244

My mistake, I should've included the url for said plans.

http://members.aol.com/k5oejerry/vhf_vert.htm

The reason I'm wanting to go with the steel is for durability versus the builder's 10 gauge copper wire. I seem to enjoy taking a simple design and making it more 'pretty' for lack of a better term.

Jeremy
KC5TEK

1194. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 23:06:55 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2tab8090fsoe0r4n0g6t72c90r1gs9c752@4ax.com>
Source record: 96245

On Tue, 20 Apr 2004 12:41:55 -0500, "Steve Nosko"
<suteuve.nosukowicuz@moutouroula.com> wrote:

>Cap the bottom to fix
>this. Leave a little air/vacuum/(a.k.a. mercury vapor) on top if you must
>use a glass tube.

Hi Steve,

It doesn't work that way. The mercury will create its own void -
thing called gravity and the pressure of the atmosphere around us are
in competition (even if the tube is sealed). Fill it to absolute
capacity (no reservoir) and you will either pop the tube (thing called
thermal expansion) or draw a vacuum.

Pressure, gravity, temperature - all things mercury is sensitive to.
It would be easier to herd cats.

73's
Richard Clark, KB7QHC

1195. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 23:08:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <n9bb809esvfmoqp9gjcp6ggt7rkalgojro@4ax.com>
Source record: 96246

On Tue, 20 Apr 2004 13:05:32 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>> In fact, the tuning length of the column of mercury could
>> be controlled simply by tilting the tube of mercury at an
>> angle away from vertical in the direction of horizontal.
>> --
>> 73, Cecil http://www.qsl.net/w5dxp
>
>How much does the length change when you tilt it at 45 degrees?

Hi Jim,

Look at it from either end and it is only a millimeter long. More new
physics of antennas (optics based too).

73's
Richard Clark, KB7QHC

1196. Re: Omni D

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 23:30:23 UTC
From: "Dan Richardson"
Message-ID: <7hcb8052vso6fkiemoudhfd7od27i7equg@4ax.com>
Source record: 96250

TenTec's customer support is one of the best around. Why don't you
drop them an email with that question.

sales@tentec.com

73
Danny, K6MHE

On Tue, 20 Apr 2004 22:24:34 GMT, "Paul" <k4cvr@amsat.org> wrote:

>While I know this is an antenna forum I'm posting this anyway in hopes of a
>response. I recently inherited a Ten-Tec Omni D without a mic. I'm wondering
>what
>might be the best mic to use with this radio? Tnx, and 73.
>
>Paul K4CVR
>
>
>
>
>---
>Outgoing mail is certified Virus Free.
>Checked by AVG anti-virus system (http://www.grisoft.com).
>Version: 6.0.659 / Virus Database: 423 - Release Date: 4/15/04
>

1197. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 23:33:47 UTC
From: "Dan Richardson"
Message-ID: <aocb80pd32glhitm5ufanv0110r2dkjv81@4ax.com>
Source record: 96249

On Tue, 20 Apr 2004 21:39:16 GMT, Ron <rmrippy@hotmail.com> wrote:

>Can someone explain how a transmission line starts radiating as the separation
>between the center conductor and ground plane becomes greater and greater.
>Assume you out start with a wire over an infinite copper ground plane that forms
>a 50 ohm Zo transmission line. Then increase the distance between the wire and
>the ground plane until the wire becomes an end fed antenna. What happens to
>cause radiation to begin?
>
>Ron

One of the pest explanations I know of can be found at:

http://home.iag.net/~w2du/Reflections2Chapter21SomeAspectsoftheBalunProblem.pdf

73
Danny, K6MHE

1198. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 23:35:33 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <9tihc.26694$hw5.40827@attbi_s53>
Source record: 96247

Ron, when the conductors in a transmission line are close, much much less than a wavelength, the currents, which are out of phase, create plus and minus EM fields that effectively cancel in all directions.

As the spacing becomes greater and becomes a significant portion of a wavelength, the fields cancel in some directions but the spacing causes the phase to add in other directions. Under this class of conditions the line starts to become more like an antenna than a transmission line.

As a point of further confusion, coaxial cables that have woven overbraid have a leakage inductance that allows some of the rf to leak out. So, even coax has some radiation due to leakage.

Ron wrote:
> Can someone explain how a transmission line starts radiating as the
> separation between the center conductor and ground plane becomes greater
> and greater.

SNIP

1199. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-20 23:41:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tfbb80h6gcbi0gbd3ok77sn924qm74r7f4@4ax.com>
Source record: 96248

On Tue, 20 Apr 2004 21:39:16 GMT, Ron <rmrippy@hotmail.com> wrote:

>Can someone explain how a transmission line starts radiating as the separation
>between the center conductor and ground plane becomes greater and greater.
>Assume you out start with a wire over an infinite copper ground plane that forms
>a 50 ohm Zo transmission line. Then increase the distance between the wire and
>the ground plane until the wire becomes an end fed antenna. What happens to
>cause radiation to begin?
>
>Ron

Hi Ron,

How it starts? You left the hose running. It comes out the end
because there is nothing there to keep it in.

This is not to say it comes out with a gush, however. A very short
protrusion of wire (the teensy radiator above this ground plane) has a
very, very small radiation resistance. In comparison to its Ohmic
loss, it can be so short that the wire itself simply turns it to heat
(or reflects the power back to the source due to the massive
mismatch). Result, not much gets out.

Increase the length of the wire, and the radiation resistance rises
faster than the Ohmic loss (the whole point of radiation is to load it
into THIS resistance and not the Ohmic loss of the copper). There may
still be a mismatch, but with the Standing Waves residing along the
length of the wire (now of sufficient length so that radiation
resistance dominates) the power eventually (within microseconds) gets
radiated. Result, enough gets out.

Increase the length of wire to wavelength proportions (typically a
quarter or more), and the radiation resistance easily eclipses Ohmic
loss. Result, most of the power is transferred out.

Let's fantasize some numbers:
1 inch radiator offers 0.001 Ohm loss and 0.000001 Ohm radiation
resistance. If you could tune this mismatch, you've got yourself a
cigar lighter. At night, folks would see you before they could hear
you.
1 foot radiator offers 0.01 Ohm loss and 0.0001 Ohm radiation
resistance. If you could tune this mismatch, you've got yourself an
infrared lightstick. You might be heard AND seen at the same
distance.
10 foot radiator offers 0.1 Ohm loss and 0.1 Ohm radiation resistance.
If you could tune this mismatch, you've got yourself a baseboard

heater suitable for a mobile 80M shoot-out.
100 foot radiator offers 1 Ohm loss and 30 Ohms radiation resistance.
Now you are talking DX.
Caution, these numbers are spun from whole cloth, but it illustrates
how important the relationships are.

Length counts in relation to wavelength. To strain a metaphor, how
warm and comfy would you feel on a cold winter night with an electric
blanket with a one inch element? Increase the length, spread the
load, and the best purpose is achieved with both.

73's
Richard Clark, KB7QHC

1200. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 00:09:45 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <1Zihc.29439$pk5.23609@fe03.usenetserver.com>
Source record: 96251

Good sites.

Some may wonder why there are different geometries for the 'same' antenna'. The reason is that the quadrifilar helix can be designed for practically any beamwidth up to 300 degrees or so. This results in different lengths and number of turns. Some designs are open at the bottom and some are closed at the bottom. It all depends on what you want the antenna to do.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

1201. Is My Johnson Big Enough?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 00:17:46 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4085BDA4.B38A8AA3@sonic.net>
Source record: 96252

The funny thing is I actually got this Spam in my email the day after aquiring a 250 Watt Johnson Matchbox exactly when I was wondering if I should have got the 1000 Watt instead. The spam said "Is your johnson big enough?" and I wondered how the heck did they knew I was thinking about that. Turns out the spam had nothing to do with ham radio, wink wink, nudge nudge, know what I mean?

Only thing is the KW Johnson is rather inflated pricewise these days. I am trying to stay within a budget. I understand that since the 250 Watt Johnson was used for AM that it could probably handle 600 Watts of SSB or even CW, this is what I have seen posted by perusing through Google searches. What are the limits powerwise of this smaller Matchbox? If I want to think about a linear amp, I may want to know my limitations with the smaller matchbox. Are linears such that you "select" how much power, so even if the linear is capable of more than the matchbox, I could experiment to see how much the matchbox would handle. I apologize for all these newbie questions. Maybe a Collins 30L-1 would be a good companion to the matchbox...

73

Zeno (aka Bill)

1202. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 00:24:36 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <2vthc.32109$pk5.7678@fe03.usenetserver.com>
Source record: 96136

According to Kraus' "Antennas" 92nd edition, chapter 2)....

An electric charge traveling at a uniform radiation along a straight wire
does not radiate.

When the charge reaches the end of a wire and reverse direction, it
undergoes acceleration (and deceleration) and radiates.

AN electric charge moving at uniform velocity along a curved or bent wire
is 'accelerated' and radiates.

An electric charge moving back and forth in simple harmonic motion (that is,
sine wave) has periodic acceleration and radiates.

If you have two parallel wires, one carrying a positive charge and the other
carrying a negative charge, it will not radiate.

If the two wires are bent away from each other, the charges radiate.

Kraus goes into more detail on all of this. Get yourself a copy of the book
or find one at the library. If they do not have one, they can get one on
interlibrary loan.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net
"Ron" <rmrippy@hotmail.com> wrote in message
news:8Mghc.25538$6m4.1042660@twister.southeast.rr.com...
> Can someone explain how a transmission line starts radiating as the
separation
> between the center conductor and ground plane becomes greater and greater.
> Assume you out start with a wire over an infinite copper ground plane that
forms
> a 50 ohm Zo transmission line. Then increase the distance between the wire
and
> the ground plane until the wire becomes an end fed antenna. What happens
to
> cause radiation to begin?
>
> Ron
>

1203. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 00:25:34 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4085bfd8$1_5@corp.newsgroups.com>
Source record: 96253

zeno wrote:
> so why not this #10 bare copper ladder line?

For one thing, it is overkill. And if it is solid,
it is subject to failure from fatigue. Many, many
hams have had trouble with breakage of solid wire
ladder-line.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1204. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 00:30:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4085c104_5@corp.newsgroups.com>
Source record: 96254

Jim Kelley wrote:

> Cecil Moore wrote:
>>"Tilt" is very good advice for a variable mercury column.
>>In fact, the tuning length of the column of mercury could
>>be controlled simply by tilting the tube of mercury at an
>>angle away from vertical in the direction of horizontal.
>
> How much does the length change when you tilt it at 45 degrees?

By the factor of the square root of two.
--
73, Cecil http://www.qsl.net/w5dxp

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1205. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 00:34:01 UTC
From: Marty <NOSPAM_vk2umj@yahoo.com.au_NOSPAM>
Message-ID: <c64fkcjpr1@austar-news.austar.net.au>
Source record: 96255

"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message
news:4085786b.327340625@news.galilei.com...
> Hi Zeno
>
> Some will say it don't affect it all, others will say it will affect
> it a little bit and other will say it affects it alot.
>
> I had several little 1/16th watt neon lights laying around doing
> nothing. I would toy with them, lining them on dipoles to find the
> highest area of RF on the dipoles, once found, I would solder these
> little rascals to the dipole so they wouldn't move in the wind.
>
> Besides looking cute, they offered a little bit of help too.
> When it was raining, they wouldn't lite at all on a couple of
> antennas, and on others were very dim.
> This alone tells me that there is some affect of rain on the antennas.
>
> But one question has always perplexed me to no end.
> Why will the light light up if placed on the end of my 10 meter mobile
> antenna, but not on the end of 10 meter ground plane. It lights up
> just fine about 19 inches below the top on the ground plane and about
> 22 inches below the top on a vertical with an underground radial bed.
>
> TTUL
> Gary

One question perplexes me - are you so bored that you can't think of
anything better to do other than solder neon lights to your antenna??? My
God, someone please shoot me if I ever get to that stage!!! ;-)

>

1206. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 00:37:12 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4085c292$1_5@corp.newsgroups.com>
Source record: 96256

Bob Miller wrote:
> I've heard rain affects balanced line, but I use standard insulated
> 450 ohm ladderline to feed a dipole, and I can't detect any SWR
> changes when the line is wet or dry.

Some (biased) experiments have been performed with twinlead laying
on a wooden deck wetted by a soapy solution. Moral: Avoid soapy
horizontal ladder-line. :-)

I use the length of the ladder-line to tune my antenna system to
resonance. I have to change the length by up to 2% to compensate
for the rain, i.e. rain has a negligible effect on the tuning of
my antenna system.
--
73, Cecil http://www.qsl.net/w5dxp

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1207. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 00:53:38 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4085c66c$1_5@corp.newsgroups.com>
Source record: 96257

Ron wrote:
> Can someone explain how a transmission line starts radiating as the
> separation between the center conductor and ground plane becomes greater
> and greater. Assume you out start with a wire over an infinite copper
> ground plane that forms a 50 ohm Zo transmission line. Then increase the
> distance between the wire and the ground plane until the wire becomes an
> end fed antenna. What happens to cause radiation to begin?

Electrons shed excess energy by emitting photons. If those
photons are absorbed by electrons, they don't radiate. If
they are not absorbed, they radiate (at the speed of light).
This is one area where quantum electrodynamics is actually
easier to understand, from a conceptual standpoint, than
Maxwell's equations.
--
73, Cecil http://www.qsl.net/w5dxp

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1208. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 01:00:42 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4085c815_5@corp.newsgroups.com>
Source record: 96258

JGBOYLES wrote:

>>Understood, Cecil, but when the SWR losses are of so little concern
>>then the SWR consistency becomes likewise, at least IMHO
>
> Hi Irv, Excellent point! Although I am sure Cecil put it in there as
> Point/Counterpoint.

If the SWR on 300 ohm twinlead is 5:1, the impedance at the current
maximum point is 60 ohms. If the SWR on 300 ohm line is 20:1, the
impedance at the current maximum point is 150 ohms (3:1 SWR).

If the SWR on 600 ohm line is 10:1, the impedance at the current
maximum point is 60 ohms NO MATTER WHAT THE ANTENNA IMPEDANCE.
The impedance at the current maximum point for a 6000 ohm antenna
fed with 600 ohm line is the same as the impedance at the current
maximum point for a 60 ohm antenna fed with 600 ohm line. That's
a definite '+' in my book. I like 60 ohms better than 150 ohms.
--
73, Cecil http://www.qsl.net/w5dxp

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1209. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 01:01:58 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4085c860_5@corp.newsgroups.com>
Source record: 96259

Dan Richardson < wrote:
> One of the pest explanations I know of can be found at:

Just who are you calling a pest?

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1210. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 01:23:04 UTC
From: "Dan Richardson"
Message-ID: <v6jb80tta3pvdhh1hclcrtd8q3u2sdst2h@4ax.com>
Source record: 96263

Oh Sheeeeeee! Those typos are going to kill me. <>F
Danny

On Tue, 20 Apr 2004 20:01:58 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Dan Richardson < wrote:
>> One of the pest explanations I know of can be found at:
>
>Just who are you calling a pest?
>
>
>
>-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1211. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 01:29:37 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <4085CE89.5D92963C@shaw.ca>
Source record: 96260

Jeremy Becnel wrote:
>
> My mistake, I should've included the url for said plans.
>
> http://members.aol.com/k5oejerry/vhf_vert.htm
>
> The reason I'm wanting to go with the steel is for durability versus the
> builder's 10 gauge copper wire. I seem to enjoy taking a simple design and
> making it more 'pretty' for lack of a better term.
>
> Jeremy
> KC5TEK

The requirement for the radials in the case shown at
the URL is because the antenna is elevated and
designed for hitting satellites. For normal low angle radiation a simple
magmount using the vehicle body as a groundplane would work.
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1212. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 01:39:21 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <4085D0C9.E678DC@cwis.net>
Source record: 96261

Jeremy,
The 'radials' aren't really necessary if you mount the
antenna directly to the vehicle's body (metal car body is
the ground). The whole point of the antenna at the URL
is that he didn't want to drill any holes in his vehicle.
If that bothers you too, then follow the directions.
The rods you have will probably work as well as anything
else you can find. The difference in conductivity between
your rods and copper just isn't worth worrying about. The
difference in durability ~is~ worth worrying about!
Have fun...
'Doc

1213. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 01:47:44 UTC
From: pw342@hotmail.com
Message-ID: <5f7b361.0404201747.7eb53ae8@posting.google.com>
Source record: 96262

Kathy, I lived in Shorewood, Excelsior, Chanhassen, and Orono. Non of
those
towns have restrictions that I knew of.
Only new developments will have restrictions. The older communities
never had them and porbably won't.
You can find really nice wooded properties out in the western
suburbs, with good antenna trees. Orono would be a good place to
look.
Pat W0OPW

1214. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 01:50:51 UTC
From: Jim Hampton <aa2qa@frontiernet.net>
Message-ID: <%rkhc.2073$rX.777@news02.roc.ny>
Source record: 96264
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"WA3MOJ" <WA3MOJ@home.com> wrote in message
news:c619hd024bp@drn.newsguy.com...
> In article <1XUgc.2518$e4.320@newsread2.news.pas.earthlink.net>, K&#65533;HB
says...
> >The Armenian judges gave this a 9.8 on the Olympic Troll-O-Meter, but
> >they were over-ruled by the umpires in instant replay, who award it a
> >1.4.
> >
> >The Armenian judges lodged a formal protest!
> >
> >It was sufficiently trollish, of course, but way too obvious. It was
> >poorly written, poorly executed, and was so incredibly lame as to lack
> >the true drawing power of a really masterful troll.
> >
> >Maybe as high as a 1.6 for the intense stupidity of the premise, but a
> >9.8? Never!
> >
> >The Armenian judges tear their hair out, throw their balalaikas down in
> >dismay, and perform the traditional Armenian Dismay Chant!
> >
> >They demand a recount!
> >
> >73, de Hans, K0HB
> >
> >
> >
> Hans, sind Sie absolut keine Hilfe gewesen. Zuk&#65533;nftig entfernen Sie bitte
Ihren
> Kopf von Ihrem Esel, bevor Sie zu mir sprechen.
>
> Danke.

I beg to differ. Hans has been most helpful. He has given a little comic
relief to what was an obvious troll.

Best regards from Rochester, NY
Jim

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.659 / Virus Database: 423 - Release Date: 4/15/04

1215. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 02:03:29 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404201803.94e91db@posting.google.com>
Source record: 96265

A slightly different way of looking at it from what Gary wrote...but
quite similar.

It's better to think of a two-wire transmission line, probably. If
you want to think of the ground plane, just realize that it's
identical to the situation with two conductors driven out of phase:
you can insert the ground plane without any effect on the fields at
all.

Then each wire does radiate, but to the extent that their currents are
coincident in space and in opposite directions, those radiations
cancel. Net field at any point in space is the linear combination of
all the fields arriving at that point, at that instant in time. As
the wires become more separated, the radiations observed at a distance
no longer cancel. You're not the same distance from each wire, and
more importantly, the phase you see differs. Consider what you see if
the wires are separated by half a wavelength, and you are in the plane
the wires are in...and what you see if you are in a plane
perpendicular to the plane the wires are in and passing between them.
If you observe the fields close to one of the wires, of course the
cancellation is not good there, either, though that's energy
propagating in the direction of the line. Note that there's no
radiation from coaxial line, so long as the net currents in the inner
and outer are exactly out of phase and the current distribution is
uniform around the outer conductor (assuming the conductors are
exactly coaxial), even if the outer conductor is not very thick.

I'll (once again) recommend the "Antennas" chapter of King, Mimno and
Wing, "Transmission Lines, Antennas and Waveguides." You'll find it
in the antennas chapter rather than the transmission lines chapter
because it's radiation rather than energy propagation along the line,
I suppose. The introductory material in that chapter bears on this
topic, and later in the chapter there's very specific mention of
radiation from transmission lines, including what seem some
non-intuitive results about amount of radiation versus line length.

Cheers,
Tom

Ron <rmrippy@hotmail.com> wrote in message
news:<8Mghc.25538$6m4.1042660@twister.southeast.rr.com>...
> Can someone explain how a transmission line starts radiating as the separation
> between the center conductor and ground plane becomes greater and greater.
> Assume you out start with a wire over an infinite copper ground plane that forms
> a 50 ohm Zo transmission line. Then increase the distance between the wire and
> the ground plane until the wire becomes an end fed antenna. What happens to

> cause radiation to begin?
>
> Ron

1216. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 02:10:06 UTC
From: JJ <radiobuff99@mailcity.moc>
Message-ID: <SuWdnciHEPXjehjdRVn-tA@gbronline.com>
Source record: 96121

Cecil Moore wrote:

> Steve Nosko wrote:
>
>> "Duane Allen" <computeruser@sprintmail.com> wrote:
>>
>>> From cartalk.com
>>> Two antennas meet on a roof, fall in love and get married. The ceremony
>>> wasn't much, but the reception was excellent.
>>
>>
>> If they have too many little 'uns, at meal time they'll have to set up a
>> feed line.
>
>
> Unless they just consider them to be parasitic.

I detect an "element" of humor in this thread.
>

1217. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 02:16:25 UTC
From: Jeremy Becnel <desfox@cox-internyet.com>
Message-ID: <108bm2gesf6a468@corp.supernews.com>
Source record: 96266

I am trying to build this to work sats, ISS packet, mostly.

I've already got a good 5/8th wave on the back end of the truck for normal use, I want this jobber for when I feel the need for spaceborne stations.

1218. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 02:17:11 UTC
From: Jeremy Becnel <desfox@cox-internyet.com>
Message-ID: <108bm3v4u8csic5@corp.supernews.com>
Source record: 96267

Just what I wanted to hear.

I'll hit the hardware store tomorrow to pick up the last few things I need.

1219. Re: Is My Johnson Big Enough?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 02:40:55 UTC
From: "Dan Richardson"
Message-ID: <j9jb80h8pcmvqio0l2s2oifvsve35rmr81@4ax.com>
Source record: 96120

I use one (250-watt) at 600-watts key down without any problems.

Danny, K6MHE

On Wed, 21 Apr 2004 00:17:46 GMT, zeno <zeno@sonic.net> wrote:

>The funny thing is I actually got this Spam in my email the
>day after aquiring a 250 Watt Johnson Matchbox exactly when I
>was wondering if I should have got the 1000 Watt instead. The
>spam said "Is your johnson big enough?" and I wondered how
>the heck did they knew I was thinking about that. Turns out
>the spam had nothing to do with ham radio, wink wink, nudge
>nudge, know what I mean?
>
>Only thing is the KW Johnson is rather inflated pricewise
>these days. I am trying to stay within a budget. I understand
>that since the 250 Watt Johnson was used for AM that it could
>probably handle 600 Watts of SSB or even CW, this is what I
>have seen posted by perusing through Google searches. What
>are the limits powerwise of this smaller Matchbox? If I want
>to think about a linear amp, I may want to know my
>limitations with the smaller matchbox. Are linears such that
>you "select" how much power, so even if the linear is capable
>of more than the matchbox, I could experiment to see how much
>the matchbox would handle. I apologize for all these newbie
>questions. Maybe a Collins 30L-1 would be a good companion to
>the matchbox...
>
>73
>
>Zeno (aka Bill)
>
>

1220. Re: moving two UHF TV antennas about the lawn till in phase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 02:58:06 UTC
From: Gary Schafer <gaschafer@comcast.net>
Message-ID: <loob809b2goquq0dt304t16m0668bdlf8b@4ax.com>
Source record: 96268

With two antennas in phase you can steer the null by moving the
horizontal spacing of the antennas. This was commonly done in cable tv
head end reception some years ago where there would be an inter
fearing station close in azimuth to the wanted station.

S search may yield the formulas for the distance verses the degrees
off null.

73
Gary K4FMX

1221. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 03:00:49 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <Btlhc.4636$e4.2680@newsread2.news.pas.earthlink.net>
Source record: 96119

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:EJGdnT0hn5MDDhjdRVn-hQ@comcast.com...

> At the higher frequencies, one way to make a 50 Ohm antenna is to arrange
it
> as a full wave loop, but make it about twice as high as wide. That is, you
> end up with an antenna that is 1/3 wavelength high, and 1/6 wavelength
wide.
> It's a balanced antenna, so you don't need ground, but the whole thing has
> to be well up in the air.
>
> Tam/WB2TT
>

That's an interesting one I'll remember.

However, the idea is to make an unbalanced antenna with all the elements
connected to ground. The folded monopole is an excellent example.

Thanks.

John

1222. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 03:20:18 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4085E86C.96B7E42C@sonic.net>
Source record: 96122

Hi Cecil,

The only reason I was considering #10 solid wire was because it would absolutely hold its shape with a minimum of spacers. Aside from the fact that it is electrically overkill, you are saying that even wire that thick could possible flex enough over time to fatique and fail? Somehow I got it into my head that the best way to go was homebrew ladder line, and the only way I could see doing it myself was with this thick wire, all other wires were too messy somehow.

I checked the #554 that you suggested and it is rated for full power. I didn't realize that #14 wire could handle that (guess I have AC wiring in mind and not RF). So you have come to the conclusion that this wire is the best way to go for balanced feed line all things considered? (weather, dirt, etc.) Maybe I should just use that and move on from this obsession about making my own ladder line. I'll tell you that #10 was going to look cool in a kind of science fiction movie laboratory kind of way..... It is hard to get off that track, but maybe I am not being very practical...

I see that Radio Works also has this #14 copper-clad for about the same price, he says that the actual impedance is approx. 390 ohms.

Now I am wondering how I got onto this do it yourself homebrew ladder line obsession in the first place, I think it was some folks complaining about how erratic it was with the rainy weather and when it gets dirty, and stories of oldtimers going out and coating it with bacon fat etc. yuk.....

So you are predicting eventual unhappiness with #10 bare copper wire ladder line with cute little gutter spike uv/pvc ferrules as spacers. Why do all those guys make their own ladder line...is it because the commercial version is nearly 30 cents a foot? Or is there some other downside they were trying to avoid?

I was going to order some stuff from Radio Works anyway, so I could just get a chunk of that #14 ladder line......unless ....

Zeno (can't seem to really get away from this nickname....so maybe Bill will just have to wait in the wings.....)

Cecil Moore wrote:

> zeno wrote:
> > so why not this #10 bare copper ladder line?
>
> For one thing, it is overkill. And if it is solid,

> it is subject to failure from fatigue. Many, many
> hams have had trouble with breakage of solid wire
> ladder-line.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
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> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1223. Re: Is My Johnson Big Enough?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 03:38:31 UTC
From: dplatt@radagast.org
Message-ID: <108br5nhtcurk8e@corp.supernews.com>
Source record: 96123

>Only thing is the KW Johnson is rather inflated pricewise
>these days. I am trying to stay within a budget. I understand
>that since the 250 Watt Johnson was used for AM that it could
>probably handle 600 Watts of SSB or even CW, this is what I
>have seen posted by perusing through Google searches. What
>are the limits powerwise of this smaller Matchbox?

That's going to depend to some extent on the characteristics of the load. Very low, very high, or very reactive loads can be difficult for a tuner to handle - they can result in high voltages (the capacitors or the output connectors may arc over) and/or high circulating currents (high losses in the inductor, leading to heating). A tuner might misbehave into some loads, at power levels where it'd have no difficulty at all into easier loads.

> Are linears such that
>you "select" how much power, so even if the linear is capable
>of more than the matchbox, I could experiment to see how much
>the matchbox would handle.

Depends on the design. Some may have adjustable gain, some may have an adjustable input attenuator. Others are fixed-gain and you'd need to reduce the RF power output from your exciter/transmitter in order to make a proportional reduction in the linear's power output.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1224. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 04:08:32 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4085F3BA.56B504C0@sonic.net>
Source record: 96124

When I was a kid I remember tuning my antenna with one of those little neon bulbs soldered to a couple of little loops of wire. One guy would be at the transmitter, the other guy up on a ladder with the bulb. When the bulb was brightest your antenna was tuned....or something like that...

Zeno

Marty wrote:

> "Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message
> news:4085786b.327340625@news.galilei.com...
> > Hi Zeno
> >
> > Some will say it don't affect it all, others will say it will affect
> > it a little bit and other will say it affects it alot.
> >
> > I had several little 1/16th watt neon lights laying around doing
> > nothing. I would toy with them, lining them on dipoles to find the
> > highest area of RF on the dipoles, once found, I would solder these
> > little rascals to the dipole so they wouldn't move in the wind.
> >
> > Besides looking cute, they offered a little bit of help too.
> > When it was raining, they wouldn't lite at all on a couple of
> > antennas, and on others were very dim.
> > This alone tells me that there is some affect of rain on the antennas.
> >
> > But one question has always perplexed me to no end.
> > Why will the light light up if placed on the end of my 10 meter mobile
> > antenna, but not on the end of 10 meter ground plane. It lights up
> > just fine about 19 inches below the top on the ground plane and about
> > 22 inches below the top on a vertical with an underground radial bed.
> >
> > TTUL
> > Gary
>
> One question perplexes me - are you so bored that you can't think of
> anything better to do other than solder neon lights to your antenna??? My
> God, someone please shoot me if I ever get to that stage!!! ;-)
>
> >

1225. Re: What material for antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 05:00:38 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <4085FFFD.CE7D973C@shaw.ca>
Source record: 96125

Jeremy Becnel wrote:
>
> I am trying to build this to work sats, ISS packet, mostly.
>
> I've already got a good 5/8th wave on the back end of the truck for normal
> use, I want this jobber for when I feel the need for spaceborne stations.

Then this is the one you want.
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1226. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 05:31:58 UTC
From: richardharrison@webtv.net
Message-ID: <5657-4086074E-845@storefull-3254.bay.webtv.net>
Source record: 96127

Bill wrote:
"When transmitting what effect does moisture and / or precipitation
have on various kinds of antennas---?"

I worked off and on for 10 years in a medium wave broadcast station with
a 4-tower directional array (separate day and night patterns) fed by
open-wire 6-wire skeletal coax.
Every half hour we recorded the sampling loop currents associated with
each tower and the phase relationships between the towers using an RCA
WM-30A phase monitor. Precipitation and fog didn`t amount to a hill of
beans in nearly all cases. Currents and phases were nailed in place.

Best regards, Richard Harrison, KB5WZI

1227. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 05:40:11 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40860936.31DB18@sonic.net>
Source record: 96128

Hi Richard,

You remind me that I do not understand something. Let's say the characteristic impedance of this 540' loop is in the neighborhood of 140 ohms in free space, or even as you say closer to even 35 ohms in reality. Your point was, if I understand correctly, that this is in the ballpark of 50ohm coax and you suggest it can just as easily be fed into the coax.

But I thought that coax is unbalanced and the point was to go with a balanced feed line?

I guess I am not understanding the relevant differences between balanced vs. unbalanced feedlines, and getting the impedance of the the transmission line close to the impedance of the antenna.

I thought the point of my striving to use balanced ladder line was to somehow gain something that would be compromised by using coax. I thought that the the ladder line which might be 488 ohms say is still going to be a better feedline than using the 50ohm coax. The coax would still then require a balun, correct? (a 1:1 banlun?).

It is sites like this: http://www.cebik.com/par.html that tend to get one thinking about this whole diy approach.

My reading and gleaning of websites has me of the opinion (at this point) that the balanced line with this long loop is better (multi band) than to feed it with coax.

I believe Cecil has already explained this in terms of the wide range of actual resistance that may be encountered multi band. (hey, I am just now learning to talk this lingo....just barely know what I am talking about....operating intuitively, and with the kindness of strangers.....

Zeno (aka Bill) KG6UHM for the moment.....

Richard Clark wrote:

> On Tue, 20 Apr 2004 06:23:13 GMT, zeno <zeno@sonic.net> wrote:
>
> >Any recommendations on a specific type of commercially made window
> >(ladder) line? I see that it comes in a variety of configurations
> >and slight differences in Z.
> >
> >This feed line will be for a full wave 160m loop.
>
> Hi Bill,
>

> You repeatedly characterize this as 160M and given the size and height
> - Why do you think you need ladder line when it will in all
> probability fit quite nicely into a coax?
>
> In free space, it may show as much as 140 Ohms R; however, within the
> cold embrace of earth only 50 feet away, you will barely muster 35
> Ohms at resonance.
>
> 73's
> Richard Clark, KB7QHC

1228. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 05:41:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408609e8_6@corp.newsgroups.com>
Source record: 96126

zeno wrote:
> So you have come to the
> conclusion that this wire is the best way to go for balanced feed
> line all things considered?

Not the best, but hard to beat for the price and convenience.

> So you are predicting eventual unhappiness with #10 bare copper wire
> ladder line ...

The solid copper wire usually breaks at the antenna where there
is lots of lateral movement. That can probably be cured by a
rigid center support.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1229. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 05:59:22 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c652j7$7ut81$1@ID-225206.news.uni-berlin.de>
Source record: 96129

How much gain do you need? The quadrafilar is low gain, and the helical beam
is high gain, but you have to point it.
Check with the weatherfax sites, they should be close

"Richard Heindel" <rheindel@neo.rr.com> wrote in message
news:2ufhc.15796$8k.15606@fe1.columbus.rr.com...
>
>
> Hi Jerry,
> Here's a few more sites for building the quadrafilar antenna
> http://www.qsl.net/kf4cpj/qha/,
> http://www.jcoppens.com/ant/qfh/index.en.php,
> and there's a nice article in QST, August '96, by W3KH.
> Richard WB8KRN
>
>

1230. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 06:20:04 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0404202220.57878fa2@posting.google.com>
Source record: 96130

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<4082d952_3@corp.newsgroups.com>...
> Reg Edwards wrote:
>
> Pity the poor ham who puts an Isotron on a ten foot pole
> for field day.

And the same pays for the EH antenna, see
http://home.earthlink.net/~calvinf15/_technical/EH_antenna_test_report.pdf

73 Ivan OK1SIP

1231. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 06:36:55 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <k44c80de8ol60vk6vr3bec2pplkn4k2kf2@4ax.com>
Source record: 96131

On Wed, 21 Apr 2004 05:40:11 GMT, zeno <zeno@sonic.net> wrote:
>You remind me that I do not understand something. Let's say the
>characteristic impedance of this 540' loop is in the neighborhood of 140
>ohms in free space, or even as you say closer to even 35 ohms in reality.
>Your point was, if I understand correctly, that this is in the ballpark
>of 50ohm coax and you suggest it can just as easily be fed into the coax.
>
>But I thought that coax is unbalanced and the point was to go with a
>balanced feed line?

Hi Bill,

True, but easily answered with a feed line choke (1:1 BalUn) at the
drive point that will render the coax balanced if the load is - being
that close to ground there is every chance that may be debatable.
Again, there is no getting it right the first time out of the box -
you can only put it up and test to see how much you need to change it.

You were planning pulleys right?

>I guess I am not understanding the relevant differences between balanced
>vs. unbalanced feedlines, and getting the impedance of the the
>transmission line close to the impedance of the antenna.

You can build a twin line of 50 Ohms. Takes pretty close spacers, and
you will need a lot if you use bare wire. The wire pairs would be as
close as zip cord. Twisted pair, insulated could do the trick (might
even match the 35 Ohms).

>I thought the point of my striving to use balanced ladder line was to
>somehow gain something that would be compromised by using coax. I thought
>that the the ladder line which might be 488 ohms say is still going to be
>a better feedline than using the 50ohm coax.

Well.... Only if you use this as a monobander. As a multibander it
will ALWAYS have SWR, the point of big wire twin lead is that the loss
will be less than if you used the same antenna with coax feeding it.
Coax with big center wire is HUGE and COSTLY for the same loss figures
at the same SWRs met by multiband use.

For 160M band, I would REALLY look for the Archer and put my effort
into that prospect. A low loop is the pits - hi Z, lo Z, balanced,
unbalanced, SWR, no SWR hardly counts for diddly.

>The coax would still then
>require a balun, correct? (a 1:1 banlun?).

ibid.

>It is sites like this: http://www.cebik.com/par.html that tend to get
>one thinking about this whole diy approach.
>
>My reading and gleaning of websites has me of the opinion (at this point)
>that the balanced line with this long loop is better (multi band) than to
>feed it with coax.

True enough. I simply responded to you describing it as a 160M loop.
If it was a dedicated monobander, twin lead is extravagant and forces
unnecessary SWR into the picture.

>I believe Cecil has already explained this in terms of the wide range of
>actual resistance that may be encountered multi band. (hey, I am just now
>learning to talk this lingo....just barely know what I am talking
>about....operating intuitively, and with the kindness of strangers.......

Stella! (Oops, wrong "Streetcar").

73's
Richard Clark, KB7QHC

1232. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 07:24:23 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0404202324.13c55448@posting.google.com>
Source record: 96132

"Marty" <NOSPAM_vk2umj@yahoo.com.au_NOSPAM> wrote in message
news:<c64fkcjpr1@austar-news.austar.net.au>...
> >
> > I had several little 1/16th watt neon lights laying around doing
> > nothing. I would toy with them, lining them on dipoles to find the
> > highest area of RF on the dipoles, once found, I would solder these
> > little rascals to the dipole so they wouldn't move in the wind.
> >
> > Besides looking cute, they offered a little bit of help too.
> > When it was raining, they wouldn't lite at all on a couple of
> > antennas, and on others were very dim.
> > This alone tells me that there is some affect of rain on the antennas.
> >
> > But one question has always perplexed me to no end.
> > Why will the light light up if placed on the end of my 10 meter mobile
> > antenna, but not on the end of 10 meter ground plane. It lights up
> > just fine about 19 inches below the top on the ground plane and about
> > 22 inches below the top on a vertical with an underground radial bed.
> >
>
> One question perplexes me - are you so bored that you can't think of
> anything better to do other than solder neon lights to your antenna??? My
> God, someone please shoot me if I ever get to that stage!!! ;-)
>

Actually, i think this might be an interesting experiment.

I would assume the neon lights have a brightness that is proportional
to the RMS voltage, and that the areas of brightest neons are high voltage
(low current) nodes.

One question is how are you hooking them up? On the dipole?

S.

1233. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 10:52:53 UTC
From: fractenna@aol.com
Message-ID: <20040421065253.26979.00000030@mb-m12.aol.com>
Source record: 96133

>I challenge any antenna 'inventor' to invent an antenna that is not
>described in Kraus' book, at least at the fundamental theory level!

Which addition?

73,
Chip N1IR

1234. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 11:04:22 UTC
From: fractenna@aol.com
Message-ID: <20040421070422.26979.00000031@mb-m12.aol.com>
Source record: 96134

Here's a helpful hint on the (ohmic) loss: what is the power rating of the resistor (and is it wirewound?) and what is the rated input power at the feed?

Obviously there are multiple current maxima at the high end of HF That would seem to count for something:-)

Graph the mismatch loss vs ohmic loss over the entire passband, then plot the peak gain compared to a (dipole of the same total height)--and then tell us this antenna doesn't work:-)

Key question: what problem was this antenna solving? I bet that a 110 ft inverted V--unterminated and ungrounded --was far worse in solving the problem as posed.

73,
Chip N1IR

1235. Re: Antenna at p. 95 of April QST?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 11:07:36 UTC
From: fractenna@aol.com
Message-ID: <20040421070736.24293.00000129@mb-m12.aol.com>
Source record: 96135

>Which addition?
>

I hope some got the pun...for those who didn't...'which edition'?

--C

1236. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 12:10:31 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Kwthc.32111$pk5.26422@fe03.usenetserver.com>
Source record: 96137

If he wants horizon to horizon coverage, there is only one choice for gain,
which is 3 dB.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

"John Smith" <pani@yahoo.com> wrote in message
news:c652j7$7ut81$1@ID-225206.news.uni-berlin.de...
> How much gain do you need? The quadrafilar is low gain, and the helical
beam
> is high gain, but you have to point it.
> Check with the weatherfax sites, they should be close
>
> "Richard Heindel" <rheindel@neo.rr.com> wrote in message
> news:2ufhc.15796$8k.15606@fe1.columbus.rr.com...
> >
> >
> > Hi Jerry,
> > Here's a few more sites for building the quadrafilar antenna
> > http://www.qsl.net/kf4cpj/qha/,
> > http://www.jcoppens.com/ant/qfh/index.en.php,
> > and there's a nice article in QST, August '96, by W3KH.
> > Richard WB8KRN
> >
> >
>
>

1237. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 12:11:51 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <_xthc.32114$pk5.30305@fe03.usenetserver.com>
Source record: 96138

Perhaps the wife's beamwidth was too broad.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net
"Dave VanHorn" <dvanhorn@cedar.net> wrote in message
news:Zb6dnd2KW9kZVR7d4p2dnA@comcast.com...
>
> "Duane Allen" <computeruser@sprintmail.com> wrote in message
> news:0uPgc.2233$e4.767@newsread2.news.pas.earthlink.net...
> > Mike Luther wrote:
> >
> > > But, as the respected Mother's noted ..
> > >
> > > Duane Allen wrote:
> > >
> > >> From cartalk.com
> > >>
> > >> Two antennas meet on a roof, fall in love and get married. The
> > >> ceremony wasn't much, but the reception was excellent.
> > >>
> > >>
> > >> Duane
> > >> N6JPO
> > >
> > > It's still a matter of propagation!
> > >
> > > ;)
> > >
> > Nicely done.
>
> Unfortunately, they later found out they were oppositely polarized, and
the
> husband had been looking up the skirt of a discone down the block.
>
>
>

1238. Re: Omni D

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 12:52:14 UTC
From: Paul <k4cvr@amsat.org>
Message-ID: <28uhc.80934$_g4.17295149@news4.srv.hcvlny.cv.net>
Source record: 96139

Tnx for the reply, Danny. Yes, their support is very good and generally a pleasure to have dealings with. I just figured there was a pretty good user base established for that rig and some folks had some favorites for mics. I use an old TS 520S here with a modified D104 lollypop that works like a champ but even though I know several people using the Heil mics on them, I don't like the sound as well as the Astatic. By the same token, I've a KWM2a here that sounds superb with the HHG mic by Heil. I suppose much of it is personal preference after all, but if the Omni D is like any other radio I know there are some landmines that would be best avoided and that's what I was looking for.

73 and good DX!

Paul K4CVR

Dan Richardson @mendolink.com> <<ChangeThisToCallSign> wrote in message news:7hcb8052vso6fkiemoudhfd7od27i7equg@4ax.com...
> TenTec's customer support is one of the best around. Why don't you
> drop them an email with that question.
>
> sales@tentec.com
>
> 73
> Danny, K6MHE

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.659 / Virus Database: 423 - Release Date: 4/15/04

1239. Re: Is My Johnson Big Enough?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 13:08:16 UTC
From: Butch <lynyrd@cableone.net>
Message-ID: <108csi0g12db8b6@corp.supernews.com>
Source record: 96140

Bill Turner wrote:
> On Wed, 21 Apr 2004 00:17:46 GMT, zeno <zeno@sonic.net> wrote:
>
>
>>The
>>spam said "Is your johnson big enough?" and I wondered how
>>the heck did they knew I was thinking about that. Turns out
>>the spam had nothing to do with ham radio, wink wink, nudge
>>nudge, know what I mean?
>
>
> --
>
> Obviously, the question was directed at your XYL. :-)
>
> --
> Bill, W6WRT
> QSLs via LoTW
>
News flash from XYL: Your johnson isn't big enough!

1240. Re: Omni D

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 13:48:25 UTC
From: "Dan Richardson"
Message-ID: <sjuc801obngqpln81j698c9l7u2s7ii8e8@4ax.com>
Source record: 96141

Paul,

Very true. However, how it *sounds* is somewhat subjective as it
depends upon personal preferences. I have a TenTec Paragon that I am
using with an old Kenwood MC-50 microphone and have been satisfied,
but that is because no one has given me a poor report on my audio. <G>

Good luck,

Danny, K6MHE

On Wed, 21 Apr 2004 12:52:14 GMT, "Paul" <k4cvr@amsat.org> wrote:

>Tnx for the reply, Danny. Yes, their support is very good and generally a
>pleasure to have dealings with. I just figured there was a pretty good user
>base established for that rig and some folks had some favorites for mics. I
>use an old TS 520S here with a modified D104 lollypop that works like a
>champ but even though I know several people using the Heil mics on them, I
>don't like the sound as well as the Astatic. By the same token, I've a KWM2a
>here that sounds superb with the HHG mic by Heil. I suppose much of it is
>personal preference after all, but if the Omni D is like any other radio I
>know there are some landmines that would be best avoided and that's what I
>was looking for.
>
>73 and good DX!
>
>Paul K4CVR
>
>
>Dan Richardson @mendolink.com> <<ChangeThisToCallSign> wrote in message
>news:7hcb8052vso6fkiemoudhfd7od27i7equg@4ax.com...
>> TenTec's customer support is one of the best around. Why don't you
>> drop them an email with that question.
>>
>> sales@tentec.com
>>
>> 73
>> Danny, K6MHE
>
>
>
>---
>Outgoing mail is certified Virus Free.
>Checked by AVG anti-virus system (http://www.grisoft.com).
>Version: 6.0.659 / Virus Database: 423 - Release Date: 4/15/04
>

1241. Homebrew VHF/UHF mobile antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 14:13:12 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Zjvhc.32252$pk5.23067@fe03.usenetserver.com>
Source record: 96142

Would these work, or am I crazy? I would also entertain the idea of both being crazy and the ideas working ;-)

Take a normal 146 MHz quarter wave mobile antenna and heat shrink a piece of insulated wire to it. The wire would be a half wavelength., more or less, at 446 MHz. Trim the wire for minimum SWR at 446 MHz.

Another idea. Take a 446 MHz quarter wave wire with one end uninsulated. With the uninsulated end up, attach it to the 146 MHz quarter wave with heat shrink. Adjust the position and length of the quarter wave wire for minimum SWR at 446 MHz.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

1242. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 14:19:19 UTC
From: richardharrison@webtv.net
Message-ID: <24871-408682E7-36@storefull-3252.bay.webtv.net>
Source record: 96144

Bill wrote:
"What is the general effect of moisture on antennas and feedlines as power is increased?"

I worked for years in a shortwave broadcasting plant where transmitters ranged in power between 3KW and 100 KW. Moisture had little apparent effect on the 600-ohm open-wire feedlines or curtain and rhombic antennas at any power level.

We can speculate that wet insulators were slightly conductive when wet due to disolved impurities. Ohm`s law says current and heat are higher at high power.

The climate was dry for most of the year but the rainy season was intense resulting in occasional floods. As I recall, transmission line flashovers rarely happened in wet weather but dry was the norm and arcs were infrequent in any case even at 100 KW with 100% high-level modulation.

From my mediumwave experience I would say that most antenna system arcing resulted from approaching moisture, not to its arrival.

Approaching thunderstorms are often preceded by charged air sweeping across the antenna system. Tower guy segments, separated by insulators, charge until they arc across the insulators with a loud report (Bang!). This triggers ionized paths which short antenna system parts. This overloads the transmitter which removes itself from the air to clear the overload and protect itself. This often repeats rapidly until the storm actually arrives and the rain starts.

Best regards, Richard Harrison, KB5WZI

1243. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 14:21:15 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408683b9$1_7@corp.newsgroups.com>
Source record: 96143

JLB wrote:
> An electric charge traveling at a uniform radiation along a straight wire
> does not radiate.

Should that be "uniform velocity"?
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1244. Re: Homebrew VHF/UHF mobile antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 14:40:49 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c66156$8b8da$1@ID-225206.news.uni-berlin.de>
Source record: 96145

"JLB" <IHateSpam@nospam.net> wrote in message
news:Zjvhc.32252$pk5.23067@fe03.usenetserver.com...
> Would these work, or am I crazy? I would also entertain the idea of both
> being crazy and the ideas working ;-)
>
> Take a normal 146 MHz quarter wave mobile antenna and heat shrink a piece
of
> insulated wire to it. The wire would be a half wavelength., more or less,
> at 446 MHz. Trim the wire for minimum SWR at 446 MHz.
>
> Another idea. Take a 446 MHz quarter wave wire with one end uninsulated.
> With the uninsulated end up, attach it to the 146 MHz quarter wave with
heat
> shrink. Adjust the position and length of the quarter wave wire for
minimum
> SWR at 446 MHz.
>
> --
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net
>
>
>

1245. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 14:47:17 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40868850.396945937@news.galilei.com>
Source record: 96146

Hi S

I just wrap the two wire leads around the dipole wire. The lamp
lights whether the dipole wire is insulated or not, if you have it in
the right place that is.

They also let you know if your on the right antenna too!

TTUL
Gary

1246. Re: Homebrew VHF/UHF mobile antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 15:08:42 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c662pe$8gu1d$1@ID-225206.news.uni-berlin.de>
Source record: 96147

Idea 1, would probably not work much at 446 as current would have a hard time to flow into attached insulated wire. general problem with most mobile antennas is getting enough RF current to flow out into them.

Idea 2, May almost work, as the 446 is almost the third harmonic of 146 and the antenna would be resonant again, 438 is 3*146 only a 2% change, close enough to try it once. Bandwidth of antenna is the critical factor, tune for 3/4 antenna of 446 first and then see where it came out near the 146. Then split the difference between the two, a sweep of return loss would show you the antenna bandwidths, and if it is possible, If no go, try Idea #3

Idea 3, Other cases -- use a dual ban antenna approach, put a loading coil in the middle (airspace turns), the bottom part is the 446 1/4 wave, and doesn't "see" the top part due to the coil. Then the full length with loading coil is equivalent to a loaded 1/4 wave at 146. Start with a 146 and center loading coil to shorten the 146 lengthwise. Then tune the lower rod for 446, so the coil may not end up in the center, but it will be right on on both frequencies. (should not take much of a coil since it is only 2% off) I did a triband one time with two loading coils for Low Band, VHF and UHF. Had a splitter designed to split off to the three radios in the trunk too.

Crazy ideas get patented!

"JLB" <IHateSpam@nospam.net> wrote in message
news:Zjvhc.32252$pk5.23067@fe03.usenetserver.com...
> Would these work, or am I crazy? I would also entertain the idea of both
> being crazy and the ideas working ;-)
>
> Take a normal 146 MHz quarter wave mobile antenna and heat shrink a piece
of
> insulated wire to it. The wire would be a half wavelength., more or less,
> at 446 MHz. Trim the wire for minimum SWR at 446 MHz.
>
> Another idea. Take a 446 MHz quarter wave wire with one end uninsulated.
> With the uninsulated end up, attach it to the 146 MHz quarter wave with
heat
> shrink. Adjust the position and length of the quarter wave wire for
minimum
> SWR at 446 MHz.
>
> --
> Jim
> N8EE

>
> to email directly, send to my call sign at arrl dot net
>
>
>

1247. Mid coil loaded CB to 2 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 16:26:51 UTC
From: "R. Scott" <washingtonhamTHREAD@yahoo.com>
Message-ID: <4086A0CB.F7C87238@yahoo.com>
Source record: 96150

I have a mid coil loaded CB that came with my Goldwing I bought. I know
Ive seen somewhere that you could convert a mid loaded CB to 2mtrs. I
dont plan on using CB on my bike but would like 2mts.

Did a Google search and came up emtpy.

Anyone know where I could get ideas.

Thanks
--
Rick N7HJ
Everett, Washington
Remove THREAD to reply.

1248. 30ft Tower uprooting

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 16:31:45 UTC
From: Mike <kc2jga@twcny.rr.com>
Message-ID: <Rlxhc.69469$M3.51576@twister.nyroc.rr.com>
Source record: 96148

Just got back from D.C yesterday to have my neighbor come up and tell me that my tower almost fell over Sunday during heavy rain and wind storm. He was able to secure the tower to the upstairs sun deck. What has me wondering is, the foundation that the tower sits on, sits about 2 inches below the cement porch which sits about 4 inches above the top soil. Now, the tower foundation sits an inch higher than the deck. I loosened the tie downs for the tower and I can move the tower and foundation. It almost looks like the foundation broke half way down because of the way it "pivots" on top of the broken lower half of the foundation. Looks like I may have to take the tower down this weekend and dig up the old foundation and see what happened. Neighbor said we had alot of rain in a short period of time. It's a good thing I had disconnected the 2 radios from the feedlines, cause, if that tower would have come down, it would have pulled both radios out of the window. ie, Icom 2100 and Icom 706.
Mike
KC2JGA

1249. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 16:48:52 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <UBxhc.29734$G_.2035@nwrddc02.gnilink.net>
Source record: 96149

Jim

You've got the concept. There is little lattitude for designing for Gain.
I do wonder how (if) there is a way to build an antenna that has RHCP
principally in the North and South sectors. It occurres to me that the
polar satellites will be approaching from "pretty much North or South".
And the passes that are far to the East or West are within range for too
short a time to be of value. So, I wonder if it would be practical to build
an antenna that has decent RHCP North and South. and overhead, with little
sensitivity East and West.
I have just about given up hope that I can design an antenna for this
'spec'.

Jerry

"JLB" <IHateSpam@nospam.net> wrote in message
news:Kwthc.32111$pk5.26422@fe03.usenetserver.com...
> If he wants horizon to horizon coverage, there is only one choice for
gain,
> which is 3 dB.
>
> --
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net
>
> "John Smith" <pani@yahoo.com> wrote in message
> news:c652j7$7ut81$1@ID-225206.news.uni-berlin.de...
> > How much gain do you need? The quadrafilar is low gain, and the helical
> beam
> > is high gain, but you have to point it.
> > Check with the weatherfax sites, they should be close
> >
> > "Richard Heindel" <rheindel@neo.rr.com> wrote in message
> > news:2ufhc.15796$8k.15606@fe1.columbus.rr.com...
> > >
> > >
> > > Hi Jerry,
> > > Here's a few more sites for building the quadrafilar antenna
> > > http://www.qsl.net/kf4cpj/qha/,
> > > http://www.jcoppens.com/ant/qfh/index.en.php,
> > > and there's a nice article in QST, August '96, by W3KH.
> > > Richard WB8KRN
> > >

> > >
> >
> >
>
>
>

1250. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 17:16:49 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <50yhc.29799$G_.20345@nwrddc02.gnilink.net>
Source record: 96151

John

Since I'm a poor reader, I'm not confidant I fully understand your objective. But, a folded monopole (1/4 wave) with a very fat "fed" element and a very thin "grounded" element, with very close spacing will have an input impedance lower that 150 ohms at *resonance*. It occurrs to me that you already know that.

Jerry.

"The other John Smith" <jocjo-john@yooha.com> wrote in message news:uQ_gc.3027$e4.2108@newsread2.news.pas.earthlink.net...
> Good evening, Gentlemen.
>
> A thought experiment:
>
> Start with a regular 1/4-wave monopole ground plane. The literature says it
> looks like half the value of a dipole, about 35 Ohms, when resonant. It
> would be nice to have the resistance at the terminals be a bit higher, and I
> very much value a grounded element anyway, so let's let it evolve into a
> folded monopole. The literature says it should now have about 4 times the
> terminal resistance of the original 1/4-wave we started with (about 140
> Ohms). Huh. Now it's a bit high.
>
> They tell me that shortening the antenna below resonance will lower the
> resistance and introduce capacitance. But I think I have also seen in the
> literature that the antenna can be viewed as a transmission line. A shorted
> portion of parallel conductor transmission line (the folded monopole) less
> than 1/4-wave long looks inductive. But wait! Which will win? Will the
> shortness of the antenna look capacitive or will the transmission line
> dominate and the antenna will look inductive?
>
> Even better, is there some choice of the folded section wire diameters and
> spacing that will give an inductance that will exactly offset the
> capacitance due to shortness? So, then, is there a folded monopole of such
> dimensions that the resistance is 50 Ohms (due to being shorter than 1/4
> wave) with no terminal reactance (due to the inductive design of the
> "transmission line" cancelled by the shortness of the antenna's
> capacitance)?
>
> Brain hurts.
>

> John, KD5YI
>
>
>

1251. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 19:12:13 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4086C78B.BDF99391@sonic.net>
Source record: 96152

Richard Clark wrote:

You were planning pulleys right?

yes indeed, lots of pulleys, I only want to be putting up these masts once.

>
> For 160M band, I would REALLY look for the Archer and put my effort
> into that prospect. A low loop is the pits - hi Z, lo Z, balanced,
> unbalanced, SWR, no SWR hardly counts for diddly.
>

I am going to meet the archer this weekend at the hamfest in Sonoma. Another friend is giving me a homebuilt house trailer (quaint gypsy wagon) which I can park out in the back 40 as an alt. shack which will be close to the antenna up in the <200' Eucalyptus tree. It is not that I am particularly excited about 160m (although good to be able to operate there when necessary I guess), but HEIGHT is everything, right?

>
> >I believe Cecil has already explained this in terms of the wide range of
> >actual resistance that may be encountered multi band. (hey, I am just now
> >learning to talk this lingo....just barely know what I am talking
> >about....operating intuitively, and with the kindness of strangers.......
>
> Stella! (Oops, wrong "Streetcar").
>

Wow, a cinematically (literary) erudite ham, cool....I feel like I am home.....

Zeno (aka Bill) KG6UHM (until further notice.....)

1252. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 19:33:03 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4086CC6D.62F258E8@sonic.net>
Source record: 96153

Richard Clark wrote:
For 160M band, I would REALLY look for the Archer and put my effort

> into that prospect. A low loop is the pits - hi Z, lo Z, balanced,
> unbalanced, SWR, no SWR hardly counts for diddly.

OK, the 540' loop will be up as high as I can get it with these telescoping masts, somewhere between 45-55 feet at each corner. How will this be for bands other than 160m (either with the Johnson or my Kenwood ATU (+current type balun)? As mentioned I have the real estate to try several antennas here. I am curious to find out how the loop will work. I only call it 160m because of the length of the wire. There were a handful of websites expressing enthusiasm about this antenna.

Another plan is some kind of antenna on a rotator. Any ideas of how to engineer some kind of beam (light-weight) or something similar atop one of these 50' telescoping tv masts? If I am to telescope 4 - ten foot sections, the antenna and rotator would have to be light. I would have to engineer this with a crew of buddies holding the guy ropes as the stong person is up ten feet trying to push up this whole thing into the air a section at a time. Anyone done this? The motivation here is 1) I have the 50 mast, so economy is a factor, and 2) the result will look more like some kind of elaborate tv antenna. A tower out in the front yard might be a bit much in the neighborhood at this point. I need to test these waters first.

1253. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 19:38:38 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <4086CDBE.75FA42E7@uci.edu>
Source record: 96154

Cecil Moore wrote:
>
> Jim Kelley wrote:
>
> > Cecil Moore wrote:
> >>"Tilt" is very good advice for a variable mercury column.
> >>In fact, the tuning length of the column of mercury could
> >>be controlled simply by tilting the tube of mercury at an
> >>angle away from vertical in the direction of horizontal.
> >
> > How much does the length change when you tilt it at 45 degrees?
>
> By the factor of the square root of two.

Sounds kinda like one of those mythical cable stretchers. :-)

ac6xg

1254. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 19:57:16 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0404211157.361028c7@posting.google.com>
Source record: 96155

raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote in message news:<40868850.396945937@news.galilei.com>...
> Hi S
>
> I just wrap the two wire leads around the dipole wire. The lamp
> lights whether the dipole wire is insulated or not, if you have it in
> the right place that is.
>
> They also let you know if your on the right antenna too!
>
> TTUL
> Gary

Ok, so do you electrically attach the two leads together
make a loop out of them, and then wrap this loop around the
dipole? That's what the other poster seemed to be suggesting,
use an inductive pick-up loop, which essentially shorts the
two leads together (a DC short that is).

Slick

1255. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 20:20:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <f8ld805abqjf08k3d2tbek2ftv3i2glv97@4ax.com>
Source record: 96156

On Wed, 21 Apr 2004 19:33:03 GMT, zeno <zeno@sonic.net> wrote:
>OK, the 540' loop will be up as high as I can get it with these telescoping
>masts, somewhere between 45-55 feet at each corner. How will this be for
>bands other than 160m (either with the Johnson or my Kenwood ATU (+current
>type balun)? As mentioned I have the real estate to try several antennas
>here.

Hi Bill,

Above 80M it should be gangbusters. However, you may wish to look into Rhombic designs given the vast footprint available to you to experiment with. This will be more directional, more gain for the 30M bands and above, so you will want to investigate what direction that should be (don't guess using a flat map either). It would be roughly the same shape, only more diamond than haphazard square. Such a design shouldn't hurt your 160M loop prospects, but would optimize the higher bands (where formerly you were just going to take what came with the turf).

With a lot more wire (and work), you could get into the Fish Bone Array, or a wire Log Periodic Array. Both would, again, be fixed direction so planning ahead is again seen in the XTAL ball.

>I am curious to find out how the loop will work. I only call it 160m
>because of the length of the wire. There were a handful of websites
>expressing enthusiasm about this antenna.

What choice did they have? Such is the fallacy of testimonial. As the saying goes, if all you have is a hammer, everything looks like a nail.

>Another plan is some kind of antenna on a rotator. Any ideas of how to
>engineer some kind of beam (light-weight) or something similar atop one of
>these 50' telescoping tv masts?

That would have to be WARC bands and 10M, probably; otherwise you are dreaming in technicolor and surround-sound.

73's
Richard Clark, KB7QHC

1256. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 20:26:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <guld80dnl2n59974s3unngqi29ml0fehc9@4ax.com>
Source record: 96157

On 21 Apr 2004 12:57:16 -0700, radio913@aol.com (Dr. Slick) wrote:
> Ok, so do you electrically attach the two leads together
>make a loop out of them, and then wrap this loop around the
>dipole? That's what the other poster seemed to be suggesting,
>use an inductive pick-up loop, which essentially shorts the
>two leads together (a DC short that is).

Hi OM,

Cut the wires off - it doesn't matter, the energy is in the field and
THAT is what is lighting it up. [Standard lab demo of exciting an
ionized gas.] In the late 70s you would find these lamps at the end
of CB whips.

73's
Richard Clark, KB7QHC

1257. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 20:38:04 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <NYAhc.53$hk6.6@fe03.usenetserver.com>
Source record: 96158

oops. You're right. Uniform velocity.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net
"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:408683b9$1_7@corp.newsgroups.com...
> JLB wrote:
> > An electric charge traveling at a uniform radiation along a straight
wire
> > does not radiate.
>
> Should that be "uniform velocity"?
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1258. Re: Mid coil loaded CB to 2 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 20:39:26 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4086dc5d_6@corp.newsgroups.com>
Source record: 96159

R. Scott wrote:
> I have a mid coil loaded CB that came with my Goldwing I bought. I know
> Ive seen somewhere that you could convert a mid loaded CB to 2mtrs.

If there's 19+ inches under the coil, chop the coil off
and throw it away. If there's not 19 inches under the
coil, short the coil out and trim the entire antenna
length to 19+ inches. Leave enough for cutting and trying.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1259. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 20:43:10 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <C1Bhc.56$hk6.27@fe03.usenetserver.com>
Source record: 96160

Hmmm.

Interesting idea. Almost said I would have to think on this, but one idea popped in my head as I was about to type it.

My idea is this. Build two (or more) quadifilar helix antennas. Each would have hemispherical RHCP overage. Place them on a line in exactly an east-west direction. Phase them properly and you should get a null to the east and west with 180 degree coverage north and south. The exact spacing that you would use is and how you would phase them is something that I would have to look up.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net
"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:UBxhc.29734$G_.2035@nwrddc02.gnilink.net...
>
> Jim
>
> You've got the concept. There is little lattitude for designing for
Gain.
> I do wonder how (if) there is a way to build an antenna that has RHCP
> principally in the North and South sectors. It occurres to me that the
> polar satellites will be approaching from "pretty much North or South".
> And the passes that are far to the East or West are within range for too
> short a time to be of value. So, I wonder if it would be practical to
build
> an antenna that has decent RHCP North and South. and overhead, with little
> sensitivity East and West.
> I have just about given up hope that I can design an antenna for this
> 'spec'.
>
> Jerry
>
>
>
> "JLB" <IHateSpam@nospam.net> wrote in message
> news:Kwthc.32111$pk5.26422@fe03.usenetserver.com...
> > If he wants horizon to horizon coverage, there is only one choice for
> gain,
> > which is 3 dB.
> >

> > --
> > Jim
> > N8EE
> >
> > to email directly, send to my call sign at arrl dot net
> >
> > "John Smith" <pani@yahoo.com> wrote in message
> > news:c652j7$7ut81$1@ID-225206.news.uni-berlin.de...
> > > How much gain do you need? The quadrafilar is low gain, and the
helical
> > beam
> > > is high gain, but you have to point it.
> > > Check with the weatherfax sites, they should be close
> > >
> > > "Richard Heindel" <rheindel@neo.rr.com> wrote in message
> > > news:2ufhc.15796$8k.15606@fe1.columbus.rr.com...
> > > >
> > > >
> > > > Hi Jerry,
> > > > Here's a few more sites for building the quadrafilar antenna
> > > > http://www.qsl.net/kf4cpj/qha/,
> > > > http://www.jcoppens.com/ant/qfh/index.en.php,
> > > > and there's a nice article in QST, August '96, by W3KH.
> > > > Richard WB8KRN
> > > >
> > > >
> > >
> > >
> >
> >
> >
>
>

1260. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 20:43:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4086dd66$1_6@corp.newsgroups.com>
Source record: 96161

zeno wrote:
> Another plan is some kind of antenna on a rotator. Any ideas of how to
> engineer some kind of beam (light-weight) or something similar atop one of
> these 50' telescoping tv masts?

Check out Worldradio's SD-20 systems at http://www.wr6wr.com
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1261. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 20:47:26 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4086de3c$1_6@corp.newsgroups.com>
Source record: 96162

Jim Kelley wrote:

> Cecil Moore wrote:
>
>>Jim Kelley wrote:
>>>How much does the length change when you tilt it at 45 degrees?
>>
>>By the factor of the square root of two.
>
> Sounds kinda like one of those mythical cable stretchers. :-)

By Golly, I have been looking for a cable stretcher. A tilted
mercury column will perform that function. Question is, what
do I mix with the mercury column to make it more conductive?
--
73, Cecil http://www.qsl.net/w5dxp

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1262. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 20:47:47 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4086DDF1.ED11B193@sonic.net>
Source record: 96163

Hi Richard,

> Above 80M it should be gangbusters. However, you may wish to look
> into Rhombic designs given the vast footprint available to you to
> experiment with. This will be more directional, more gain for the 30M
> bands and above, so you will want to investigate what direction that
> should be (don't guess using a flat map either). It would be roughly
> the same shape, only more diamond than haphazard square. Such a
> design shouldn't hurt your 160M loop prospects, but would optimize the
> higher bands (where formerly you were just going to take what came
> with the turf).
>

Although I have the acres (7) there are a lot of buildings (old barns etc.), trees, etc. My antenna planning has to dodge many many obstacles actually. This is an old chicken ranch and there are building everywhere, then all the trees. Are you saying that a rhombic could be put up on the same masts more or less (only one of the masts is potentially moveable, meaning that it would only be diamond like at one end of the trapezoid. This rhombic would be instead of the 540' loop?

I will look up rhombic in the books and see what gives.

>
> With a lot more wire (and work), you could get into the Fish Bone
> Array, or a wire Log Periodic Array. Both would, again, be fixed

I will look these up as well. I don't want to get so complex and over my head that I will be overwhelmed. Now that I have the call sign of choice, I am ready to rock and roll.....

-Bill (aka Zeno)

Hey I got it!!! I am now K6TAJ, Tango Alpha Juliet. The old bongo drummer morse code tapper in me is tickled DAH, DI-DAH, DI-DAH-DAH-DAH is so cool for me for a variety of esoteric reasons, aside from the fact that it is fun to tap out. My second choice was my 1953 call K6CCG (also fun to tap, but not as fun as TAJ, the new call is shorter as well), also I like tango alpha juliet more than charlie charlie golf.....I don't really own any checkered pants.....

I actually found myself listed in an old 1958 call book, which actually was the year my old Tech ran out.....

Hopefully I can make up for lost time......

73

Bill, K6TAJ

1263. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 20:52:38 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4086DF14.15732B27@sonic.net>
Source record: 96164

roger, tnx Ceece.

I apologize for the Beany reference....I am just elated at getting k6taj.

Cecil Moore wrote:

> zeno wrote:
> > Another plan is some kind of antenna on a rotator. Any ideas of how to
> > engineer some kind of beam (light-weight) or something similar atop one of
> > these 50' telescoping tv masts?
>
> Check out Worldradio's SD-20 systems at http://www.wr6wr.com
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
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> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 100,000 Newsgroups - 19 Different Servers! =-----

1264. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 21:03:46 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <SkBhc.4003$eZ5.1367@newsread1.news.pas.earthlink.net>
Source record: 96165

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:50yhc.29799$G_.20345@nwrddc02.gnilink.net...
>
> John
>
> Since I'm a poor reader, I'm not confidant I fully understand your
> objective. But, a folded monopole (1/4 wave) with a very fat "fed"
element
> and a very thin "grounded" element, with very close spacing will have an
> input impedance lower that 150 ohms at *resonance*. It occurrs to me
that
> you already know that.
>
> Jerry.

You're very perceptive, Jerry. How did you come to think I would know that?

You are correct, of course. The strange thing is that the graphs depicting that sort of behavior is not in the 18th edition of the ARRL Antenna Handbook (unless I somehow missed them) but they are in the 1977 edition of the Radio Amateur's Handbook. I had hoped to use a single wire formed into a hairpin for the sake of simplicity, but I am tempted to use the different sized conductors nevertheless. I have even chosen a ratio of 4:1 for the diameters.

Hmmmm. I wonder how it would work with, say, 1/2 by 1/16 inch metal bar and wire. Or maybe orient two bars of the same size 90 degrees (looking down the long dimension) so that the wide side of the "fat" part sees the narrow edge of the "thin" part. Like this:

```
.-.
| |
| | .-------.
| | | |
| | '-------'
| |
'-'
```

but connected across the top. Actually it could be made from one long bar with a twist at the top where the hairpin occurs. I don't know how to model that, so I'll have to build and try it.

The foremost objective is to learn. But, at the end of this particular quest I hope to wind up with a suitably rugged antenna mounted to the top of a remote data gathering device transmitting in the 70 cm band. The sensors will measure temperature, rainfall, soil conductivity, and anything else I

decide might be fun to know about. In fact, I plan to put another one down by the county road at the site where it floods. That remote sensor will tell me when the road goes under water so I can take an alternate route rather than having to back the car 1/4 mile to a turn-around spot.

So much to do, so little time.

Thanks for your reply.

John

1265. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 21:12:46 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4086e42d$1_6@corp.newsgroups.com>
Source record: 96166

zeno wrote:
> Hey I got it!!! I am now K6TAJ, Tango Alpha Juliet.

Now we will have an endless thread of words to match your
TLA (three letter acronym). Transmitting All Joules?
--
73, Cecil http://www.qsl.net/w5dxp

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1266. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 21:17:14 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <4086E4DA.5D8B482B@uci.edu>
Source record: 96167

Cecil Moore wrote:
>
> Jim Kelley wrote:
>
> > Cecil Moore wrote:
> >
> >>Jim Kelley wrote:
> >>>How much does the length change when you tilt it at 45 degrees?
> >>
> >>By the factor of the square root of two.
> >
> > Sounds kinda like one of those mythical cable stretchers. :-)
>
> By Golly, I have been looking for a cable stretcher. A tilted
> mercury column will perform that function.

How so?

> Question is, what
> do I mix with the mercury column to make it more conductive?

Maybe it'll superconduct if it gets cold enough. :-)

73, ac6xg

1267. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 21:49:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <eaqd80tkfnjr3f0q03ehn2h2qkfm5tvlsg@4ax.com>
Source record: 96168

On Wed, 21 Apr 2004 20:47:47 GMT, zeno <zeno@sonic.net> wrote:
>Although I have the acres (7) there are a lot of buildings (old barns etc.),
>trees, etc. My antenna planning has to dodge many many obstacles actually. This
>is an old chicken ranch and there are building everywhere, then all the trees.
>Are you saying that a rhombic could be put up on the same masts more or less
>(only one of the masts is potentially moveable, meaning that it would only be
>diamond like at one end of the trapezoid. This rhombic would be instead of the
>540' loop?
>
>I will look up rhombic in the books and see what gives.

Hi Bill,

No, this time shape matters as it is a function of all angles of
radiation combining to ADD rather than jumble. Again, think in terms
of the supports/mast merely being the outer, irregular perimeter to an
ordered interior antenna shape.

The Rhombic would BE the 540' loop. Normally it is open or terminated
at the end opposite the feed point, but having the shape anticipated
is more the work than this simple change. (It has the same feed
considerations, complete with your expected twin lead.)

Congrats on your desired call.

73's
Richard Clark, KB7QHC

1268. Re: Homebrew VHF/UHF mobile antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 22:05:52 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <9fChc.74$hk6.18@fe03.usenetserver.com>
Source record: 96169

"John Smith" <pani@yahoo.com> wrote in message
news:c662pe$8gu1d$1@ID-225206.news.uni-berlin.de...
> Idea 1, would probably not work much at 446 as current would have a hard
> time to flow into attached insulated wire. general problem with most
mobile
> antennas is getting enough RF current to flow out into them.
>

There are two ways that Idea 1 can be thought of:

A. The extra wire is a half wave dipole coupled to the 2 meter quarter wave. By some magic, it resonates and radiates on 446 MHz as a half wave dipole.

B. A shorted quarter wave transmission line is an open circuit. So is a half wave open circuit transmission line. The extra wire next to the 2 meter quarter wave acts like an open half wave transmission line, effectively isolating the upper part of the 2 meter quarter wave when operating on 446. When the wire is positioned properly, the bottom part of the 2 meter quarter wave will act like a 446 quarter wave.

Jim
N8EE

to email directly, send to my call sign at arrl dot net

1269. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 22:19:28 UTC
From: jder8745@aol.com
Message-ID: <20040421181928.11380.00000095@mb-m18.aol.com>
Source record: 96170

That bride got herself a great guy! But one guy is usually not as good as two or three guys.

Jack

1270. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 22:32:44 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <gEChc.36949$L31.7121@nwrddc01.gnilink.net>
Source record: 96171

Jim

The QFH scares me. I dont understand whats going on within the QFH
anrenna.

The 'actuallity' is; a turnstile antenna or a decent QFH is probably be
good enough. I guess I'd like to be able to contribute some thinking to
this "displaying weather pictures" poject.
I made one prototype turnstile and got marginal results. But the poor
signals were probably due to my building a faulty antenna.

Jerry

"JLB" <IHateSpam@nospam.net> wrote in message
news:C1Bhc.56$hk6.27@fe03.usenetserver.com...
> Hmmm.
>
> Interesting idea. Almost said I would have to think on this, but one idea
> popped in my head as I was about to type it.
>
> My idea is this. Build two (or more) quadifilar helix antennas. Each
would
> have hemispherical RHCP overage. Place them on a line in exactly an
> east-west direction. Phase them properly and you should get a null to the
> east and west with 180 degree coverage north and south. The exact spacing
> that you would use is and how you would phase them is something that I
would
> have to look up.
>
> --
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> news:UBxhc.29734$G_.2035@nwrddc02.gnilink.net...
> >
> > Jim
> >
> > You've got the concept. There is little lattitude for designing for
> Gain.
> > I do wonder how (if) there is a way to build an antenna that has RHCP
> > principally in the North and South sectors. It occurres to me that the
> > polar satellites will be approaching from "pretty much North or South".
> > And the passes that are far to the East or West are within range for too

> > short a time to be of value. So, I wonder if it would be practical to
> build
> > an antenna that has decent RHCP North and South. and overhead, with
little
> > sensitivity East and West.
> > I have just about given up hope that I can design an antenna for this
> > 'spec'.
> >
> > Jerry
> >
> >
> >
> > "JLB" <IHateSpam@nospam.net> wrote in message
> > news:Kwthc.32111$pk5.26422@fe03.usenetserver.com...
> > > If he wants horizon to horizon coverage, there is only one choice for
> > gain,
> > > which is 3 dB.
> > >
> > > --
> > > Jim
> > > N8EE
> > >
> > > to email directly, send to my call sign at arrl dot net
> > >
> > > "John Smith" <pani@yahoo.com> wrote in message
> > > news:c652j7$7ut81$1@ID-225206.news.uni-berlin.de...
> > > > How much gain do you need? The quadrafilar is low gain, and the
> helical
> > > beam
> > > > is high gain, but you have to point it.
> > > > Check with the weatherfax sites, they should be close
> > > >
> > > > "Richard Heindel" <rheindel@neo.rr.com> wrote in message
> > > > news:2ufhc.15796$8k.15606@fe1.columbus.rr.com...
> > > > >
> > > > >
> > > > > Hi Jerry,
> > > > > Here's a few more sites for building the quadrafilar antenna
> > > > > http://www.qsl.net/kf4cpj/qha/,
> > > > > http://www.jcoppens.com/ant/qfh/index.en.php,
> > > > > and there's a nice article in QST, August '96, by W3KH.
> > > > > Richard WB8KRN
> > > > >
> > > > >
> > > >
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>

1271. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 23:01:49 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <x3Dhc.20194$Aq.5676@nwrddc03.gnilink.net>
Source record: 96172

John

I do have a book with a graph of Zin as a function of diameters and
spacing of the folded dipole. But, I dont have any equations. I suspect
someone on this news group has knowledge of where to get some math tools for
predicting the antenna impedance. I'd be glad to scan the page 16-6 of the
1990 ARRL Handbook for you if it would help.

Jerry

"The other John Smith" <jocjo-john@yooha.com> wrote in message
news:SkBhc.4003$eZ5.1367@newsread1.news.pas.earthlink.net...
>
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> news:50yhc.29799$G_.20345@nwrddc02.gnilink.net...
> >
> > John
> >
> > Since I'm a poor reader, I'm not confidant I fully understand your
> > objective. But, a folded monopole (1/4 wave) with a very fat "fed"
> element
> > and a very thin "grounded" element, with very close spacing will have an
> > input impedance lower that 150 ohms at *resonance*. It occurrs to me
> that
> > you already know that.
> >
> > Jerry.
>
>
> You're very perceptive, Jerry. How did you come to think I would know
that?
>
> You are correct, of course. The strange thing is that the graphs depicting
> that sort of behavior is not in the 18th edition of the ARRL Antenna
> Handbook (unless I somehow missed them) but they are in the 1977 edition
of
> the Radio Amateur's Handbook. I had hoped to use a single wire formed into
a
> hairpin for the sake of simplicity, but I am tempted to use the different
> sized conductors nevertheless. I have even chosen a ratio of 4:1 for the
> diameters.
>
> Hmmmm. I wonder how it would work with, say, 1/2 by 1/16 inch metal bar
and
> wire. Or maybe orient two bars of the same size 90 degrees (looking down

the
> long dimension) so that the wide side of the "fat" part sees the narrow
edge
> of the "thin" part. Like this:
>
>
> .-.
> | |
> | | .-------.
> | | | |
> | | '-------'
> | |
> '-'
>
> but connected across the top. Actually it could be made from one long bar
> with a twist at the top where the hairpin occurs. I don't know how to
model
> that, so I'll have to build and try it.
>
> The foremost objective is to learn. But, at the end of this particular
quest
> I hope to wind up with a suitably rugged antenna mounted to the top of a
> remote data gathering device transmitting in the 70 cm band. The sensors
> will measure temperature, rainfall, soil conductivity, and anything else I
> decide might be fun to know about. In fact, I plan to put another one down
> by the county road at the site where it floods. That remote sensor will
tell
> me when the road goes under water so I can take an alternate route rather
> than having to back the car 1/4 mile to a turn-around spot.
>
> So much to do, so little time.
>
> Thanks for your reply.
>
> John
>
>

1272. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 23:11:44 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <4087000f$1_7@corp.newsgroups.com>
Source record: 96173

Jim Kelley wrote:
> Cecil Moore wrote:
>>By Golly, I have been looking for a cable stretcher. A tilted
>>mercury column will perform that function.
>
> How so?

The gravity vector remains constant while the tilted mercury
vector varies with the angle of the tilt. Let's say theta
is the angle of the tilt, i.e. the angle between the mercury
column and the ground plane. At an angle of 45 degrees, the
mercury column length will be 1.414 times the length at 90 degrees,
At 10 degrees, the mercury column length will be 5.76 times the
length at 90 degrees. That sounds like something worth patenting.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1273. Re: Mid coil loaded CB to 2 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 23:18:13 UTC
From: k9sqg@aol.com
Message-ID: <20040421191813.03106.00000027@mb-m03.aol.com>
Source record: 96174

You may or may not be able to easily use the antenna. It depends not only the radiator but also the base matching coil/capacitor. It would be easier and not all that expensive to use an actual 2m antenna, unless you just want to experiment. What you could do is get a 2m antenna tuner and hook it up to your existing antenna and see what happens.

73s,

Evan

1274. Re: Weather Satellite VHF antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-21 23:31:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2p0e801ontelgtnc59oiqlte6h4g62h27l@4ax.com>
Source record: 96175

On Wed, 21 Apr 2004 22:32:44 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:
> The QFH scares me. I dont understand whats going on within the QFH
>anrenna.
...
> I made one prototype turnstile and got marginal results. But the poor
>signals were probably due to my building a faulty antenna.

Hi Jerry,

Odd, but one of the radio and antenna bibles of our group,
"Reflections," was written by Walter Maxwell who designed these QFHs
for the satellites - and yet no one has offered him as a resource or
reference. Try writing him at:
w2du@iag.net

Try this link for formuli¿½:
http://www.askrlc.co.uk/

73's
Richard Clark, KB7QHC

1275. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 00:16:00 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40870EBF.585D22EB@sonic.net>
Source record: 96176

for starters a good contest alternative: Toronto Alaska Japan

and for the hometown crew: Tasty Apricot Jelly or Typical Antique
Junk

Cecil Moore wrote:

> zeno wrote:
> > Hey I got it!!! I am now K6TAJ, Tango Alpha Juliet.
>
> Now we will have an endless thread of words to match your
> TLA (three letter acronym). Transmitting All Joules?
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
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1276. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 00:20:50 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40870FE0.9BB01599@sonic.net>
Source record: 96177

The problem, as I see it, with using the fixed masts as outside perimeter configuration support structure for the specifically ordered interior shape is the sag the inevitably occurs when wire is a rope and pulley distance away from the supporting mast. I already see this with the tree supported antenna. The ropes drop down and the wire is 8' or so lower than anticipated. This seems critical when the masts are only 50' to begin with. How high, or shouls I say, what is the minimum height for an acceptable Rhombic?

Bill, K6TAJ

Richard Clark wrote:

> On Wed, 21 Apr 2004 20:47:47 GMT, zeno <zeno@sonic.net> wrote:
> >Although I have the acres (7) there are a lot of buildings (old barns etc.),
> >trees, etc. My antenna planning has to dodge many many obstacles actually. This
> >is an old chicken ranch and there are building everywhere, then all the trees.
> >Are you saying that a rhombic could be put up on the same masts more or less
> >(only one of the masts is potentially moveable, meaning that it would only be
> >diamond like at one end of the trapezoid. This rhombic would be instead of the
> >540' loop?
> >
> >I will look up rhombic in the books and see what gives.
>
> Hi Bill,
>
> No, this time shape matters as it is a function of all angles of
> radiation combining to ADD rather than jumble. Again, think in terms
> of the supports/mast merely being the outer, irregular perimeter to an
> ordered interior antenna shape.
>
> The Rhombic would BE the 540' loop. Normally it is open or terminated
> at the end opposite the feed point, but having the shape anticipated
> is more the work than this simple change. (It has the same feed
> considerations, complete with your expected twin lead.)
>
> Congrats on your desired call.
>
> 73's
> Richard Clark, KB7QHC

1277. Re: 30ft Tower uprooting

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 00:29:37 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <RlEhc.10091$OE6.2253@newssvr24.news.prodigy.com>
Source record: 96178

I'm not clear on your exact situation with the tower. Is the base sitting
on a pad or on a foundation that's several feet down? How tall is the tower
and what's on it? Any guys?
tnx
Hank WD5JFR
"Mike" <kc2jga@twcny.rr.com> wrote in message
news:Rlxhc.69469$M3.51576@twister.nyroc.rr.com...
> Just got back from D.C yesterday to have my neighbor come up and tell me
> that my tower almost fell over Sunday during heavy rain and wind storm. He
> was able to secure the tower to the upstairs sun deck. What has me
wondering
> is, the foundation that the tower sits on, sits about 2 inches below the
> cement porch which sits about 4 inches above the top soil. Now, the tower
> foundation sits an inch higher than the deck. I loosened the tie downs for
> the tower and I can move the tower and foundation. It almost looks like
the
> foundation broke half way down because of the way it "pivots" on top of
the
> broken lower half of the foundation. Looks like I may have to take the
tower
> down this weekend and dig up the old foundation and see what happened.
> Neighbor said we had alot of rain in a short period of time. It's a good
> thing I had disconnected the 2 radios from the feedlines, cause, if that
> tower would have come down, it would have pulled both radios out of the
> window. ie, Icom 2100 and Icom 706.
> Mike
> KC2JGA
>
>

1278. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 00:39:11 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <PuEhc.6168$e4.3507@newsread2.news.pas.earthlink.net>
Source record: 96179

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:x3Dhc.20194$Aq.5676@nwrddc03.gnilink.net...
> John
>
> I do have a book with a graph of Zin as a function of diameters and
> spacing of the folded dipole. But, I dont have any equations. I suspect
> someone on this news group has knowledge of where to get some math tools
for
> predicting the antenna impedance. I'd be glad to scan the page 16-6 of
the
> 1990 ARRL Handbook for you if it would help.
>
> Jerry

I accept your generous offer and extend my thanks. If anybody else is interested, you could put it on a.b.s.e for all of us. If you find no interest from anybody else, you can email it to me at jocjo_john at yahoo dot com.

If I learn anything out of all this, I'll let you know.

Thanks again.

John

1279. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 01:09:00 UTC
From: "David.Shrader" <W1MCE@comcast.net>
Message-ID: <MWEhc.435$YP5.79101@attbi_s02>
Source record: 96180

Cecil, are you thinking of an open ended tube of Hg with a variable
supply of Hg?? My days with Hg manometers comes to mind.

If it's a closed tube then the length does not change with angle.

So, you can have your variable length antenna and not have it too!!

Deacon Dave

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> Cecil Moore wrote:
>>
>>> "Tilt" is very good advice for a variable mercury column.
>>> In fact, the tuning length of the column of mercury could
>>> be controlled simply by tilting the tube of mercury at an
>>> angle away from vertical in the direction of horizontal.
>>
>>
>> How much does the length change when you tilt it at 45 degrees?
>
>
> By the factor of the square root of two.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
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1280. Re: 30ft Tower uprooting

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 01:14:44 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <80Fhc.12116$GR.1596966@attbi_s01>
Source record: 96181

At my previous QTH I had a ROHN 25 at 47 feet length. The base was just under 2000# of concrete [approximately 4.5 feet deep to get below the frost line]. The three guy wire anchors were each 700-800#.

Held up fine in 80 mph winds.

Your base doesn't sound too solid. What were/are the base details?

Mike wrote:

> Just got back from D.C yesterday to have my neighbor come up and tell me
> that my tower almost fell over Sunday during heavy rain and wind storm. He
> was able to secure the tower to the upstairs sun deck. What has me wondering
> is, the foundation that the tower sits on, sits about 2 inches below the
> cement porch which sits about 4 inches above the top soil. Now, the tower
> foundation sits an inch higher than the deck. I loosened the tie downs for
> the tower and I can move the tower and foundation. It almost looks like the
> foundation broke half way down because of the way it "pivots" on top of the
> broken lower half of the foundation. Looks like I may have to take the tower
> down this weekend and dig up the old foundation and see what happened.
> Neighbor said we had alot of rain in a short period of time. It's a good
> thing I had disconnected the 2 radios from the feedlines, cause, if that
> tower would have come down, it would have pulled both radios out of the
> window. ie, Icom 2100 and Icom 706.
> Mike
> KC2JGA
>
>

1281. Re: 30ft Tower uprooting

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 01:42:37 UTC
From: Mike <kc2jga@twcny.rr.com>
Message-ID: <hqFhc.71339$M3.64042@twister.nyroc.rr.com>
Source record: 96182

Its a 30ft tower with a 3.5ft base and no guys. Antenna's are Cushcraft triband VHF beam and 2 meter vertical. on a ten foot mast. Never had issues with the tower base in the past 2 years its been up. I'm going to take it down this weekend and see about digging up the base to see whats going on.

"Dave Shrader" <david.shrader@comcast.net> wrote in message news:80Fhc.12116$GR.1596966@attbi_s01...
> At my previous QTH I had a ROHN 25 at 47 feet length. The base was just
> under 2000# of concrete [approximately 4.5 feet deep to get below the
> frost line]. The three guy wire anchors were each 700-800#.
>
> Held up fine in 80 mph winds.
>
> Your base doesn't sound too solid. What were/are the base details?
>
> Mike wrote:
>
> > Just got back from D.C yesterday to have my neighbor come up and tell me
> > that my tower almost fell over Sunday during heavy rain and wind storm.
He
> > was able to secure the tower to the upstairs sun deck. What has me
wondering
> > is, the foundation that the tower sits on, sits about 2 inches below the
> > cement porch which sits about 4 inches above the top soil. Now, the
tower
> > foundation sits an inch higher than the deck. I loosened the tie downs
for
> > the tower and I can move the tower and foundation. It almost looks like
the
> > foundation broke half way down because of the way it "pivots" on top of
the
> > broken lower half of the foundation. Looks like I may have to take the
tower
> > down this weekend and dig up the old foundation and see what happened.
> > Neighbor said we had alot of rain in a short period of time. It's a good
> > thing I had disconnected the 2 radios from the feedlines, cause, if that
> > tower would have come down, it would have pulled both radios out of the
> > window. ie, Icom 2100 and Icom 706.
> > Mike
> > KC2JGA
> >
> >
>

1282. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 02:15:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40872b1a$1_7@corp.newsgroups.com>
Source record: 96184

David.Shrader wrote:
> If it's a closed tube then the length does not change with angle.

I may be wrong, cuz I'm not very mechanical, but it seems to me
that a column of mercury in a tube with a vacuum at the top
and a reservoir of mercury at the bottom would change height
of column depending on the angle of the column's deviation from
vertical. It seems to me that when the column is horizontal,
there would be no vacuum at all in the tube.
--
73, Cecil http://www.qsl.net/w5dxp

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1283. Re: 30ft Tower uprooting

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 02:15:42 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <iVFhc.19750$5Q5.18564@newssvr22.news.prodigy.com>
Source record: 96183

Sounds like you have a pad rather than a foundation, no?
The roots are deep enough!
73
Hank WD5JFR
"Mike" <kc2jga@twcny.rr.com> wrote in message
news:hqFhc.71339$M3.64042@twister.nyroc.rr.com...
> Its a 30ft tower with a 3.5ft base and no guys. Antenna's are Cushcraft
> triband VHF beam and 2 meter vertical. on a ten foot mast. Never had
issues
> with the tower base in the past 2 years its been up. I'm going to take it
> down this weekend and see about digging up the base to see whats going on.
>
> "Dave Shrader" <david.shrader@comcast.net> wrote in message
> news:80Fhc.12116$GR.1596966@attbi_s01...
> > At my previous QTH I had a ROHN 25 at 47 feet length. The base was just
> > under 2000# of concrete [approximately 4.5 feet deep to get below the
> > frost line]. The three guy wire anchors were each 700-800#.
> >
> > Held up fine in 80 mph winds.
> >
> > Your base doesn't sound too solid. What were/are the base details?
> >
> > Mike wrote:
> >
> > > Just got back from D.C yesterday to have my neighbor come up and tell
me
> > > that my tower almost fell over Sunday during heavy rain and wind
storm.
> He
> > > was able to secure the tower to the upstairs sun deck. What has me
> wondering
> > > is, the foundation that the tower sits on, sits about 2 inches below
the
> > > cement porch which sits about 4 inches above the top soil. Now, the
> tower
> > > foundation sits an inch higher than the deck. I loosened the tie downs
> for
> > > the tower and I can move the tower and foundation. It almost looks
like
> the
> > > foundation broke half way down because of the way it "pivots" on top
of
> the
> > > broken lower half of the foundation. Looks like I may have to take the

> tower
> > > down this weekend and dig up the old foundation and see what happened.
> > > Neighbor said we had alot of rain in a short period of time. It's a
good
> > > thing I had disconnected the 2 radios from the feedlines, cause, if
that
> > > tower would have come down, it would have pulled both radios out of
the
> > > window. ie, Icom 2100 and Icom 706.
> > > Mike
> > > KC2JGA
> > >
> > >
> >
>
>

1284. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 02:46:44 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <4087321e$0$433$5cbedd26@news.real-time.com>
Source record: 96185

Cecil Moore wrote:
> Forget about the feasibility of this question for the moment.
> Could a column of mercury inside a tube of glass be used as an
> antenna?
> --
> 73, Cecil, W5DXP
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

It's probably been mentioned before, but there is a group that has
covered liquid antennas in great detail. See ->

http://groups.yahoo.com/group/Live-Wire/

Most of the liquid antennas are salt water based, but the idea is the same.

Tom
K0TAR, ex WA2PHW

lots_of_email_addresses@I_already_get_enough_spam.com

1285. Re: Homebrew VHF/UHF mobile antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 03:06:40 UTC
From: Tuuk <bangkokbob5001@yahoo.com>
Message-ID: <eMGhc.500$_12.367@read1.cgocable.net>
Source record: 96186

I have the exact antenna described on Idea # 3 ,, I have it on a magnetic mount, I use it for a bicycle, I have it magnetically mounted on a plate of steel on the back. I use it for 2m and 70cm, 2m SWR is flat and 70 SWR is very low, but I also use 156 megs a lot also. I was able to obtain a very low SWR on all three by folding metal tape in half like a flag at the bottom of the whip, about 2 inches up. 2 inch tape, tin foil tape for duct work (not duct tape) it is aluminum foil but about 6 mil and very tacky. I cut it to achieve a low SWR (about 6 inches length). So its like a metal flag, 2 inch by 6 inch length. Without it, I had very high SWR on the marine band.

"JLB" <IHateSpam@nospam.net> wrote in message
news:9fChc.74$hk6.18@fe03.usenetserver.com...
>
>
> "John Smith" <pani@yahoo.com> wrote in message
> news:c662pe$8gu1d$1@ID-225206.news.uni-berlin.de...
> > Idea 1, would probably not work much at 446 as current would have a hard
> > time to flow into attached insulated wire. general problem with most
> mobile
> > antennas is getting enough RF current to flow out into them.
> >
>
> There are two ways that Idea 1 can be thought of:
>
> A. The extra wire is a half wave dipole coupled to the 2 meter quarter
> wave. By some magic, it resonates and radiates on 446 MHz as a half wave
> dipole.
>
> B. A shorted quarter wave transmission line is an open circuit. So is a
> half wave open circuit transmission line. The extra wire next to the 2
> meter quarter wave acts like an open half wave transmission line,
> effectively isolating the upper part of the 2 meter quarter wave when
> operating on 446. When the wire is positioned properly, the bottom part
of
> the 2 meter quarter wave will act like a 446 quarter wave.
>
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net
>
>
>

1286. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 03:12:51 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <4087383e$0$436$5cbedd26@news.real-time.com>
Source record: 96187

Which proves nothing except that you went to a seminar.

Tom
K0TAR

Richard Clark wrote:

> On Tue, 13 Apr 2004 21:24:26 GMT, Gary S. <Idontwantspam@net> wrote:
>
>
>>Holding it in your hands is more of an issue if
>>A) you have some sort of wound, and some could contact your
>>bloodstream, or more likely
>
>
> Mercury can be forced through a solid plate of steel. Such is its
> ability to migrate through barriers.
>
>
>>B) if you do not _thoroughly_ clean it off your hands before touching
>>food, rubbing your eyes, smoking a ciggie, etc.
>
>
> Hi Gary,
>
> I just attended a Nanotech seminar presentation 4 hours ago on "The
> Collapse of Langmuir Monolayers" that showed the human body has
> roughly 2Mï¿½ of skin surface area, OR 100Mï¿½ of Lung surface area, OR
> 300Mï¿½ of Gastro Intestinal surface area. The later two have a
> monomolecular air/water interface - the Langmuir layer.
>
> The decay products of nuclear breakdown (the electron emission) is no
> hazard due to its inability to puncture the dermal layer - inside the
> body it leads to chromosomal breakdowns that gives rise to cancerous
> growths. Same vector, two different paths separated by lack of
> caution in the errant belief about exposure levels leads to grief.
> [Another lesson learned in close proximity to the Boomers, and 24
> Nuclear warheads stored within 10 feet of my workbench aboard ship.]
>
> 73's
> Richard Clark, KB7QHC

1287. Re: Dipole Length Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 03:59:01 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40874365_8@corp.newsgroups.com>
Source record: 96188

Robert Kole wrote:
> I know it's nit-picking and the tuner will handle it,
> I just want to know what's "correct".

Your 3 1/3 inches is only about 0.3% of the total length.
Whether the wire is insulated or not can make ten times
that amount of difference but you didn't tell us what kind
of wire you are using. Not only is it a nit, but it is a
negligible nit compared to other nits. :-)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1288. Re: ladder line construction methods?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 04:27:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8qhe805fhekq4k4ccug5jdsq8tvq86ab02@4ax.com>
Source record: 96189

On Thu, 22 Apr 2004 00:20:50 GMT, zeno <zeno@sonic.net> wrote:
>The problem, as I see it, with using the fixed masts as outside perimeter
>configuration support structure for the specifically ordered interior shape is the
>sag the inevitably occurs when wire is a rope and pulley distance away from the
>supporting mast. I already see this with the tree supported antenna. The ropes drop
>down and the wire is 8' or so lower than anticipated. This seems critical when the
>masts are only 50' to begin with. How high, or shouls I say, what is the minimum
>height for an acceptable Rhombic?

Hi Bill,

Think positively: how high will they be? 40 Feet? 10 Meters? One
quarter wave for 40M? This is not a hardship case. One half wave or
better high for 20M and above? No one's gonna let you cry in your
beer there either. And now for the classic "testimonial": it's gonna
be boomin! (what choice do you have?).

As a cautionary, don't try to pull out the catenary. The tension
rises with the tangent of the of the deflection angle. If you could
achieve perfect flatness, a breeze would snap the line.

73's Richard Clark, KB7QHC

1289. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 04:42:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7jie809ka098hjnil25jnleb8ohuducq01@4ax.com>
Source record: 96190

On Wed, 21 Apr 2004 22:12:51 -0500, Tom Ring <tarnews@taring.org>
wrote:

>Which proves nothing except that you went to a seminar.
>
>Tom
>K0TAR
>
Hi Tom,

Then we can both agree that I speak from a point of knowledge (got the
experience too). So, what have you got to offer? ;-)

73's
Richard Clark, KB7QHC

1290. Re: Dipole Length Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 05:00:30 UTC
From: Robert Kole <user@local.net>
Message-ID: <c67jhd$1v0$1@news.wplus.net>
Source record: 96191

>In article <40874365_8@corp.newsgroups.com>, Cecil Moore wrote:

[snip]

> Not only is it a nit, but it is a
> negligible nit compared to other nits. :-)

O.K. I'll have to find something else to
obsess about. <G>

1291. Re: Homebrew VHF/UHF mobile antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 06:00:41 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c67n1k$8lh38$1@ID-225206.news.uni-berlin.de>
Source record: 96192

"JLB" <IHateSpam@nospam.net> wrote in message
news:9fChc.74$hk6.18@fe03.usenetserver.com...
>
>
> "John Smith" <pani@yahoo.com> wrote in message
> news:c662pe$8gu1d$1@ID-225206.news.uni-berlin.de...
> > Idea 1, would probably not work much at 446 as current would have a hard
> > time to flow into attached insulated wire. general problem with most
> mobile
> > antennas is getting enough RF current to flow out into them.
> >
>
> There are two ways that Idea 1 can be thought of:
>
> A. The extra wire is a half wave dipole coupled to the 2 meter quarter
> wave. By some magic, it resonates and radiates on 446 MHz as a half wave
> dipole.

It would do that, coupling would be 15 to 20 dB down though, and depends where it is located too. You could take the same piece and attach it to the other wire at the base and get the 15 to 20 dB back. (see Idea 1 A Modified)
You can cut the big rod for 146 and it will also pickup 446 both under 1.5 VSWR (says) so it is already a great antenna for 446.

Idea1A modified--Just have both rods come up out of the base (attached at bottom) bent away from each other about 25 degrees or so, one long and one short. (old time antennas did this one)
>
> B. A shorted quarter wave transmission line is an open circuit. So is a
> half wave open circuit transmission line. The extra wire next to the 2
> meter quarter wave acts like an open half wave transmission line,
> effectively isolating the upper part of the 2 meter quarter wave when
> operating on 446. When the wire is positioned properly, the bottom part
of
> the 2 meter quarter wave will act like a 446 quarter wave.

It is the amount of coupling between the two upper parts may be low to lesson the effect. worth testing it, but you would need a different frequency, as the antenna already picks up both. But the preposed is 446 on bottom 1/4 resonate, and 1/2wave 446 on top next to rod, and rod could be at 120 MHz 1/4 wave length. The 1/2 wave may seem like open , but it probly does not have strong enough coupling onto the 120 Mhz rod to make it look open. (what if they are attached at that point, like a catus, 1/4 wave 466 up to attach point, 1/2 wave 466, and the rest of the 120 1/4 rod.-another

test? EZNEC!)
>
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net
>
>
>

1292. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 11:56:17 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <NoOhc.64103$Gp4.1592430@news20.bellglobal.com>
Source record: 96193

Cecil,

Could you clarify the dimensions of your column? Because the only portion of a cylinder of Hg that would lengthen is the tiny portion at the tip of the cylinder. Let's say the inner diameter of the tube was 1" (kind of thick for a tube of Hg, but makes for really easy math here... ;) If the column of Hg was 4'long by 1" diameter, tilting it to a 45 degree off vertical would only allow the volume residing at the very end to tilt (occupying 1" of cylinder length) and yes, it would (begging the question it had no surface tension) find level again and the bottom edge, effectively lengthening the metallic column by (1.414 * n) where 'n' is the affected volume. (roughly a length of column equal to the diameter of the column) Our 4' column would only lengthen to about 4' plus approx 1/2 an inch. The rest of the column is effectively captive to the inner dimensions (and volume) of the vessel containing it.

Bob.

Cecil Moore wrote:

> Jim Kelley wrote:
>
>> Cecil Moore wrote:
>>
>>> By Golly, I have been looking for a cable stretcher. A tilted
>>> mercury column will perform that function.
>>
>>
>> How so?
>
>
> The gravity vector remains constant while the tilted mercury
> vector varies with the angle of the tilt. Let's say theta
> is the angle of the tilt, i.e. the angle between the mercury
> column and the ground plane. At an angle of 45 degrees, the
> mercury column length will be 1.414 times the length at 90 degrees,
> At 10 degrees, the mercury column length will be 5.76 times the
> length at 90 degrees. That sounds like something worth patenting.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
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1293. Help srewdriver antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 12:30:41 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <RVOhc.203341$2oI1.54343@twister01.bloor.is.net.cable.rogers.com>
Source record: 96194

Hello all, have been looking all over the net for a nice detailed diagram for a screwdriver antenna. Wonder if anybody out there would have a nice website that i have not hit so far. As cant seem to get what i want out of what i have seen. The building part is not all that bad for me, as long as it is well detailed. hi.
cul 73
de Jean-Guy/ve9buf

1294. Re: Dipole Length Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 13:03:05 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <4087c652_3@newsfeed.slurp.net>
Source record: 96195

102' 3-1/2"... less than that and your feedline narrows down again,
defeating the purpose of building your own feedline exactly 3-1/2" wide...

73,
Mike KI6PR
El Rancho R.F., CA

"Robert Kole" wrote
> I'm putting up a G5RV fed with homebrew ladder-line
> spaced 3 1/2" apart. Should I include the 3 1/2"
> in the overall length?
>
> Put another way; shoud the overall length of the ant
> be 102' or 102' 3 1/3" ?
>
> I know it's nit-picking and the tuner will handle it,
> I just want to know what's "correct".
>
> (A thousand pardons if this has been asked over and over.)

1295. Re: Help srewdriver antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 13:06:11 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <4087c70b$1_3@newsfeed.slurp.net>
Source record: 96196

Pick up a copy of "20+5 Years of Mobileering", by Don Johnson W6AAQ, or
contact him directly for construction plans...

73,
Mike KI6PR
El Rancho R.F., CA

"Jean-Guy" wrote
> Hello all, have been looking all over the net for a nice detailed diagram
> for a screwdriver antenna. Wonder if anybody out there would have a nice
> website that i have not hit so far. As cant seem to get what i want out of
> what i have seen. The building part is not all that bad for me, as long as
> it is well detailed. hi.
> cul 73
> de Jean-Guy/ve9buf
>
>

1296. Re: Maintenence Management Professional

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 13:22:58 UTC
From: Roger Conroy <rogerconroy@nospam.hotmail.com>
Message-ID: <c68h0jeei1@ctb-nnrp2.saix.net>
Source record: 96197

"Charles Gilbert" <cgilbert@triad.rr.com> wrote in message
news:yqOhc.99011$04.1185024@twister.southeast.rr.com...
> CHARLES J. GILBERT
> cgilbert@triad.rr.com
>
> Career Objective:
> To obtain a challenging position in telecommunications maintenance or
maintenance management.
>
> Major Qualifications:
> * Over nine years experience in electronics repair, administrative
operations, and shop management.
> * Highly motivated, results oriented supervisor with a track record of
successful performance of increasing responsibility and difficulty.
> * Department of Defense Secret Security Clearance.
>
> Professional Experience:
>
> Supervisory:
> * Controlled capital assets totaling in excess of $10,000,000.
> * Planned, budgeted, and monitored quarterly accounts of up to $1,000,000
to affect preventive and corrective maintenance.
> * Prioritized, scheduled, and supervised the repair of over $10,000,000
of communication systems involving over 20 electronic technicians on a daily
basis.
> * Responsible for coaching, development, and team building of over 100
service members, to include safety and quality inspections.
>
> Employment History:
> August 1994 - Present United States Marine Corps
> March 2002 - Present Maintenance Management Supervisor
> Responsible for the following: Planning for deployment of a maintenance
unit; Supervision of electronic maintenance support programs and maintenance
production; Preparation of budgets for maintenance and operational
commitments; Brief commander on equipment readiness; Supervise the
deployment of field maintenance activities; Supervise the training for
communications maintenance and operational personnel
> July 2000 - March 2002 Communication-Electronics Maintenance Supervisor
> Assisted in the planning for deployment of field maintenance activities;
managed maintenance production; supervised maintenance actions
> March 1998 - July 2000 Radio/Multi-Channel Equipment Repair Supervisor
> Analyzed maintenance information system data; Managed maintenance shop
programs; Administered a quality control program; Deployed field maintenance
activities; determined maintenance support requirements; Directed

maintenance actions; Conducted training for personnel
> October 1995 - March 1998 Radio/Multi-Channel Equipment Repairman
> Performed corrective maintenance on radio/multi-channel systems; Diagnosed basic electronic circuits; Performed limited maintenance on cryptographic equipment; Performed corrective maintenance on single channel radios and tactical telephones; Performed corrective maintenance on computers and its peripherals; Performed corrective maintenance on tactical power supplies; Provided technical assistance during the installation of communications equipment
> Management and Technical Training:
>
> 2004 Electronics Technician Supervisors Course
> Organization and administration; supervision and training; combat systems; casualty control and reporting; quality assurance; test equipment; and maintenance.
> 2004 Microwave Principles
> Introduction to microwave principles. waveguides, microwave components and circuits, tube principles and types, decibel measurement, solid state devices, and microwave antennas.
> 2000 Antenna Construction and Propagation of Radio Waves
> Propagation of radio waves, construction of antennas, and characteristics of antennas
> 2000 Electrician Course
> AC and DC systems, principles of electric power, and basic circuit calculations
> 1996 Solid State Devices
> Identification, testing, troubleshooting, and repair of integrated circuits
> 1996 Fundamentals of Leadership
> Decision making, problem solving, and personnel welfare
> 1996 Techniques of Instruction
> Basic concepts of instruction and techniques
> 1996 Terrorism Counteraction
> Description of terrorism, methods of targeting, nature of threat, prevention of acts, and survival as a hostage
> 1995 Multi-Channel Equipment Repair Course
> Multi-Channel installation, testing, and repair
> 1995 Radio Fundamentals Course
> RF transmitters, receivers, and antenna theory of operation
> 1995 Basic Electronics Course
> Electricity, digital and analog electronic circuitry
>
> Skills and Strengths:
>
> * Repair, installation, adjustment, modification, and testing of data systems, as well as radio, telephone, and antenna equipment, analog and digital electronics, and multiplexing
> * Microsoft Office Suite and Microsoft Internet Explorer
> * Strong organizational skills; able to prioritize, delegate, and accomplish tasks and programs independently

> * Excellent team builder and motivator
> * Personable and articulate in written and verbal communications skills
> * Project oriented; able to complete multiple tasks achieving outstanding
results
> * Creative and innovative problem solver
> * Easily adaptable at learning new concepts and systems
> * Effective manager of time and resources
>
> Awards:
>
> * Navy and Marine Corps Commendation Medal
> * Navy and Marine Corps Achievement Medal (3)
> * Certificate of Commendation (12)
> * Letter of Appreciation (3)
>
> Supervisor Evaluations and References:
>
> * Available upon request
>
>
>
>

Why are you posting this here?

1297. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 13:54:48 UTC
From: jder8745@aol.com
Message-ID: <20040422095448.11380.00000143@mb-m18.aol.com>
Source record: 96198

The bride had heard of the groom's 1/4-wave driven element and was anxious to see how it stood up in the wind.

1298. Re: Experience with Cushcraft R7 vertical HF antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 14:00:12 UTC
From: jder8745@aol.com
Message-ID: <20040422100012.11380.00000144@mb-m18.aol.com>
Source record: 96199

I have used one for many years, right after it first came out. NO PROBLEMS. I have it on a telescoping TV mast. The bottom of it is about 20 feet up.

On 40 it is adjusted for CW portion, and use built-in AT in rigs for a match there.

Elsewhere it has acceptable SWR for each band.

73 de Jack, K9CUN

1299. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 14:07:50 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <4087D1C1.F1FC8A77@shaw.ca>
Source record: 96200

JDer8745 wrote:
>
> The bride had heard of the groom's 1/4-wave driven element and was anxious to
> see how it stood up in the wind.

Dissapointingly, it turned out to be a shorted stub!

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1300. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 14:19:37 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0404220619.3cc7d2db@posting.google.com>
Source record: 96201

Richard Clark <kb7qhc@comcast.net> wrote in message
news:<57ma809tnr71pgn7b3hke1rd4nhs5jlttp@4ax.com>...
> On 20 Apr 2004 09:06:35 -0700, N2EY@AOL.COM (N2EY) wrote:
> >> These apologies ring false. The issue of gaps is desperate and the
> >> selection of tubular has no basis in special characteristics. All
> >> such considerations MUST yield to simple scaling. For instance, if
> >> you need 0.8 and have 0.9, there is no magic formula beyond
> >> proportions necessary to achieve "what should be."
> >
> >I disagree! In the QST article, Lattin describes an 80/40 dipole using
> >his method. It has wires dangling from the stub junctions to get 40
> >meter resonance.
>
> Hi Jim,
>
> OK, you disagree, but with what?

With the idea that scaling answers all questions.

> Scaling will ALWAYS answer
> everything but the mystical apologies.

The two-band 80/40 dipole in the QST article has extra wires at the
junctions of the 80 and 40 sections because (according to the author)
the velocity factor of the tubular Twin Lead makes it necessary. Those
wires might or might not be required with a unity velocity factor.

> >Most important to me is that the antenna offers no real advantages
> >over, say, a conventional trap dipole. Yet it offers many
> >disadvantages, such as mechanical frailty and difficulty of
> >duplication.
>
> This is more pilot error than design error (which has its own
> problems, of course).

In a perfect world, maybe. But in the real world of ham radio, most
hams have limited materials, test equipment, time and space. An
antenna made out of unobtainable materials, which requires
unobtainable tools and test equipment to build and adjust is only of
academic interest to a ham.
>
> >And again - what advantages does it have over, say, a W3DZZ trap
> >dipole?
>
> I see no such issues if the theory were hammered out. It is plainly
> these readings of tea leaves that frustrate construction, because when

> a design is described, it is most clear and concise - it just doesn't
> work is all.

Exactly! If it cannot be easily duplicated by a ham with typical
resources, what good is it?

>
> Like I said, I've done some measures and added a dozen more since.
> The results are interesting. I can come up with a four band antenna
> without too much trouble; however, getting those bands into Ham
> regions (all of them) is another matter. I can do this with a simple
> run of twin lead, and one strategically placed short between them.

Which is not what Lattin did at all. Your design sounds far superior.
Is it on the web anywhere?
>
> This antenna (usefully resonant or otherwise) is no worse than any
> wire strung between poles - just two wires instead of one, hardly what
> I would call fragile. If it has an advantage over your W3DZZ trap
> dipole, I leave that strictly in the eye of the beholder as I have
> full faith it won't be any worse.

All depends on the wires. I use recycled #12 house wire, which stands
up under ice loading and high winds here in EPA. Yet it is hardly
noticed by the neighbors.

> Any way, such work offers a step towards an antenna with MORE gain
> (and more wire, a third one) by constructing a Franklin Array style of
> antenna. True, not a multi bander, but I am not particularly nailed
> to the floor over that.
>
The main attraction of the Lattin is its claim to multiband operation.
Otherwise one might as well go with a plain dipole.

73 de Jim, N2EY

1301. Re: Mid coil loaded CB to 2 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 14:33:22 UTC
From: "R. Scott" <washingtonhamTHREAD@yahoo.com>
Message-ID: <4087D7B2.7B94970A@yahoo.com>
Source record: 96204

> If there's 19+ inches under the coil, chop the coil off
> and throw it away. If there's not 19 inches under the
> coil, short the coil out and trim the entire antenna
> length to 19+ inches. Leave enough for cutting and trying.
> --
> 73, Cecil http://www.qsl.net/w5dxp

Thanks Cecil, I was thinking that, but I know I saw a conversion
somewhere
but cant put my finger on it :D.

--
Rick
Everett, Washington
Remove THREAD to reply.

1302. Re: Mid coil loaded CB to 2 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 14:34:42 UTC
From: "R. Scott" <washingtonhamTHREAD@yahoo.com>
Message-ID: <4087D802.A824006B@yahoo.com>
Source record: 96205

K9SQG wrote:
>
> You may or may not be able to easily use the antenna. It depends not only the
> radiator but also the base matching coil/capacitor. It would be easier and not
> all that expensive to use an actual 2m antenna, unless you just want to
> experiment. What you could do is get a 2m antenna tuner and hook it up to your
> existing antenna and see what happens.
>
> 73s,
>
> Evan

Possible Evan, I dont think it has a cap, I could easily get a 2 mtr and
mount it elsewhere, but I was hoping to keep the side mount of the CB as
it
matches the AM/FM on the other side.

Dont have a 2 tuner, but will play with it.

Thanks
--
Rick
Everett, Washington
Remove THREAD to reply.

1303. Re: Help srewdriver antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 14:38:15 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <rNQhc.30309$zuq1.12644@news04.bloor.is.net.cable.rogers.com>
Source record: 96202

Thanks Mikey,, will certainly check it out.
All the best.
de Jean-Guy/ve9buf

"Mikey" <ki6pr@arrl.net> a crit dans le message de
news:4087c70b$1_3@newsfeed.slurp.net...
> Pick up a copy of "20+5 Years of Mobileering", by Don Johnson W6AAQ, or
> contact him directly for construction plans...
>
> 73,
> Mike KI6PR
> El Rancho R.F., CA
>
> "Jean-Guy" wrote
> > Hello all, have been looking all over the net for a nice detailed
diagram
> > for a screwdriver antenna. Wonder if anybody out there would have a
nice
> > website that i have not hit so far. As cant seem to get what i want out
of
> > what i have seen. The building part is not all that bad for me, as long
as
> > it is well detailed. hi.
> > cul 73
> > de Jean-Guy/ve9buf
> >
> >
>
>

1304. Re: Experience with Cushcraft R7 vertical HF antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 14:44:42 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <uTQhc.30500$zuq1.5303@news04.bloor.is.net.cable.rogers.com>
Source record: 96203

Same here, have had mine up and going after fixing it last summer, went thru winter very well, not a sign of detoriation at all. Still works like a top. Now I don't know if anyone else did check the antenna with an antenna tuner (mfj 259 or whichever)
Did check mine out last year will doing the installation and found the antenna to resonant not to badly at all on 6 meters, and also on 80, where it would be a real compromise antenna. A bit hight on swr , but in a pinch i am sure it could be use with a tuner on at least 80 meters. Someday will check it out on the air on 80 meters to really find out what is what with it.

Just some feedback about R-7.

de Jean-Guy/ve9buf

"JDer8745" <jder8745@aol.com> a écrit dans le message de news:20040422100012.11380.00000144@mb-m18.aol.com...
> I have used one for many years, right after it first came out. NO PROBLEMS. I
> have it on a telescoping TV mast. The bottom of it is about 20 feet up.
>
> On 40 it is adjusted for CW portion, and use built-in AT in rigs for a match
> there.
>
> Elsewhere it has acceptable SWR for each band.
>
> 73 de Jack, K9CUN

1305. Re: Dipole Length Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 14:53:08 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <vlmf80lsqhdm966qid3gl7dq151gs2fegh@4ax.com>
Source record: 96206

On Thu, 22 Apr 2004 03:39:27 +0000 (UTC), Robert Kole <user@local.net>
wrote:

>
>I'm putting up a G5RV fed with homebrew ladder-line
>spaced 3 1/2" apart. Should I include the 3 1/2"
>in the overall length?
>
>Put another way; shoud the overall length of the ant
>be 102' or 102' 3 1/3" ?
>
>I know it's nit-picking and the tuner will handle it,
>I just want to know what's "correct".
>
>(A thousand pardons if this has been asked over and over.)

See Cebik's G5RV article at

http://www.cebik.com/g5rv.html

for the length of the dipole. G5RV was ballparking his measurements,
since an antenna tuner is used to fine-tune the system...

Bob
k5qwg

1306. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 15:03:58 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c68msu$47m$1@hercules.btinternet.com>
Source record: 96207

It is misleading to think that a feedline can radiate seperately from an antenna.

When a feedline becomes unbalanced with respect to an antenna it becomes PART of yet another antenna - which radiates.

The two TOGETHER form a resulting radiation pattern which is different to either.

Reg, G4FGQ

1307. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 15:14:53 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <4087e04c.485003421@news.galilei.com>
Source record: 96208

Hi Slick

There does NOT have to be an electrical connection at all.
You can use lamps that have the leads broken off completely and it
works just fine.

TTUL
Gary

1308. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 16:10:00 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <s7Shc.3105$_L6.465728@attbi_s53>
Source record: 96209

Cecil Moore wrote:

> David.Shrader wrote:
>
>> If it's a closed tube then the length does not change with angle.
>
>
> I may be wrong, cuz I'm not very mechanical, but it seems to me
> that a column of mercury in a tube with a vacuum at the top
> and a reservoir of mercury at the bottom would change height
> of column depending on the angle of the column's deviation from
> vertical. It seems to me that when the column is horizontal,
> there would be no vacuum at all in the tube.
> --
> 73, Cecil http://www.qsl.net/w5dxp

OK. A manometer as opposed to a thermometer.
>

1309. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 16:35:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <4087F443.9854316E@uci.edu>
Source record: 96210

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > Cecil Moore wrote:
> >>By Golly, I have been looking for a cable stretcher. A tilted
> >>mercury column will perform that function.
> >
> > How so?
>
> The gravity vector remains constant while the tilted mercury
> vector varies with the angle of the tilt. Let's say theta
> is the angle of the tilt, i.e. the angle between the mercury
> column and the ground plane. At an angle of 45 degrees, the
> mercury column length will be 1.414 times the length at 90 degrees,
> At 10 degrees, the mercury column length will be 5.76 times the
> length at 90 degrees. That sounds like something worth patenting.

I saw a further explanation in your later post. Important point - the resevoir, open to air or a source of constant pressure for example. As you tilt the vertical section, the height above ground remains constant because it is balanced by the pressure on the reservoir. In order to maintain the height above ground as the column is being tilted, the column must increase in length.

It works beautifully by the way, Cecil. I just tried it with a mercury barometer.
73, Jim AC6XG

1310. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 19:04:46 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108g5qjr2l4ha9a@corp.supernews.com>
Source record: 96211

Scaling is a powerful analytical technique(*), but in some cases it can be a little trickier than meets the eye.

Consider, for example, scaling a piece of TV twinlead to twice the frequency so it'll behave exactly the same (both as a transmission line and as a radiator) at the new frequency.

The wire diameters have to be reduced by a factor of two.
The spacing between the wires has to be reduced by a factor of two.

Luckily, if the scale model and the original are both in free space, then

The dielectric constant of the insulator remains unchanged.

And, almost always overlooked,

The wire conductivity has to be increased by a factor of two.
The dielectric conductivity has to be increased by a factor of two.

Fortunately, these last factors are usually unimportant. If the original is made from copper, it isn't possible to scale to a much higher frequency. But it's something to be kept in mind if loss is significant and an accurate assessment of loss is necessary.

Permeability, incidentally, remains unchanged with frequency when scaling.

But even if you can neglect the conductivity scaling, you wouldn't be able to run down to the store and buy a piece of the scaled twinlead to use in your antenna for another band.

(*) Antennas are often scaled to higher frequencies for testing because the scale model is a more convenient size. When I was involved in the development of very high-speed sampling circuits, we often made scale models of various structures (for example, coax connector to microstrip transitions) at *lower* frequencies, so they'd be large enough to measure and physically adjust.

Roy Lewallen, W7EL

1311. Re: Dipole Length Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 19:17:32 UTC
From: richardharrison@webtv.net
Message-ID: <14789-40881A4C-253@storefull-3257.bay.webtv.net>
Source record: 96212

Robert Kole wrote:
"Put another way, should the overall length of the antenna be 102 feet or 102 ft. 3.33 in.?"

As Cecil noted, 3.33 in. is inconsequential in comparison with 102 ft. Your antenna has bandwidth, and 3.33in. is only 0.3% of its length. Given a tuner, the antenna system can be brought to resonance to remove a reactive impediment to antenna current and radiated power.

A resonant dipole system is 1/2 wavelength or some multiple thereof. It is a multiple of 180-degrees, tip to tip, and this includes loads, gaps, coils, capacitors, and everything electrically making up the length. See Chapter-8 "Dipole Antennas" in ON4UN`s "Low-Band DXing". Note that the tip to tip dimension includes the feedline spacing in all illustrations.

Bob, K5QWG referred to Cebik`s analysis of the G5RV, a 102-ft. version which is (3) 1/2-waves at 14.15 MHz. Note that Cebik also shows a 107-ft. version from the ARRL. Cebik notes that wire size and elevation are more important than wire length when you are using a tuner.

Best regards, Richard Harrison, KB5WZI

1312. Power cable routing, Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 20:02:25 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <mxVhc.3231$hk6.1693@fe03.usenetserver.com>
Source record: 96213
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

I am in the process of mounting my old Yaesu FT-4700 in my 2000 Ford Taurus station wagon. The biggest problem encountered is running the power cable. As many others do, I prefer running directly to the battery. The problem with the Taurus, as with many other recent vehicles, is that there are no spare holes in the firewall---at least not that I can find.

So, I went this morning and talked to a local Ford salesman that I happen to know personally (of course buying our last 4 cars from him certainly helps) and asked him how to do it. He didn't know, but took me to talk to one of their mechanics (you've seen the type---middle age, hair starting to grey, grease on shirt---the kind thats been working on cars since he was 15). Evidently this guy also does radio installations for some of their dealer vehicles.

The grass roots, doen in the trenches answer is this:

1. Locate the rubber boot around the steering column, here it goes through the firewall. Using a screw driver or similar tool lift up the edge of the rubber boot and shove your cable through. Seal around it with RTV.
2. Remove the glove box (he assured me that this is easy to do). There is an unused grommet behind it, left over from when the car radio antenna was mounted up front (at least on the Taurus).
3. Drill a hole in the firewall and mount your own grommet. Or use a bunch of RTV.

His only other comment was to stay away from the exhaust manifold, as it would melt the insulation. I might also add to stay away from moving parts, too.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

1313. Re: Dipole Length Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 20:08:01 UTC
From: richardharrison@webtv.net
Message-ID: <2145-40882621-293@storefull-3251.bay.webtv.net>
Source record: 96214

Robert Cole wrote:
"Put another way, should the overall length of the antenna be 102` or 102` 3 1/3`` ?"

An example may be found in microwaves. The RSGB 3rd edition of "VHF-UHF Manual" has a dipole dishfeed for the 23 cm band on page 8.67.

23 cm is 9 inches. The dipole is 4 & 7/16 inches tip-to-tip, or just 5% short of 1/2-wavelength as expected for "end effects".

The tip-to-tip length of a dipole need not be adjusted for feedline spacing.

Best regards, Richard Harrison, KB5WZI

1314. Re: Power cable routing, Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 22:58:54 UTC
From: Dave Edwards <kd2e@comcast.net>
Message-ID: <FNmdnWmVtcCk0xXdRVn-hw@comcast.com>
Source record: 96217
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Had the same problem with my Taurus...I said "forget it" and went along the
fender, and in the door...near, but not next to the door hinges.
Also did the same method on my current Olds Intrigue.
...Dave

"JLB" <IHateSpam@nospam.net> wrote in message
news:mxVhc.3231$hk6.1693@fe03.usenetserver.com...
> I am in the process of mounting my old Yaesu FT-4700 in my 2000 Ford
Taurus
> station wagon. The biggest problem encountered is running the power
cable.
> As many others do, I prefer running directly to the battery. The problem
> with the Taurus, as with many other recent vehicles, is that there are no
> spare holes in the firewall---at least not that I can find.
>
> So, I went this morning and talked to a local Ford salesman that I happen
to
> know personally (of course buying our last 4 cars from him certainly
helps)
> and asked him how to do it. He didn't know, but took me to talk to one of
> their mechanics (you've seen the type---middle age, hair starting to
grey,
> grease on shirt---the kind thats been working on cars since he was 15).
> Evidently this guy also does radio installations for some of their dealer
> vehicles.
>
> The grass roots, doen in the trenches answer is this:
>
> 1. Locate the rubber boot around the steering column, here it goes
> through the firewall. Using a screw driver or similar tool lift up the
edge
> of the rubber boot and shove your cable through. Seal around it with RTV.
> 2. Remove the glove box (he assured me that this is easy to do).
There
> is an unused grommet behind it, left over from when the car radio antenna
> was mounted up front (at least on the Taurus).
> 3. Drill a hole in the firewall and mount your own grommet. Or use a
> bunch of RTV.
>
> His only other comment was to stay away from the exhaust manifold, as it
> would melt the insulation. I might also add to stay away from moving
parts,
> too.

>
>
> --
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net
>
>
>

1315. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-22 23:29:46 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40885575$0$431$5cbedd26@news.real-time.com>
Source record: 96218

Well, I gave an answer, farther down the thread, that actually is more on subject, liquid antennas. I told him where to find a group that knows about them and builds lots of them, which is more than anyone else seems to have done.

Looks to me like most of the regulars on this newsgroup, except Roy and a couple others, talk about anything except the subject/question that started the thread. Which is their right. Just don't get annoyed if I point out that fact occasionally. Also the fact that anyone with an IQ above room temperature knows mercury has to be handled with some care.

tom
K0TAR

Richard Clark wrote:

> On Wed, 21 Apr 2004 22:12:51 -0500, Tom Ring <tarnews@taring.org>
> wrote:
>
> Hi Tom,
>
> Then we can both agree that I speak from a point of knowledge (got the
> experience too). So, what have you got to offer? ;-)
>
> 73's
> Richard Clark, KB7QHC

1316. Re: Power cable routing, Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 00:45:07 UTC
From: Nitespark <nitespark@h8spam.cox.net>
Message-ID: <kGZhc.36271$fq4.5617@lakeread05>
Source record: 96070
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

JLB wrote:
> I am in the process of mounting my old Yaesu FT-4700 in my 2000 Ford Taurus
> station wagon. The biggest problem encountered is running the power cable.
> As many others do, I prefer running directly to the battery. The problem
> with the Taurus, as with many other recent vehicles, is that there are no
> spare holes in the firewall---at least not that I can find.
>
> So, I went this morning and talked to a local Ford salesman that I happen to
> know personally (of course buying our last 4 cars from him certainly helps)
> and asked him how to do it. He didn't know, but took me to talk to one of
> their mechanics (you've seen the type---middle age, hair starting to grey,
> grease on shirt---the kind thats been working on cars since he was 15).
> Evidently this guy also does radio installations for some of their dealer
> vehicles.
>
> The grass roots, doen in the trenches answer is this:
>
> 1. Locate the rubber boot around the steering column, here it goes
> through the firewall. Using a screw driver or similar tool lift up the edge
> of the rubber boot and shove your cable through. Seal around it with RTV.

The thing I don't like about this method is it puts your primary heavy
current wire (which I would hope would be fused), in direct contact with
a metalic edge. After awhile, with road vibration, the insulation will
wear through to the wire and short out.

> 2. Remove the glove box (he assured me that this is easy to do). There
> is an unused grommet behind it, left over from when the car radio antenna
> was mounted up front (at least on the Taurus).

This would be a good choice if the wire routing would be away from hot
manifolds, etc. I also like to use some wire loom when routing my
wiring. This give it added protection.

> 3. Drill a hole in the firewall and mount your own grommet. Or use a
> bunch of RTV.

I have done this a few times and again, as long as you stay away from
hot manifolds, moving parts, etc., its perfectly fine.

>
> His only other comment was to stay away from the exhaust manifold, as it
> would melt the insulation. I might also add to stay away from moving parts,
> too.

Andy
WD4KDN

--
One lawyer can steal more than a hundred men with guns.

1317. Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 00:46:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mbog80l60r8kkgsbbe1158ushct7k6e5e2@4ax.com>
Source record: 96071

On 22 Apr 2004 07:19:37 -0700, N2EY@AOL.COM (N2EY) wrote:

>> Like I said, I've done some measures and added a dozen more since.
>> The results are interesting. I can come up with a four band antenna
>> without too much trouble; however, getting those bands into Ham
>> regions (all of them) is another matter. I can do this with a simple
>> run of twin lead, and one strategically placed short between them.
>
>Which is not what Lattin did at all. Your design sounds far superior.
>Is it on the web anywhere?

Hi Jim,

You should take care with my perverse generalizations, especially when
you follow it with:
>The main attraction of the Lattin is its claim to multiband operation.
>Otherwise one might as well go with a plain dipole.

A plain dipole is already mutibanded. This particular claim is easy
to achieve. It may not fall within interesting bands, but history
already suggests one dipole often serves more than one ham band if one
can accept the short comings (wrong directionality being key).

This is more a matter of the dichotomy of need: match and launch.
There may be more matching options than actual application of where it
is launched (too many lobes in the wrong directions).

In this sense, the trap serves to shorten the antenna to RESTRICT its
physical to electrical wavelength ratio to a quarter or less, thus
guaranteeing a mediocre performance from precious air space and
real-estate. If Art hadn't been nailed for a design 17dB below a
simple vertical, he would be here howling efficiency per unit length
(but, unfortunately in the wrong aspect - that's how you lose 17dB
behind the sofa).

Frankly, the Lattin has yet to prove to me that the notion of a
longitudinal stub as "trap" really holds any water. I've seen the
same "theory" applied to diametrically opposed designs. It is
pleasing to the arm-chair designer to mutter these ideas, but these
so-called streamers needed to make it work just yell foul on every
street corner. It is an ad-hoc design draped with academic mumblings
to lend it the appearance of legitimacy.

To extend my quote above, I have added yet another dozen measurements
to have nailed down patterns that emerged with the basis of a
consistent building paradigm (yeah, I know, gobbldygook). I seek to
generalize such claims as the Lattin makes and reduce them to a

practical minimum that are robust and repeatable. This is not to say entirely useful, nor optimal.

I did the same thing with the fractal with 300 or more measurements and reduced that junk science to a simple observation: you can push more resonances into a length of wire, the more you kink it. Useful? The test of time has shown that no one has made any money from those same published 300 pages - why would I expect the Lattin to emerge from 5 decades of neglect to eclipse that record? Frankly, the Lattin simply confirms this simple observation, but is more controlled. It may mature to a more repeatable design, but I doubt its inventor would recognize it.

73's
Richard Clark, KB7QHC

1318. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 00:48:54 UTC
From: Bunnydawg <r.heenan@sympatico.ca>
Message-ID: <S5Xhc.72924$Gp4.1745518@news20.bellglobal.com>
Source record: 96215

After reading the thread i believe i just discovered who it was that killed vaudville lol.
Robert
VE3 something or other
"Irv Finkleman" <finkirv@shaw.ca> wrote in message news:4087D1C1.F1FC8A77@shaw.ca...
> JDer8745 wrote:
> >
> > The bride had heard of the groom's 1/4-wave driven element and was anxious to
> > see how it stood up in the wind.
>
> Dissapointingly, it turned out to be a shorted stub!
>
> --------------------
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

1319. Re: Maintenence Management Professional

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 00:54:07 UTC
From: Bunnydawg <r.heenan@sympatico.ca>
Message-ID: <SaXhc.73150$Gp4.1747354@news20.bellglobal.com>
Source record: 96216

You can add your experience as a newsgroup spammer too Charles. I'd be more
then happy to provide you with a reference.
Robert
VE3 something or other
"Roger Conroy" <rogerconroy@nospam.hotmail.com> wrote in message
news:c68h0jeei1@ctb-nnrp2.saix.net...
>
> "Charles Gilbert" <cgilbert@triad.rr.com> wrote in message
> news:yqOhc.99011$04.1185024@twister.southeast.rr.com...
> > CHARLES J. GILBERT
> > cgilbert@triad.rr.com
> >
> > Career Objective:
> > To obtain a challenging position in telecommunications maintenance or
> maintenance management.

snipped

>
> Why are you posting this here?
>
>

1320. Re: Power cable routing, Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 01:46:19 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Rz_hc.3570$hk6.1917@fe03.usenetserver.com>
Source record: 96072
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Well, he also mentioned the possibility of poking a hole in the steering column boot. That may not be too bad, as there seems to be a lot of room there.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net
"Nitespark" <nitespark@h8spam.cox.net> wrote in message
news:kGZhc.36271$fq4.5617@lakeread05...
>
>
> JLB wrote:
> > I am in the process of mounting my old Yaesu FT-4700 in my 2000 Ford
Taurus
> > station wagon. The biggest problem encountered is running the power
cable.
> > As many others do, I prefer running directly to the battery. The
problem
> > with the Taurus, as with many other recent vehicles, is that there are
no
> > spare holes in the firewall---at least not that I can find.
> >
> > So, I went this morning and talked to a local Ford salesman that I
happen to
> > know personally (of course buying our last 4 cars from him certainly
helps)
> > and asked him how to do it. He didn't know, but took me to talk to one
of
> > their mechanics (you've seen the type---middle age, hair starting to
grey,
> > grease on shirt---the kind thats been working on cars since he was 15).
> > Evidently this guy also does radio installations for some of their
dealer
> > vehicles.
> >
> > The grass roots, doen in the trenches answer is this:
> >
> > 1. Locate the rubber boot around the steering column, here it goes
> > through the firewall. Using a screw driver or similar tool lift up the
edge
> > of the rubber boot and shove your cable through. Seal around it with
RTV.

>
> The thing I don't like about this method is it puts your primary heavy
> current wire (which I would hope would be fused), in direct contact with
> a metalic edge. After awhile, with road vibration, the insulation will
> wear through to the wire and short out.
>
>
> > 2. Remove the glove box (he assured me that this is easy to do).
There
> > is an unused grommet behind it, left over from when the car radio
antenna
> > was mounted up front (at least on the Taurus).
>
> This would be a good choice if the wire routing would be away from hot
> manifolds, etc. I also like to use some wire loom when routing my
> wiring. This give it added protection.
>
>
> > 3. Drill a hole in the firewall and mount your own grommet. Or use
a
> > bunch of RTV.
>
> I have done this a few times and again, as long as you stay away from
> hot manifolds, moving parts, etc., its perfectly fine.
>
>
> >
> > His only other comment was to stay away from the exhaust manifold, as it
> > would melt the insulation. I might also add to stay away from moving
parts,
> > too.
>
> Andy
> WD4KDN
>
> --
> One lawyer can steal more than a hundred men with guns.
>

1321. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 01:55:30 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <4088779c$0$439$5cbedd26@news.real-time.com>
Source record: 96073
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

Cathy

Thanks to a couple hams in this city, Golden Valley MN has very nice antenna "restrictions". I don't know all the rules, but as I understand things, the city essentially matches most of the FCC regs. The only thing I would check on is maximum tower height. A large number of antenna installations are allowed with no permissions at all.

Feel free to email me at throwaway27 at taring.org

tom
K0TAR

Cathy James wrote:

> Greetings all,
>
> I am planning to move to the western suburbs of Minneapolis soon, and
> would like to know if there are any communities that I should
> specifically "look at" or "avoid" due to restrictions on ham radio
> antennas or other issues.
>
> Even apart from ham radio issues, I prefer rural to urban, but commute
> time to the areas on the west side of downtown is an issue preventing
> me from being too far out. Mound is probably the western limit of
> what I am willing to consider.
>
> Right now I am looking at Mound, Champlin, and Maple Grove. My
> realtor is generally helpful, but amateur radio is a mystery to her
> and I do not think she is used to getting such requests.
>
>
> 73,
>
> Cathy (N5WVR)

1322. Re: Need info on antenna issues in Minneapolis area

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 02:04:59 UTC
From: K&#65533;HB <groupk0hb@earthlink.net>
Message-ID: <fR_hc.5749$eZ5.4590@newsread1.news.pas.earthlink.net>
Source record: 96074
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna

"Tom Ring" <tarnews@taring.org> wrote

| Thanks to a couple hams in this city, Golden Valley MN has very nice
| antenna "restrictions".

Golden Valley is very ham friendly. The city donates space in the Public Safety building for our W0EF club station. See http://www.tcfmc.org We have a full 2-position contest station on MF/HF, antenna towers atop the building, etc. They also provide a free meeting room for our club meetings, and break-room facilities for coffee/snacks during contest weekends and club meetings. The only "cost" to our club is that we provide a 2-person Skywarn team at their EOC during severe-wx.

73, de Hans, K0HB

1323. 1/4 wave mag mount ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 02:33:34 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <1g%hc.5154$0u6.1124791@attbi_s03>
Source record: 96075

With a regular 1/4 wave (or 5/8) mobile whip (VHF and/or UHF) the coax normally is grounded to the sheetmetal to form the ground plane -- but a mag mount lacks the ground at the antenna end of the shield, though hopefully the metal of the body is ultimately connected to the transmitter chassis and coax braid (assumes ground braids for trunk lids etc. for rear deck lid mounts), so is there a significant performance penalty for the mag mount vs the same whip on a grounded base at the same location?

1324. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 02:37:56 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <8k%hc.16866$GR.2460124@attbi_s01>
Source record: 96076
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Wouldn't conversion of UHF gear (300MHz-3GHz) to 11m (27MHz) be tricky?
Commercial UHF gear to 70 cm OTOH...

"WA3MOJ" <WA3MOJ@home.com> wrote in message
news:c60cuk02d43@drn.newsguy.com...
> Hi all, I'm looking for a good reference manual, pdf file, or web site's
that
> will assist me in converting used UHF gear to operate on 11 meters. I'm
finding
> there is a substantial market for such gear and I'll need some references
for
> various solid state and tube conversions.
>
> Thanks in advance for any help.
>
> WA3MOJ
>

1325. Re: 1/4 wave mag mount ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 02:58:36 UTC
From: k9sqg@aol.com
Message-ID: <20040422225836.20241.00000281@mb-m29.aol.com>
Source record: 96077

Well, it depends. The antenna does not need a DC ground path to work well. Inductive/capacitive coupling to an adjacent metal surface is generally adequate. But there are so many installation specific issues that it is not a simple answer. However, most people are unaware that one of the best antennas for 2m is a 1/4 whip in the center of the roof. At highway speeds, the 5/8 whip bends over and distorts the pattern and causes a null in the forward hemisphere. For stationary instances, the gain antennas may indeed offer gain over the 1/4 wave. Just some thoughts...

73s,

Evan

1326. Re: IMPORTANT ANTI VIRUS INFORMATION

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 03:20:21 UTC
From: Bunnydawg <r.heenan@sympatico.ca>
Message-ID: <QjZhc.79227$Gp4.1807462@news20.bellglobal.com>
Source record: 96069
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet

And of course if you are foolish enough to download something from them
you'll have an even worse virus or they will have the ability to hack your
computer with the program they are offering.
Robert
VE3 something or other
<SysAdmin@vf.shawcable.net> wrote in message
news:T3Zhc.214306$Pk3.129884@pd7tw1no...
> Protect yourself from new viruses that you may not know you have. We have
designed a set of anti virus tools to keep your system secure. Visit here
for more information on these free and easy to use tools
>
> http://www.gigdot.net/
>

1327. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 03:54:55 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <js0ic.8176$e4.3652@newsread2.news.pas.earthlink.net>
Source record: 96078

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:10892fqqfas8p01@corp.supernews.com...
> The short answer to your question is no, with practical impedances. It
> turns out you'd need a very low impedance transmission line (on the
> order of a few ohms, if I recall correctly) to track very well.

(snip excellent explanation)

Not only that, but it also appears that the effort results in an _increase_
in the real part as well. Just the opposite of what I wanted.

Thanks again for explaining.

John

1328. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 04:36:19 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <108h7a0d51bv047@corp.supernews.com>
Source record: 96079
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

The Masked Marvel wrote:
> Wouldn't conversion of UHF gear (300MHz-3GHz) to 11m (27MHz) be tricky?
> Commercial UHF gear to 70 cm OTOH...
>
> "WA3MOJ" <WA3MOJ@home.com> wrote in message
> news:c60cuk02d43@drn.newsguy.com...
>
>>Hi all, I'm looking for a good reference manual, pdf file, or web site's
>
> that
>
>>will assist me in converting used UHF gear to operate on 11 meters. I'm
>
> finding
>
>>there is a substantial market for such gear and I'll need some references
>
> for
>
>>various solid state and tube conversions.
>>
>>Thanks in advance for any help.
>>
>>WA3MOJ
>>
>
>
>
If you want to keep your ham license my advise to you is not to make any
conversions to 11 meters. CB radios still need FCC acceptance. If you
want to undertake the task of getting the acceptance then disregard my
previous advice. BTW the tests to obtain acceptance should only cost you
1 or 2 hundred thousand dollars if you are lucky.

Dave WD9BDZ

1329. Re: Best antenna for an Icom T90A (rig and car)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 06:48:57 UTC
From: danielmorlan@yahoo.com
Message-ID: <a7dee37b.0404222248.6aae4daf@posting.google.com>
Source record: 96081
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.antenna

Okay, what I ended up getting was a Larsen... A 5.8 wave... I'm using
a diamond mag mount (pinched my fingers on that sucker... Good
magnet!) Had to get a SMA adapter... I told the guy to include it,
and he didn't... Good guys at HRO though... No shipping at least.
Fast delivery. Can't ask for more than that, really...

I look forward to giving it a test flight tomorrow. Thanks for the
information folks! It really helped.

73, WW6DJM

" Stephen Cowell" <scowell@sbcglobal.net> wrote in message
news:<KjFgc.18468$VE3.12533@newssvr22.news.prodigy.com>...
> "Daniel J. Morlan" <danielmorlan@yahoo.com> wrote in message
> news:a7dee37b.0404181450.133aaa52@posting.google.com...
> > Ah! Thanks a lot! Actually 2 Meters is really the ONLY one I'm
> > wanting to be using. I have a new Icom T90A, and just want a nice car
> > antenna for talking on 2 meters.
>
> You want a mag-mount 5/8wave Larsen... it's a
> nice 1/4wave on 6m, too. Get the Larsen mag
> mount, too... your present mag-mount (probably
> BNC, with a duck on it) is insufficient... BNC
> connectors are not rated for outdoor exposure.
> Just run the coax in the passenger side, via the
> rear door's front edge, down the center post, and
> under the rocker panel to the dash.
> --
> Steve
> KI5YG
> .

1330. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 07:20:49 UTC
From: richardharrison@webtv.net
Message-ID: <2147-4088C3D1-37@storefull-3251.bay.webtv.net>
Source record: 96082

The other John Smith wrote:
"They tell me that shortening the antenna (folded monopole) below resonance will lower the resistance and introduce capacitance."

I believe that is only half right. A too-short (less than 1/4-wavelength) antenna worked against a ground plane will have a lower resistance than a 1/4-wave antenna. But, unlike the open-circuit less than 1/4-wave whip, which has a series capacitive reactance, folding the too-short element not only transforms its resistance to a higher value, it reverses the sign of the input reactance. The too-short folded monopole has a series inductive reactance.

Just like the shunt-fed grounded tower antenna, the inductance can be tuned out with only a simple series variable capacitor, not an inductor as is required with a too-short whip. See Fig 19, page 6-10 of the ARRL Antenna Book, 19th edition for an example of a shunt-fed tower capacitor tuning arrangement. The shunt-feed arrangement makes a too-small loop just as a short folded monopole does.

Q of the folded monopole is lower than a whip because the folded antenna is fatter. This gives more bandwidth.

Best regards, Richard Harrison, KB5WZI

1331. Re: Element Design with Loading Coils

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 07:40:47 UTC
From: MikeN <mnewman@clear.net.nz>
Message-ID: <nmhh80tdssu4ndldi83bvia011f71mpnv2@4ax.com>
Source record: 96080

Hi Yuri

What's the best way to measure the resonant frequency of the 450 MHz
dipole?

I've got a simple UHF return loss bridge and a counter.

What else would I need?

Thanks

MikeN ZL1BNB

On 15 Apr 2004 14:04:09 GMT, k3bu@aol.comNoUsama (Yuri Blanarovich)
wrote:

>>
>>I have a design based on EZNEC. Total shortened "half-wave" dipole length
>>is 0.32 lambda. Half of that of course is in each of the two elements.
>>There is a loading coil in the middle of each element. EZNEC assumes zero
>>length, non-radiating coils. In reality, the coil length is significant
>>compared to the element length.
>
>
>
>Welcome to real world. If you want to read more about the loading coil
>controversy, go to my web page www.K3BU.us and snoop around ARTICLES, you will
>get the picture. Eznec doesn't understand real coils, you can try to substitute
>the coil with hairpin stub of the same inductance for modeling.
>
>With 450 MHz dipole you will "research" this subject faster by taking piece of
>wire or tubing, make about 3 turns in the middle, put the dipole up, measure
>the resonant frequency and then snip the ends untill you get it where you want
>it. Fine tuning can be done by squeezing or expanding the coil turns.
>
>To make it more efficient, you can just bend the ends 90 deg. in L or T shape,
>instead of using coils.
>
>Yuri, K3BU.us

1332. Re: Power cable routing, Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 09:55:59 UTC
From: Nitespark <nitespark@h8spam.cox.net>
Message-ID: <MK5ic.37623$fq4.19125@lakeread05>
Source record: 96083
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

JLB wrote:

> Well, he also mentioned the possibility of poking a hole in the steering
> column boot. That may not be too bad, as there seems to be a lot of room
> there.
>

I have done that and that is not a bad method as long as you don't get too close to the steering column or the other edge. When I used that method it is, "inspect, measure, reinspect, remeasure, re-reinspect, re-remeasure" to make certain I am not getting into anything on the other side of the bushing or getting too close to the column or the firewall.

--
One lawyer can steal more than a hundred men with guns.

1333. Re: Dipole Length Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 09:57:49 UTC
From: Robert Kole <user@local.net>
Message-ID: <c6apat$2ica$1@news.wplus.net>
Source record: 96084

>In article <2145-40882621-293@storefull-3251.bay.webtv.net>, Richard
>Harrison wrote:

[snip]

> The tip-to-tip length of a dipole need not be adjusted for feedline
> spacing.

Looking at graphs of how the waves form on the wire, that's what
I was thinking. But illustrations like the uppermost one on:
http://www.astrosurf.com/lombry/qsl-g5rv-2.htm
had me confused. I guess it's just wrong.

1334. Anecdata: was Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 10:19:29 UTC
From: David J Windisch <davidw@copper.net>
Message-ID: <4088edfd_4@newsfeed.slurp.net>
Source record: 96085

Hi, all concerned:

Here's some anecdata (sic) ... :

OUAT, after reading something some where about the Lattin Labs antenna, I
put an 8-ft stub on the side of a 33-ft verticaloverlotsaradials.

I got a "new" indication of low-Z near 10M which wasn't there B4, to go
along with the 40M low-Z reading.

Received noise on 10M went up, from a well-defined nearby source, suggesting
that the el pattern might have come down some.

I moved the stub nearer the top, and found what I remember as a 3/4-wave
low-Z indication on 10M.

I think the KT-XX series of "diametrically opposed designs" use this method
of multibanding, as well.

Might even try this anecdata in Roy's Toy3, to see if its gui-ed
algorithm-ized academic mumblings prove this scandalous anecdata.

Shucks, if it can't be modeled, it can't be made to happen ;o)

Right?

73, Dave, N3HE

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:mbog80l60r8kkgsbbe1158ushct7k6e5e2@4ax.com...
> On 22 Apr 2004 07:19:37 -0700, N2EY@AOL.COM (N2EY) wrote:
>
> >> Like I said, I've done some measures and added a dozen more since.
> >> The results are interesting. I can come up with a four band antenna
> >> without too much trouble; however, getting those bands into Ham
> >> regions (all of them) is another matter. I can do this with a simple
> >> run of twin lead, and one strategically placed short between them.
> >
> >Which is not what Lattin did at all. Your design sounds far superior.
> >Is it on the web anywhere?
>
> Hi Jim,
>
> You should take care with my perverse generalizations, especially when
> you follow it with:

BIGSNIP

>
> Frankly, the Lattin has yet to prove to me that the notion of a
> longitudinal stub as "trap" really holds any water. I've seen the
> same "theory" applied to diametrically opposed designs. It is
> pleasing to the arm-chair designer to mutter these ideas, but these
> so-called streamers needed to make it work just yell foul on every
> street corner. It is an ad-hoc design draped with academic mumblings
> to lend it the appearance of legitimacy.
>
> To extend my quote above, I have added yet another dozen measurements
> to have nailed down patterns that emerged with the basis of a
> consistent building paradigm (yeah, I know, gobbldygook). I seek to
> generalize such claims as the Lattin makes and reduce them to a
> practical minimum that are robust and repeatable. This is not to say
> entirely useful, nor optimal.
>
> I did the same thing with the fractal with 300 or more measurements
> and reduced that junk science to a simple observation: you can push
> more resonances into a length of wire, the more you kink it. Useful?
> The test of time has shown that no one has made any money from those
> same published 300 pages - why would I expect the Lattin to emerge
> from 5 decades of neglect to eclipse that record? Frankly, the Lattin
> simply confirms this simple observation, but is more controlled. It
> may mature to a more repeatable design, but I doubt its inventor would
> recognize it.
>
> 73's
> Richard Clark, KB7QHC

1335. Re: Power cable routing, Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 13:00:27 UTC
From: clint <c_moore_77@bluesky.net>
Message-ID: <4089136A.D0DE07F3@bluesky.net>
Source record: 96086
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

Hi,

Good info, just like to add this tip:

Most cars the hood release cable runs past the battery on the way to the
hood latch up front.

You can run your cables along the same route, throught the firewall
with the hood release cable.

73

1336. ANN --- NEW design ARM BOARD with JTAG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 14:41:07 UTC
From: ARM MCU DEVELOPEMENT <nospamail@no_email.com>
Message-ID: <c6ba4l$dqc396@imsp212.netvigator.com>
Source record: 95936
Cross-posted to: alt.ham-radio.packet,alt.radio.scanner.uk,rec.radio.amateur.antenna

please find the new design board at

http://arm.web7days.com

the arm board is equipped with JTAG and ready for shipment.

---

mcu arm development team

http://arm.web7days.com

1337. Re: Dipole Length Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 16:01:35 UTC
From: richardharrison@webtv.net
Message-ID: <10887-40893DDF-77@storefull-3251.bay.webtv.net>
Source record: 96087

Robert Kole provided a link to a G5RV antenna attachment from astrosurf.com. I enjoyed reading the attachment but I believe it questionable when it says:

"---erect the antenna at an average height of about 10.35m (34 ft), which happens to be the optimum efficiency on 160, 80 and 40m bands for any horizontal type antenna"

"In practice few amateurs install masts of the optimum height on 80 or 40m, and certainly not on 160 meters."

I agree that often amateurs are limited to low mast heights, but not being able to reach the heights needed (1/2-wave which eliminates energy waste directly overhead) doesn`t make a lowered antenna optimum, just feasible.

Best regards, Richard Harrison, KB5WZI

1338. Re: Element Design with Loading Coils

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 16:38:23 UTC
From: richardharrison@webtv.net
Message-ID: <4083-4089467F-38@storefull-3252.bay.webtv.net>
Source record: 96088

Mike, ZL1BNB wrote:
"I`ve got a simple UHF return loss bridge and a counter.

What else do I need?"

To measure the resonant frequency of the 450 MHz dipole, you need an appropriate variable frequency signal source.

Return loss is the difference between incident and reflected powers at the antenna. At resonance, antenna reactances cancel removing a large impediment to power acceptance by your antenna.

Energy absorbed by the antenna is not reflected back toward the signal source so you have the greatest difference between incident and reflected powers near resonance (greatest return loss).

Best regards, Richard Harrison, KB5WZI

1339. Ladder line question ????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 16:41:17 UTC
From: Bob <nubob5001@yahoo.com>
Message-ID: <XNbic.794$_12.783@read1.cgocable.net>
Source record: 96089

I have the 50 foot tower, it is right outside the shack window, so will be drilling the two small holes in the sill, then fishing through approximately 12" or 18" then replace the spacers to keep the distance between the leads constant. That leaves the remaining 98 feet outside of which I need a distance of approx 35 or 40 feet of the ladder line to reach my center fed 80m or two wires 66feet each leg. What are my options with the left over 50 feet (approx) of ladder line? Coil it up? Cut it? And what are the rules about keeping the ladder line away from the tower and steal guy wires that are not insulated? I only want to do this once now and first time using the ladder line, all suggestions appreciated, thanks.....

1340. Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 16:48:40 UTC
From: arrow146@aol.com
Message-ID: <20040423124840.02695.00000175@mb-m21.aol.com>
Source record: 96090

Who writes VIRUS programs ?
Who makes a profit from it ?

Any chance it could be those who sell the ANTI VIRUS software ?
Just a thought!!

73 Al Lowe N0IMW

1341. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 17:01:40 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0404230901.2ae36c90@posting.google.com>
Source record: 96091

I've recently done some NEC-2 (MultiNEC) modeling of folded dipoles which might help answer some of your questions. Translating the results to folded monoploes should be fairly straightforward.

The model is a half-wave folded dipole for 14.2 MHz in freespace, resonant at 33.15 feet using #18 wire with 2 inch spacing. The center-fed input impedance is 289 - j0.01, which is 4 times the resonant impedance of 72 ohms for a conventional dipole. A folded 1/4-wavelength monopole would have half that impedance, or about 144 ohms.

Examining the R-X curves for this dipole shows that it has characteristics very similar to a 3/2-wavelength dipole, operating at its third harmonic, and on a relatively low-slope part of the curves, indicating a low Q and good bandwidth, similar to a fat dipole.

Shortening the antenna increases capacitive reactance, as might be expected. However, input resistance *increases* as the length decreases, which is contrary to our experience with common 1/2-wavelength dipoles. This is because we're on the high side of full-wave resonance, where very high resistance values exist at its peak. As we shorten the antenna, we're climbing the full-wave resistance curve, which peaks when the antenna length is 22 feet. If we further shorten the antenna past full-wave resonance, we now begin experiencing a "normal" decrease in resistance as we "slide" back down the low side of the full-wave resistance spike. However, capacitive reactance has now quickly changed to inductive reactance as we crossed full-wave resonance.

If we continue to shorten the folded antenna length, we come to a length of about 17 feet where the input impedance is 50 + j2000 ohms. Notice that the impedance is *inductive*, not capacitive as we are accustomed to seeing with ordinary short dipoles. The inductive 2000 ohms can be cancelled with a series capacitor (or other suitable matching network). Q has increased (because we're on a relatively steep part of the R-X curves) and bandwidth has narrowed considerably from the resonance at 33.15 feet.

So, by reducing the length of the 1/2-wavelength folded dipole from 33.15 feet to 17 feet, we have a 50 ohm resistive impedance by matching the inductive reactance with a capacitor (or split capacitor) instead of the usual lossy, low-Q loading coils. Gain and patterns appear to be the same as a conventional dipole.

Translated to a monopole, the length would be a little more than half the dipole's 17 feet, to boost feed point resistance from 25 ohms to

50 ohms. My guess is (I haven't modeled it) that this antenna
functions much like a 3/8-wavelength monopole, although much shorter.
Actually building this antenna and placing it the real world will
obviously change the above values.

Unfortunately, it doesn't appear that any combination of element size
and spacing will offset the need for impedance matching with the
shortened folded dipole or monopole.

I hope this makes sense. I'm sure Roy, Cecil, Tom, and others might
have comments/corrections that will be helpful to me and others who
are relative neophytes in the wonderful world of antennas.

Al WA4GKQ

> Even better, is there some choice of the folded section wire diameters and
> spacing that will give an inductance that will exactly offset the
> capacitance due to shortness? So, then, is there a folded monopole of such
> dimensions that the resistance is 50 Ohms (due to being shorter than 1/4
> wave) with no terminal reactance (due to the inductive design of the
> "transmission line" cancelled by the shortness of the antenna's
> capacitance)?

1342. Re: Anecdata: was Re: Lattin antenna.....more info sources.....experiences

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 17:03:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <csii80dh9ce5jgtqekvhk9s3o9dnjb5alf@4ax.com>
Source record: 96092

On Fri, 23 Apr 2004 06:19:29 -0400, "David J Windisch"
<davidw@copper.net> wrote:
>Shucks, if it can't be modeled, it can't be made to happen ;o)
>
>Right?

Hi Dave,

More the issue is if it can be made to happen, and it can't be modeled
- what happened? [After that we can then stare at our navels and ask
"what is IT?"]

73's
Richard Clark, KB7QHC

1343. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 17:54:51 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c6bl9bqq1@hercules.btinternet.com>
Source record: 96093

Anything which increases traffic volume benefits Internet service providers.

==========

> Who writes VIRUS programs ?
> Who makes a profit from it ?
>
> Any chance it could be those who sell the ANTI VIRUS software ?
> Just a thought!!
>
> 73 Al Lowe N0IMW

1344. A Lattinate Design

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 18:04:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kgji80l1s78olc0se2uns9eruf4bmf8dak@4ax.com>
Source record: 96094

Hello Fans of the Lattin persuasion,

This is a tickler design to show how little is required to come up
with similar claims of multiband operation.

First a description of the radiator:
1. 18 meters tall;
2. two #12 wires separated by 10cM;
3. wire 1 fed against Real/MININEC ground of medium characteristics;
4. wire 2 trimmed 10cM away from ground (shorter, then, than wire 1);
5. wire 1 and 2 connected with 10cM lead, 5.4 meters above ground.

3.7MHz 30 + j3 0.28dBi @ 25ï¿½
10.5MHz 70 + j7 1.34dBi @ 15ï¿½
21.4MHz 103 - j6 5.85dBi @ 55ï¿½
28.8MHz 69 + j2 6.54dBi @ 65ï¿½

If this were developed as a horizontal, it would exhibit more Z, but
the gain figures would be more useful (and certainly higher than a
Lattin design).

I would note, with some of Roy's proviso's observed, this antenna was
derived from fundamental measurements from a suite of tests, and then
scaled to this design. Scaling worked as well as expected.

I would forecast that 20M could be brought in by changing the short to
7 meters above ground (80M would lower a bit; 15M would be iffy; and
10M lost)

73's
Richard Clark, KB7QHC

1345. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 18:06:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tmmi80lq33hb7kj4kb93r8dksrvl1j4cdl@4ax.com>
Source record: 96095

On 23 Apr 2004 16:48:40 GMT, arrow146@aol.com (Arrow146) wrote:

>Who writes VIRUS programs ?

High School kids mostly (or their emotional equivalent).

>Who makes a profit from it ?

Big ego boost - money can't buy that.
>
>Any chance it could be those who sell the ANTI VIRUS software ?
>Just a thought!!

They can't afford to pay teenagers to do it.

1346. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 18:17:06 UTC
From: dplatt@radagast.org
Message-ID: <108ind2gjkrto73@corp.supernews.com>
Source record: 96096

In article <20040423124840.02695.00000175@mb-m21.aol.com>,
Arrow146 <arrow146@aol.com> wrote:

>Who writes VIRUS programs ?
>Who makes a profit from it ?
>
>Any chance it could be those who sell the ANTI VIRUS software ?
>Just a thought!!

That thought has been raised by numerous people, over the past couple of decades (ever since MS-DOS viruses began to be a significant problem).

I've never heard anyone put forth *any* credible evidence at all, which indicated that the commercial anti-virus-software companies or programmers had had anything to do with writing or releasing the viruses.

Based on what I can see, the motives behind virus and trojanwriting are:

- Ego and bragging rights. Releasing a virus which spreads widely and gets a lot of visibility in the press provides the author(s) with a sense of importance.

At the moment, there seems to be an ongoing battle between the authors of two or three of the currently-most-active virus/worm families. They're actually releasing viruses or worms which [1] contain code to identify, and remove their rivals' viruses, and [2] contain bragging "We're the best, they're all losers!" statements embedded in the code.

- Spamming ability. Quite a few of the more recent viruses, worms, and trojan horses contain software which installs specialized email-processing software and web/email/TCP proxy servers. A large percentage (half or more, I've heard) of the spam flooding the Internet is now being sent through home PCs on DSL and cable-modem networks, which have been compromised by these viruses. Previous spam-fighting efforts had succeeded in shutting down many of the open email relays, and poorly-installed open proxy servers that the spammers had been abusing, and it's widely believed that major spam-gangs have commissioned virus-authors to implement these viral mail relays. The motive, in this case, is profit: spammers can flood millions of people with spam at almost no cost, and even a handful of sales can earn them enough money to be worth the effort.

--
Dave Platt <dplatt@radagast.org> AE6EO

Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1347. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 18:20:08 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6bmor0e3r@enews1.newsguy.com>
Source record: 96097

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:2147-4088C3D1-37@storefull-3251.bay.webtv.net...
> The other John Smith wrote:
> "They tell me that shortening the antenna (folded monopole) below
> resonance will lower the resistance and introduce capacitance."
>
> I believe that is only half right. A too-short (less than
> 1/4-wavelength) antenna worked against a ground plane will have a lower
> resistance than a 1/4-wave antenna. But, unlike the open-circuit less
> than 1/4-wave whip, which has a series capacitive reactance, folding the
> too-short element not only transforms its resistance to a higher value,
> it reverses the sign of the input reactance. The too-short folded
> monopole has a series inductive reactance.
>
> Just like the shunt-fed grounded tower antenna, the inductance can be
> tuned out with only a simple series variable capacitor, not an inductor
> as is required with a too-short whip. See Fig 19, page 6-10 of the ARRL
> Antenna Book, 19th edition for an example of a shunt-fed tower capacitor
> tuning arrangement. The shunt-feed arrangement makes a too-small loop
> just as a short folded monopole does.
>
> Q of the folded monopole is lower than a whip because the folded antenna
> is fatter. This gives more bandwidth.
>
> Best regards, Richard Harrison, KB5WZI
>

Yes, I now understand. I mistakenly said shortening the length of a
non-folded monopole lowers resistance and raises capacitance. I have done
some modeling in EZNEC and with a Smith chart as Roy Lewallen suggested and
learned a great deal. I would have done this earlier, but I didn't know I
could do it the way Roy said.

Thanks to all respondents, and to you two in particular.

John

1348. BANNED Survivor Pics (sxBUSHES3.) 6689

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 19:37:58 UTC
From: rzdvgg@tv.com
Message-ID: <c6bram$v9i$8@news.loxinfo.co.th>
Source record: 96098
Body handling: Inline uuencoded payload not displayed:
C:\AAA-Data\WebSites\XSites\Zpromo\NEWS\Headers\Pics\Pic3\arrow3.gif

Ever Wondered What Happens When the Cameras
are not On During Survivor or Temptations Island ?

Curious About What Happens Behind Closeed Doors
On Big Brother or American Idol?

You Know Crazy, Wild and even Obscene things Happen!

The Networks Dont Want you to See This!!!!
BUT WE SHOW IT TO YOU!!!

---> http://tinyurl.com/2a634 <---

BECAUSE THE CAMERA WERE ROLLING the Shots just got
BANNED or CENCORED but we Have the SECRETS from REALITY TV

This is for real You Know You Want to See It!

More Erotic Than Temptation Island
Beyong BigBrother
Sexior than Survivor
Better than the Bachelor
Raunchier than The Amazing Race

Nasty Obscene, erotic, dirty, insestuous, gross, indecent,
sleezy, impure, wild, erotic, pornographic, smutty,
risque, sensual, sexy.....
YOU NAME IT - THEY DID IT
ADD WE HAVE THE PROOF

---> http://thbgnwphs.nom.vg/ <---

The Contestants Did it all and the NetWorks Couldnt
Show it, it was Banned, Cencored there Secret
Now we show you what they were doing!!!!

Fetishes, Lingere, Lesbianism, Bi Sexual Experiments,
Foot Fetishes, FORCED SEX, Cross Dressing, Swinging,
jacuzzi group sex, threesomes, hi heels, rubber,
Whatever turns you on - they did it while they
thought no one was watching.

The Real Private Secrets from, Survivor, Bachelor,
Bachelorette, Temptation Island, Mole, Joe Millionare

Contestants caught naked, stripping, playing, sucking, fucking

Did you know some contestants were lesbians some were sluts, On one show a chick gave everyone a blowjob including the camera MEN!!!!

Behind Closed doors, in changing rooms, dressing rooms, in the bushes, private sets, closets, showers, lakes, all sorts of places they thought the cameras were not around, BUT THEY WERE and WE GOT THE SHOTS!!!!!

asdfasdf

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[Inline uuencoded payload not displayed:
C:\AAA-Data\WebSites\XSites\Zpromo\NEWS\Headers\Pics\Pic3\arrow3.gif]

`

end

1349. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 20:06:33 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0404231206.79a20f4b@posting.google.com>
Source record: 96099

raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote in message news:<4087e04c.485003421@news.galilei.com>...
> Hi Slick
>
> There does NOT have to be an electrical connection at all.
> You can use lamps that have the leads broken off completely and it
> works just fine.
>

Oh yeah, like the tesla coil-flourescent light trick.

Ok, but will the neon lights be able to show you the high voltage nodes and the high current nodes on the antenna, depending on their location along the antenna? Is the brightness of the neon proportional to the RMS voltage?

Or is the brightness only proportional to the effective radiated power?

Slick

1350. Re: 1/4 wave mag mount ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 21:03:07 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c6c0e6$bv9$1@newshost.mot.com>
Source record: 96100

"K9SQG" <k9sqg@aol.com> wrote in message
news:20040422225836.20241.00000281@mb-m29.aol.com...
> Well, it depends. The antenna does not need a DC ground path to work
well.
> Inductive/capacitive coupling to an adjacent metal surface is generally
> adequate. But there are so many installation specific issues that it is
not a
> simple answer. However, most people are unaware that one of the best
antennas
> for 2m is a 1/4 whip in the center of the roof. At highway speeds, the
5/8
> whip bends over and distorts the pattern and causes a null in the forward
> hemisphere. For stationary instances, the gain antennas may indeed offer
gain
> over the 1/4 wave. Just some thoughts...
> 73s,
> Evan

There is a significant amount of capacitance between the base of the magnet mount and the roof. Some mag mounts have special arrangements of conductive material, sometimes a foil which is on the bottom and is (usually) insulated by a thin plastic membrane. This provides a low impedance or Capacitive reactance to the roof at the base of the antenna and therefore is effectively an AC ground as far as the antenna is concerned. I have often wanted to measure it, but haven't yet. The ground through the coax, rig and negative power lead is completely irrelevant for the RF. This is because the distance along this path presents a significant impedance (without going into too much detail) and should be considered, for all intents, an open circuit at RF.
My 5/8 MFJ has surprisingly little wind induced bend at the kind of high speeds I travel (60 mph). Thicker whip sections are better in this regard.

--
Steve N, K,9;d, c. i My email has no u's.

1351. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 21:12:45 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c6c109$c0m$1@newshost.mot.com>
Source record: 96101

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40872b1a$1_7@corp.newsgroups.com...
> David.Shrader wrote:
> > If it's a closed tube then the length does not change with angle.
>
> I may be wrong, cuz I'm not very mechanical, but it seems to me
> that a column of mercury in a tube with a vacuum at the top
> and a reservoir of mercury at the bottom would change height
> of column depending on the angle of the column's deviation from
> vertical. It seems to me that when the column is horizontal,
> there would be no vacuum at all in the tube.
> --
> 73, Cecil http://www.qsl.net/w5dxp

It s good thing you clarified that you were taklking about the "barometer"
configuration. Sounds messy to me.

--
Steve N, K,9;d, c. i My email has no u's.

1352. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 23:19:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108j94ibv24cv45@corp.supernews.com>
Source record: 96102

Modeling a 17 foot folded dipole made from copper #18 wire spaced at 2 inches at 14.2 MHz with EZNEC shows a feedpoint impedance of 46.1 + j1893 ohms. This can be resonated, as Richard Harrison recently pointed out, with a series capacitor. There's no free lunch, though -- at 1 kW, the voltage across the capacitor is almost 9000 V RMS (about 12,000 volts peak), and even at 10 watts, it's almost 900 volts RMS. Besides concerns about arcing, you'd have to make sure the insulation across the capacitor is very good, since even a very small leakage current will cause significant loss. And you end up with a fairly narrow-banded antenna, with the 2:1 SWR bandwidth of about 130 kHz. The loss due to finite wire conductivity is 1.9 dB, which might or might not be acceptable, depending on the particular use. Increasing the wire size will reduce the loss, but also the bandwidth -- introducing loss nearly always improves bandwidth, so reducing it narrows the bandwidth. Without wire loss, and assuming the resulting 29 ohm feedpoint impedance is transformed to 50 ohms, the 2:1 SWR bandwidth becomes 80 kHz. Like a great number of variations, this antenna would surely be useful to some people in some situations, and might well be better than some other alternatives. But here's an antenna rule you can take to the bank: Small--broad band--efficient, choose any two. Any time either a modeling program or an antenna inventor or seller tell you any different, you should be very, very skeptical.

Roy Lewallen, W7EL

alhearn wrote:
> I've recently done some NEC-2 (MultiNEC) modeling of folded dipoles
> which might help answer some of your questions. Translating the
> results to folded monoploes should be fairly straightforward.
>
> The model is a half-wave folded dipole for 14.2 MHz in freespace,
> resonant at 33.15 feet using #18 wire with 2 inch spacing. The
> center-fed input impedance is 289 - j0.01, which is 4 times the
> resonant impedance of 72 ohms for a conventional dipole. A folded
> 1/4-wavelength monopole would have half that impedance, or about 144
> ohms.
>
> Examining the R-X curves for this dipole shows that it has
> characteristics very similar to a 3/2-wavelength dipole, operating at
> its third harmonic, and on a relatively low-slope part of the curves,
> indicating a low Q and good bandwidth, similar to a fat dipole.
>
> Shortening the antenna increases capacitive reactance, as might be
> expected. However, input resistance *increases* as the length
> decreases, which is contrary to our experience with common

> 1/2-wavelength dipoles. This is because we're on the high side of
> full-wave resonance, where very high resistance values exist at its
> peak. As we shorten the antenna, we're climbing the full-wave
> resistance curve, which peaks when the antenna length is 22 feet. If
> we further shorten the antenna past full-wave resonance, we now begin
> experiencing a "normal" decrease in resistance as we "slide" back down
> the low side of the full-wave resistance spike. However, capacitive
> reactance has now quickly changed to inductive reactance as we crossed
> full-wave resonance.
>
> If we continue to shorten the folded antenna length, we come to a
> length of about 17 feet where the input impedance is 50 + j2000 ohms.
> Notice that the impedance is *inductive*, not capacitive as we are
> accustomed to seeing with ordinary short dipoles. The inductive 2000
> ohms can be cancelled with a series capacitor (or other suitable
> matching network). Q has increased (because we're on a relatively
> steep part of the R-X curves) and bandwidth has narrowed considerably
> from the resonance at 33.15 feet.
>
> So, by reducing the length of the 1/2-wavelength folded dipole from
> 33.15 feet to 17 feet, we have a 50 ohm resistive impedance by
> matching the inductive reactance with a capacitor (or split capacitor)
> instead of the usual lossy, low-Q loading coils. Gain and patterns
> appear to be the same as a conventional dipole.
>
> Translated to a monopole, the length would be a little more than half
> the dipole's 17 feet, to boost feed point resistance from 25 ohms to
> 50 ohms. My guess is (I haven't modeled it) that this antenna
> functions much like a 3/8-wavelength monopole, although much shorter.
> Actually building this antenna and placing it the real world will
> obviously change the above values.
>
> Unfortunately, it doesn't appear that any combination of element size
> and spacing will offset the need for impedance matching with the
> shortened folded dipole or monopole.
>
> I hope this makes sense. I'm sure Roy, Cecil, Tom, and others might
> have comments/corrections that will be helpful to me and others who
> are relative neophytes in the wonderful world of antennas.
>
> Al WA4GKQ

1353. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 23:33:02 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <4089a7b9$0$433$5cbedd26@news.real-time.com>
Source record: 96103

Nope, absolutely incorrect. I work at an ISP, and with very few
exceptions, we get the same money regardless of the traffic. It is
therefore in our best interest to minimize traffic. This is a cutthroat
business, and no one can raise prices without losing customers.

tom
K0TAR

Reg Edwards wrote:

> Anything which increases traffic volume benefits Internet service providers.
>
> ====================================

1354. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-23 23:39:21 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <4089a929$1@news.vallnet.com>
Source record: 96104

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c6bl9bqq1@hercules.btinternet.com...
> Anything which increases traffic volume benefits Internet service
providers.
>
Uhm no... If a normal customer is using more bandwidth (receiving and
sending more email, committing virus controlled DDoS attacks, etc) Internet
service providers LOSE MONEY. They pay by the byte, you don't. Most
customers pay a flat fee for internet access. This is true of most Cable,
DSL, ISDN, and Dial-up setups... they are priced based on an expectation of
'normal' usage, and the ISP loses money in 'extreme' usage cases. Why I (a
'power user') get nasty emails from ISP's and have to switch often.... this
one is good about that though.

1355. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 00:03:39 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <4089aee6$0$433$5cbedd26@news.real-time.com>
Source record: 96105

Close, but not quite.

An ISP will buy pipes, such as a DS3 that does 45Mbps, for a flat rate per month. Theoretically the upstream provider doesn't care if 1 bps or 45 Mbps are passing through that pipe; from a billing perspective, they get the same money. But they have to play the statistical game on how much upstream pipe that they need to handle all the 45Mbps pipes they sold to ISPs like you. And eventually you get to the backbone providers, who have really really big pipes, and very expensive routers.

This "power user" thing is something I've never heard anyone in the business speak of, so I have no idea why you would get bumped. If you are not breaking the TOS agreement, ISPs don't care a rat's rear end how much traffic you generate. You buy a pipe from the ISP and you have every right to fill it if you can. The only exception to that would be that you have a maximum number of hours or bytes per month. They won't kick you if you exceed it, they just charge you an additional amount that you agreed to in your contract with them. Some ISPs may do it a bit differently, but that's fairly normal in the industry.

tom
K0TAR

Tyas_MT wrote:

> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> news:c6bl9bqq1@hercules.btinternet.com...
>
>>Anything which increases traffic volume benefits Internet service
>
> providers.
>
> Uhm no... If a normal customer is using more bandwidth (receiving and
> sending more email, committing virus controlled DDoS attacks, etc) Internet
> service providers LOSE MONEY. They pay by the byte, you don't. Most
> customers pay a flat fee for internet access. This is true of most Cable,
> DSL, ISDN, and Dial-up setups... they are priced based on an expectation of
> 'normal' usage, and the ISP loses money in 'extreme' usage cases. Why I (a
> 'power user') get nasty emails from ISP's and have to switch often.... this
> one is good about that though.
>
>

1356. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 00:27:16 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <4089b465$0$439$5cbedd26@news.real-time.com>
Source record: 96106

And I forgot to mention that almost all our customers are of the
unlimited type, so we don't don't monitor their traffic rate, or amount.

tom
K0TAR

Tom Ring wrote:

> Close, but not quite.
>
> An ISP will buy pipes, such as a DS3 that does 45Mbps, for a flat rate
> per month. Theoretically the upstream provider doesn't care if 1 bps or
> 45 Mbps are passing through that pipe; from a billing perspective, they
> get the same money. But they have to play the statistical game on how
> much upstream pipe that they need to handle all the 45Mbps pipes they
> sold to ISPs like you. And eventually you get to the backbone
> providers, who have really really big pipes, and very expensive routers.
>
> This "power user" thing is something I've never heard anyone in the
> business speak of, so I have no idea why you would get bumped. If you
> are not breaking the TOS agreement, ISPs don't care a rat's rear end how
> much traffic you generate. You buy a pipe from the ISP and you have
> every right to fill it if you can. The only exception to that would be
> that you have a maximum number of hours or bytes per month. They won't
> kick you if you exceed it, they just charge you an additional amount
> that you agreed to in your contract with them. Some ISPs may do it a
> bit differently, but that's fairly normal in the industry.
>
> tom
> K0TAR
>

1357. Re: Ladder line question ????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 00:33:04 UTC
From: k9sqg@aol.com
Message-ID: <20040423203304.25300.00000100@mb-m22.aol.com>
Source record: 96107

Well, all I can do is relate my experiences, which don't totally agree with theory.

The spacing between the wires entering the home is not critical. I have two feedthroughs for my open wire line, 450 ohm, where the spacing goes out to about 8" for 3 feet. I could measure NO change in the SWR as a result of that spacing for that distance on my SWR meters (Drake W4, Autek WM-1, and Nye Viking MBVA).

Further, in a previous location, I noticed no change in SWR when the ladder line was laid on top of a flourescent light fixture for 2 feet.

In general, it is best to cut off that excess feedline, but, in some cases adding a little back in can help with problem SWRs on some bands. With a reasonable antenna tuner (Johnson Matchbox, double balanced tuner, link coupled tuner, etc.) you should still be able to tune it in most cases.

Finally, I've made 90 deg , sharp bends with the ladder line and could detect no change in SWR.

I always listen to theory, wives tales, but give some credibility to acutal measurements as well.

73s,

Evan

1358. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 01:57:30 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <c6chh7$64e$1@news.oregonstate.edu>
Source record: 96109

Tom Ring <tarnews@taring.org> wrote:
> This "power user" thing is something I've never heard anyone in the
> business speak of, so I have no idea why you would get bumped. If you
> are not breaking the TOS agreement, ISPs don't care a rat's rear end how
> much traffic you generate. You buy a pipe from the ISP and you have
> every right to fill it if you can.

Yes, and the ISP has the right to simply stop offering you service as well.

BTW, the same thing happens with cell phone usage... many plans now have 'unlimited minutes,' but in actuality your usage is tracked and people who use far, FAR more minutes than the average are usually sent warnings letters or politely told that the provider no longer wishes to offer them service.

1359. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 01:58:48 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <c6chjl$64t$1@news.oregonstate.edu>
Source record: 96108

Tom Ring <tarnews@taring.org> wrote:
> And I forgot to mention that almost all our customers are of the
> unlimited type, so we don't don't monitor their traffic rate, or amount.

Are you offering dial-up service only, or cable modem/DSL services?

Where I live, cable modem users get well over a megabit per second of bandwidth, and someone filling that connection 24 hours a day is going to make a noticeable mark in the ISP's overall bandwidth usage.

1360. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 02:34:30 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <4089d243$0$431$5cbedd26@news.real-time.com>
Source record: 96110

DSL, dialup, T1, locally connected ethernet, wireless, P2P high speed
wireless.

And if they are doing a long term average of 1Mbps, they are very likely
breaking the TOS or have a virus or are doing file trading. Most people
just can't use that much as an average, and average is the important
word. I use a ton of bandwidth compared to a lot of people, but my long
term average is well below 50Kbps.

We manage a dormitory which is mostly grad students, and the people who
use large bandwidth are mostly file traders. These people can be
assigned to 2 groups - those who actively trade, and those who installed
a file trading program, used it and think they disabled it. Guess what,
many aren't disabled when you disable them. They may still search for
peers, and may also still run as an upload/download point even though
the computer owner thinks it's disabled. I deal with this once or twice
per week on a dorm with about 300 users.

Uninfected, non-file trading users average less than 10Kbps in/out even
though their connection is "free".

And 1Mbps sustained is fairly trivial and normal. It gets missed all
the time, at least for a while. Unfortunately it gets lost in the noise
until someone looks at ALL the MRTG graphs. And again, it may be
perfectly ok, not violating the TOS. Inwhich case all the ISP can do is
call the customer and make ask them to check for a virus. And maybe not
even that, depending on the fed and state laws.

tom
K0TAR

Joel Kolstad wrote:

> Tom Ring <tarnews@taring.org> wrote:
>
>>And I forgot to mention that almost all our customers are of the
>>unlimited type, so we don't don't monitor their traffic rate, or amount.
>
>
> Are you offering dial-up service only, or cable modem/DSL services?
>
> Where I live, cable modem users get well over a megabit per second of
> bandwidth, and someone filling that connection 24 hours a day is going to
> make a noticeable mark in the ISP's overall bandwidth usage.
>
>

1361. End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 03:01:05 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6cl9j01jrq@enews1.newsguy.com>
Source record: 96111

To achieve resonance, non-folded dipoles/monopoles must be cut slightly less than 1/2 or 1/4 wave due to "end effect", so I've read. EZNEC agrees.

Is this true for the folded dipole/monopole?

Thanks,
John

1362. Re: Ladder line question ????

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 03:54:21 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <4089E4ED.D01B6E5@cwis.net>
Source record: 96112

Bob,
Keeping the spacing of the ladder line going through a sill
is sort of a waste of time. Make the spacing whatever is
convenient, since what is between the conductors will change
the impedance from whatever it normally is, anyway. As long as
it isn't for a very long stretch of feed line, it isn't going
to make much difference.
Keeping the ladder line away from metal objects about 3 or
4 times the width of the ladder line (what's that, about 4 to
6 inches give or take a little?).
Coiling up ladder line isn't a very good idea. If you have
any extra, cut it off and save it for later. The length of the
feed line can make a difference in the tuner's ability to get a
match at some frequencies. So, try it with just enough to reach
and if that is a problem, add a little more. You will
eventually
find a 'right' length for the particular bands you want to use
(if
you use the antenna on more than one band).
Playing with antennas is almost never a "do it one time and
forget
it" kinda thing. That's half the 'fun' of playing with
antennas...
'Doc

1363. Re: 1/4 wave mag mount ground?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 04:29:42 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404232029.2600b35b@posting.google.com>
Source record: 96113

"The Masked Marvel" <s_crook_remove_underbars_@comcast.net> wrote in message news:<1g%hc.5154$0u6.1124791@attbi_s03>...
> With a regular 1/4 wave (or 5/8) mobile whip (VHF and/or UHF) the coax
> normally is grounded to the sheetmetal to form the ground plane -- but a mag
> mount lacks the ground at the antenna end of the shield, though hopefully
> the metal of the body is ultimately connected to the transmitter chassis and
> coax braid (assumes ground braids for trunk lids etc. for rear deck lid
> mounts), so is there a significant performance penalty for the mag mount vs
> the same whip on a grounded base at the same location?

There was some difference in one case where I had the chance to compare. I once had a larson 5/8 mag mount on the center of the roof. You know the common model with the black box looking mag mount... It always seemed to work pretty well as a mag mount, but eventually I tore it up by knocking it off the car once too many times...So I had to ditch the mag mount, and drill a hole and do a hole mount. Did it make a difference? Yes. Quite a bit actually. It was quite noticable anyway...I found the hole mount was superior. But I still like mag mounts...It's nice being able to slap it on any car you are in. But on my truck, I have a hole mount right in the center of the roof of the cab. At the moment, I only have a homebrew 2m 1/4 wave whip on it...I don't work a heck of a lot of 2m mobile, but I do want the antenna there ready if needed.. MK

1364. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 04:32:48 UTC
From: richardharrison@webtv.net
Message-ID: <10887-4089EDF0-172@storefull-3251.bay.webtv.net>
Source record: 96114

Roy Lewallen wrote:
"Modeling a 17 foot folded dipole made from copper #18 wire spaced at 2 inches at 14.2 MHz with EZNEC shows a feedpoint impedance of 46.1 + j1893. This can be resonated as Richard Harrison recently pointed out with a series capacitor. There`s no free lunch though---at 1kW, the voltage across the capacitor is almost 9000 V RMS (about 12000 volts peak) and even at 10 watts its almost 900 volts RMS.

I agree that at 1KW input to Roy`s folded dipole the power-correction capacitor has 8466 volts across it. That`s close enough to 9 KV for me.

No single antenna fits all applications and alterations may adapt an antenna for more than one application.

Antennas have a voltage to current ratio (Zo) which is a function of position along along the conductor. Zo is also a function of conductor length to diameter ratio. Fat wires have lower Zo than do thin wires. Low Zo means low voltage (relatively).

Also spacing the folded antenna conductors farther apart lowers impedance and Q. This helps bandwidth.

Raising the current by lowering Zo is no panacea as the volts across the capacitor are Amps x XC.

The capacitance of 1893 ohms at 14.2 MHz is about 0.000006 pF. If the plate size is kept significant, the spacing should be good for 12 KV with no problem.

The Andrew Corporation folded monopoles I am familiar with were usually working with 500-watt VHF FM transmitters in our land-mobile operations. Bandwidth required was 2f + 2d, if I recall, and the (f) was maximum modulation frequency, and the (d) was the peak deviation. Bandwidth was less than 20 KHz. Half-duplex was the communications mode so we needed the antenna only to work at one carrier frequency.

It was a cakewalk. Antennas only flashed over on lightning strikes and the 50-ohm Heliax saw most of the lightning as a common-mode disturbance and rejected its passage through the coax (via counter-emf from coax distributed inductance).

The VHF Andrew folded monopole element was similar to the slide pipe on a trombone only made of stainless steel. It had clamps to hold its position once set. Andrew set its length for 50-ohms at our frequency, I suppose, and adjusted the reactance for a net zero. When we set it atop our tower we always had about 500 watts forward and nearly zero reflected power. Some of these are surely operating well at this moment

after 50 years or more, though they`ve surely accumulated many small pits from countless lightning strikes.

Best regards, Richard Harrison, KB5WZI

1365. 1.2Ghz Antenna Construction Design required.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 05:16:42 UTC
From: Kevin & Natalia Mitchell <sparcman@hotmail.com>
Message-ID: <4089f7e0$1@news.iconz.co.nz>
Source record: 96115

Hi All,

I am on the look for a design for a 1.2Ghz antenna.
Any design will be of interest, but I am after construction of a high gain
panel type.

--
Kevin, ZL1UDD

1366. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 07:21:25 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108k5blrbo8fm42@corp.supernews.com>
Source record: 96116

Richard Harrison wrote:

> . . .
> The capacitance of 1893 ohms at 14.2 MHz is about 0.000006 pF. If the
> plate size is kept significant, the spacing should be good for 12 KV
> with no problem.
>. . .

By my reckoning, a capacitive reactance of 1893 ohms at 14.2 MHz is 5.9 pF.

Roy Lewallen, W7EL

1367. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 12:59:42 UTC
From: Dave <noone@nowhere.com>
Message-ID: <BdidnVEL6dpf-RfdRVn-uA@crocker.com>
Source record: 96117

i had to switch isp's twice because their definitions of 'unlimited' did not mean 24/7 on a dialup. i was not using much bandwidth, heck i could normally only get about a 33kbps connection to them, but the modem was tied up 24/7. on one of them i was a 'charter' member who had been with them since before they opened... to give me 24/7 access they wanted to go from their 'unlimited' account charge of $20/mo to around $300/mo on dialup. i ended up buying a business isdn service for 24/7 access to get more bandwidth and real unlimited access, the total for the line and isp is about $150/mo with one static ip.... some day we may get dsl out here and that wll come down to a reasonable charge.

"Tyas_MT" <tyas_mt@hotplonkmail.com> wrote in message
news:4089a929$1@news.vallnet.com...
> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> news:c6bl9bqq1@hercules.btinternet.com...
> > Anything which increases traffic volume benefits Internet service
> providers.
> >
> Uhm no... If a normal customer is using more bandwidth (receiving and
> sending more email, committing virus controlled DDoS attacks, etc)
Internet
> service providers LOSE MONEY. They pay by the byte, you don't. Most
> customers pay a flat fee for internet access. This is true of most Cable,
> DSL, ISDN, and Dial-up setups... they are priced based on an expectation
of
> 'normal' usage, and the ISP loses money in 'extreme' usage cases. Why I
(a
> 'power user') get nasty emails from ISP's and have to switch often....
this
> one is good about that though.
>
>

1368. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 14:34:12 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6dtt702lol@enews1.newsguy.com>
Source record: 96019

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108j94ibv24cv45@corp.supernews.com...
> Modeling a 17 foot folded dipole made from copper #18 wire spaced at 2
> inches at 14.2 MHz with EZNEC shows a feedpoint impedance of 46.1 +
> j1893 ohms.

I didn't know I could model loops in EZNEC. But now I see that it has problems only with small loops. I guess a 1/4-wave loop is not considered small. I'll go back and try it.

My fall-back plan is to make a simple 1/4-wave resonant folded monopole and feed it with a 1/4-wave length of 75 Ohm coax. There will probably be some mismatch, but I think it will be tolerable.

Thanks, guys.

John

1369. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 14:54:38 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <408a7fae$1@news.vallnet.com>
Source record: 96118

"Tom Ring" <tarnews@taring.org> wrote in message
news:4089aee6$0$433$5cbedd26@news.real-time.com...
> Close, but not quite.
>
> An ISP will buy pipes, such as a DS3 that does 45Mbps, for a flat rate
> per month. Theoretically the upstream provider doesn't care if 1 bps or
> 45 Mbps are passing through that pipe; from a billing perspective, they
> get the same money. But they have to play the statistical game on how
> much upstream pipe that they need to handle all the 45Mbps pipes they
> sold to ISPs like you. And eventually you get to the backbone
> providers, who have really really big pipes, and very expensive routers.
>
> This "power user" thing is something I've never heard anyone in the
> business speak of, so I have no idea why you would get bumped. If you
> are not breaking the TOS agreement, ISPs don't care a rat's rear end how
> much traffic you generate. You buy a pipe from the ISP and you have
> every right to fill it if you can. The only exception to that would be
> that you have a maximum number of hours or bytes per month. They won't
> kick you if you exceed it, they just charge you an additional amount
> that you agreed to in your contract with them. Some ISPs may do it a
> bit differently, but that's fairly normal in the industry.
Clarification accepted ISP's pay for the pipe not by the byte... but if you get lots of power users it's more average bandwidth, therefore more pipe needed.

Let me see, the ones who have cut me off (rather than me cut them off) These are in the order they occur to me, not chronological:
ISP1: cut off because of excessive email traffic. I can only guess that receiving so much spam (oh, 4 years ago) got me suspended. My machine was clean of any kind of spyware/viruses, and I certainly was not a spammer. And they didn't say I was. One thing I was doing at the time was transferring some rather large files around through email regularly (was telecommuting and the company I was working for didn't have an FTP server), but I still don't think it was that much (2-3 files of 6-10 mb a week). Account was 'unlimited dial up'

ISP2: Exceeded allowable bandwidth (on my "unlimited broadband" account) 4 months running. After they warned me the first month, I asked what 'allowable bandwidth' was. They could not tell me. I looked at my usage agreement, nothing about allowable bandwidth. Was a clause about 'abuse of service', but no allowable bandwidth. I cut back my usage, dinged me the next month. Called, talked to 7 people, got one guy who said 'yes, we have a cap. I can't tell you what it is, just that you will get cut off if you exceed it regularly'. Go-go stupid national cable ISP! Cut back usage, dinged me the third month. Again, I don't/didn't have spyware, viruses, (I

don't run a virus program normally I will admit, but I use the online checks with housecall or Symantec once every month, and am careful beyond belief with material from the net. Download.com stuff gets scanned by the freebie virus program I use. I just don't keep it running. Ad aware/spybot once a month as well. No hits this year so far...) and I've never run file sharing software since I had a linux box with a linux version of napster long long ago. I know that's not active anymore, as the at the time the box was running FreeBSD, and not even on the network. Admittedly I tend to be a heavy downloader... CD iso's for various free OS's, that sort of thing. I think I've run every OS to come down the pike in the last half dozen years.

ISP3: One month and out. 'Unlimited' dial-up account. Terminated for using ~320 hours in one month. Admittedly I was running a trader in EverQuest... you have to be online to enable people to purchase from you in that game. That was avg 2-3 hours a night playing, 9-10 hours from morning till I get back from work with my bot online (better sales than overnight...), doing other things on weekends.

ISP4: Purchased Unlimited ISDN account at a premium fee. Disconnected for using 1300 hours the second month. (channel hours, 2 channels count time at twice the rate). After signing up with another ISP determined that the router they made me buy from them (We won't allow you to connect with a netgear. You must use our 3-com ISDN PoS router. Oh yes, you must have a block of static ip's if you want to use multiple computers with ISDN with us, we won't allow you to use a nat boundary. Your router will be accessible from our side so we can reconfigure it. Oh yes we charge lots of cash for static IPs.) was not working properly... would not drop channels (experiment: connect, transfer enough data to bring up BOD for second channel, disconnect network from router, go to work. Router set for 2 min BOD channel drop and 5 min inactivity timeout. Router still online when back from work.)

So it's out there... you may not do it (I applaud you). the ISP I worked for didn't do it (they tracked hours and bytes, but unlimited accounts were just that, unlimited), and my current ISP isn't looking over my shoulder too much, but it is out there.

Besides, to get back on the original topic, nothing you said refutes my point (and I am not saying you wanted to, please understand that. I think you actually agree with me.), which is that ISPs (except when they charge for overage or overtime, and most accounts don't have provisions for that.. at least most I've seen do not) do not make more money on heavy usage. They make the most money on light usage. Therefore the ISP's are have little to no motivation to write these viruses.

Now if you will excuse me I have 5 machines to work on who use the local cable provider that appear to have the latest infection... presumably because the cable ISP's entire virus protection scheme involves auto detecting if someone seems to have been infected (lots of email outbound traffic) and shutting them off till they come in with a clean bill of health from a tech, and a receipt that shows they have purchased Norton antivirus (only Norton... nothing else will be accepted) and presumably installed it.

1370. Re: 1.2Ghz Antenna Construction Design required.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 15:06:12 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c6dvp5$attno$1@ID-225206.news.uni-berlin.de>
Source record: 96020

need polarization, gain and amount of backlobes, portable?
one panel type is 4 helical beams, comes out almost on 50 ohms, high gain
a flat type is stripline in/on a PCB, elements or slots are fed to center
point
Another type easy to build is using a gallon paint can with feed about 1/4
wave from the back(not panel type)

"Kevin & Natalia Mitchell" <sparcman@hotmail.com> wrote in message
news:4089f7e0$1@news.iconz.co.nz...
> Hi All,
>
> I am on the look for a design for a 1.2Ghz antenna.
> Any design will be of interest, but I am after construction of a high gain
> panel type.
>
>
> --
> Kevin, ZL1UDD
>
>

1371. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 15:37:58 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6e1kt0249k@enews2.newsguy.com>
Source record: 96022

"John" <jocjo_john@yooha.com> wrote in message
news:c6cl9j01jrq@enews1.newsguy.com...
> To achieve resonance, non-folded dipoles/monopoles must be cut slightly
less
> than 1/2 or 1/4 wave due to "end effect", so I've read. EZNEC agrees.
>
> Is this true for the folded dipole/monopole?
>
> Thanks,
> John

After I posted this, I learned that EZNEC would handle the loop formed by a 1/4-wave monopole. So I modeled it and found that the answer to my question is yes.

John

1372. cushcraft A3S Tribander HF beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 15:39:50 UTC
From: les <gm4jnw@nospamhotmail.com>
Message-ID: <108l2kp52bg1kef@corp.supernews.com>
Source record: 96021

Just bought a secondhand A3S 3 element HF beam (bought it really cheap but its as well!) The fibreglass isolator is cracked so managed to get a new isolator.
What suprises me is that the isolator is made of fiberglass tube rather than being solid especially as it must take quite a bashing in gales.
Question to owners of this or other beam with a similar isolator:
Anyone replaced it with stronger material and if so can you send me info (taking out the spam trap in the email address)
Thanks in advance.

1373. Anyone have back issues of Ham Radio Magazine Need Oct 86

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 16:25:45 UTC
From: washingtonham@yahoo.com
Message-ID: <408a95ce.3195938@news.verizon.net>
Source record: 96023

Article on page 52 is just what I need.

Convert an inexpensive CB mag-mount antenna into a superb 2-meter whip K7DBA 52 Oct 86

Thanks

Rick N7HJ

1374. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 16:39:01 UTC
From: richardharrison@webtv.net
Message-ID: <14599-408A9825-48@storefull-3256.bay.webtv.net>
Source record: 96024

Roy Lewallen, W7EL wrote:
"By my reckoning, a capacitive reactance of 1893 ohms at 14.2 MHz is 5.9 pF."

Dang me and my sliderule. Neither of us keeps track of decimals very well. 6 pF can be obtained with wide spacing and high breakdown volts with small plates. I don`t see much of a hurdle to clear because 6 pF is a small capacitance.

As a practical matter, Andrew Corporation used another method to tune its folded monopoles, I believe, because they had d-c continuity. They supplied these antennas for decades to work at VHF. To move from 10m to 20m brings problems of scale, mechanical and electrical.

The original question said that the open-circuit ground plane has a 35-ohm feedpoint (at some elevation), and a folded ground plane has about 140 ohms as a feedpoint. Neither ground plane matches the usual coax at the antenna resonant frequency. Commercial antenna makers advertise and deliver open-circuit and folded radiator ground plane antennas which are nearly 50 + j0 ohms feedpoint impedance at a specified frequency when mounted high and in the clear.

The folded radiator offers more lightning protection than the open-circuit radiator. The folded radiator contains the ability to step-up feedpoint impedance in cases where an open-circuit radiator would have an inconveniently low feedpoint. Most TV yagis, for example, use a folded dipole as the driven eleement due to the low feedpoint impedance caused by mutual coupling with the parasitic elements.

Most energy in a lightning strike is at lower frequencies. Tune the bands during thunderstorm season and notice where the static crashes are worse, though much of this is due to propagation, some is due to the shape of the transient. Where the folded antenna loop is small in terms of wavelength, the loop is nearly a short-circuit and differential energy is small.

I saw lightning problems solved by replacing open-circuit antennas with folded-element antennas. As lightning is an interference problem taken to an extreme, folded elements are also useful in solving some other interference problems. But there are cautions. A folded dipole has a resonance where it is only 1/4-wave from tip to tip. Its circumference is 1/2-wave and resonates. This gives a folded dipole twice as many resonances as an open-circuit dipole.

I make arithmetic mistakes more frequently when I don`t know for sure that the number I calculate is reasonable or not. I do know that 20-kV

to 40-kV sparkplug voltage does not ordinarily leap many feet through the air. I also have a formula for capacitance:

CpF = 0.225 K A / S

CpF = capacitance in pF

K = dielectric constant

A = area of one of the 2-plate capacitor plates (sq. in.)

S = spacing between the plates in inches

For air, K = 1.0006

For a vacuum, K = 1

6 pF is not much so it should be easy to create.

Best regards, Richard Harrison, KB5WZI

1375. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 16:45:47 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6e5ju02soo@enews1.newsguy.com>
Source record: 96026

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108j94ibv24cv45@corp.supernews.com...
> Modeling a 17 foot folded dipole made from copper #18 wire spaced at 2
> inches at 14.2 MHz with EZNEC shows a feedpoint impedance of 46.1 +
> j1893 ohms.

Now I'm confused again.

I modeled a monopole at 434 MHz. Varying the vertical element showed the terminal impedance to get lower in resistance and become increasingly capacitive as the vertical element is shortened.

I thought it was supposed to be backwards from the usual unfolded monopole.?.

John

1376. Re: Element Design with Loading Coils

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 17:00:06 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404240900.780c846b@posting.google.com>
Source record: 96025

Resonance will be the frequency at which the feedpoint reactance is
zero. You may have difficulty with your simple equipment determining
that point, but it will be vanishingly close to the frequency at which
the SWR is minimum -- or the point of maximum return loss -- on a 50
ohm line feeding a dipole. Be sure the line is properly decoupled
from the antenna: use a balun. Generally you won't need a counter,
because the resonance will be quite broad and there's no practical
need to get the frequency closer than a percent or even a few percent.

Cheers,
Tom

MikeN <mnewman@clear.net.nz> wrote in message
news:<nmhh80tdssu4ndldi83bvia011f71mpnv2@4ax.com>...
> Hi Yuri
>
> What's the best way to measure the resonant frequency of the 450 MHz
> dipole?
>
> I've got a simple UHF return loss bridge and a counter.
>
> What else would I need?
>
> Thanks
>
> MikeN ZL1BNB
>
> On 15 Apr 2004 14:04:09 GMT, k3bu@aol.comNoUsama (Yuri Blanarovich)
> wrote:
>
> >>
> >>I have a design based on EZNEC. Total shortened "half-wave" dipole length
> >>is 0.32 lambda. Half of that of course is in each of the two elements.
> >>There is a loading coil in the middle of each element. EZNEC assumes zero
> >>length, non-radiating coils. In reality, the coil length is significant
> >>compared to the element length.
> > >
> > >
> > >
> >Welcome to real world. If you want to read more about the loading coil
> >controversy, go to my web page www.K3BU.us and snoop around ARTICLES, you will
> >get the picture. Eznec doesn't understand real coils, you can try to substitute
> >the coil with hairpin stub of the same inductance for modeling.
> > >
> >With 450 MHz dipole you will "research" this subject faster by taking piece of

> >wire or tubing, make about 3 turns in the middle, put the dipole up, measure
> >the resonant frequency and then snip the ends untill you get it where you want
> >it. Fine tuning can be done by squeezing or expanding the coil turns.
> >
> >To make it more efficient, you can just bend the ends 90 deg. in L or T shape,
> >instead of using coils.
> >
> >Yuri, K3BU.us

1377. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 17:08:11 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <408a9bfb.664122828@news.galilei.com>
Source record: 96027

Hi Slick

Your getting above my head on that one.

I know if I move the light back and forth a few inches it will dim and then go out, there are several points along a dipole where the lamp will have high brightness and this is where I put the lamps.

I know the CBers used to put a neon lamp on the tip of their mobile antenna's. I first tried it on a 10 meter mobile and it worked fine. But on a ground plane it didn't work, then I started moving the light down the shaft of the antenna and found a spot where it did work just great.

Back in the good ole days of the Heathkit Sixer lunchbox, I could put a flourescent lamp against my mobile antenna and it would light up on transmit. I never could get it to do that when I was using the Saturn V halo though.

TTUL
Gary

1378. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 17:31:53 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <408a9f55.664980828@news.galilei.com>
Source record: 96028

Hi Tom

I'm not real adept at understanding much of the lingo, but you might be able to answer a question for me.

I use standard 56k dialup. I assume that when I'm online I'm tying up one of the ISP's modems. Therefore I never stay online longer than necessary to get my work done. Although I know plenty of folks that leave their computers on and connected all the time.

My late wife, after she had her major heart attack and could not leave the house worked out an agreement with her employer to do her work at home. This required staying on-line at least 8 hours a day connected to her employer.
At first the ISP said 'no problem' you have an unlimited account.
But then they later came back and told us we needed a different service, it was still dial-up, but in effect we owned our own modems located in the ISP's racks.
After a couple of more heart attacks, she had to quit work completely.
I began using the sevice she was using for my regular dialup to retrieve e-mail, read the newsgroups, surf the web, etc. About 3 hours a day.
I received a nasty note from the ISP saying I could not use that service in place of normal dialup, it was set up strictly for my wifes connection to her employer.
I switched back to my original dial-up unlimited account, but still had to pay for the contract on the other dial-up account until it expired.
Once it expired, I left that ISP and have been with my current one ever since.

But lets get into a deeper question here.
I moved to a different state but am still using the ISP I have used for years.
I assume that my home ISP has a joint account with many ISPs around the country. I'm a ham radio operator and I can travel the country and use repeaters as a guest, because I AM a member of a repeater club.
But how does this work as far as ISP's go?
Should I change to a local ISP or is it OK to continue using one of the POP presences. How does the ISP I'm calling make any money from me?

TTUL
Gary

1379. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 17:31:54 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <408aa26f.665774234@news.galilei.com>
Source record: 96029

Hi Dave

Perhaps I'm all wet on this, but I thought most reputable ISP's had a program in place that blocked outgoing e-mail over a certain quantity, configurable of course to allow certain users their needed outbound e-mail activity.

I know when I was doing a newsletter that if I tried to send to everyone on the list at once, my ISP would block the transmission and an auto-responder would tell me to contact my ISP immediately.
I would do so and tell them I was sending out a newsletter.
They would either A: up my daily mailing limit or B: tell me to break it into 25 unit pieces.

It seems to me that it wouldn't be to hard to implement a program that verified the domain of inbound e-mail. Most of the spam I do get has fraudulent headers.

Although my ISP will do the filtering for me, I still elect to receive all of my inbound e-mail, including the spam, and have my own sets of filters that knock about 99% of it out, without fear of losing a valid e-mail that I should have received.

TTUL
Gary

1380. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 17:56:20 UTC
From: kashe@sonic.net
Message-ID: <bhal80545vk9jtde1vehsv3v5qs80hj895@4ax.com>
Source record: 96030

On Wed, 21 Apr 2004 14:17:14 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>Cecil Moore wrote:
>>
>> Jim Kelley wrote:
>>
>> > Cecil Moore wrote:
>> >
>> >>Jim Kelley wrote:
>> >>>How much does the length change when you tilt it at 45 degrees?
>> >>
>> >>By the factor of the square root of two.
>> >
>> > Sounds kinda like one of those mythical cable stretchers. :-)
>>
>> By Golly, I have been looking for a cable stretcher. A tilted
>> mercury column will perform that function.
>
>How so?

Pascal's law.

1381. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 18:22:44 UTC
From: kashe@sonic.net
Message-ID: <f3cl80tmjhrnjpt8kse3caon17h12lsnpj@4ax.com>
Source record: 96032

On Thu, 22 Apr 2004 16:10:00 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Cecil Moore wrote:
>
>> David.Shrader wrote:
>>
>>> If it's a closed tube then the length does not change with angle.
>>
>>
>> I may be wrong, cuz I'm not very mechanical, but it seems to me
>> that a column of mercury in a tube with a vacuum at the top
>> and a reservoir of mercury at the bottom would change height
>> of column depending on the angle of the column's deviation from
>> vertical. It seems to me that when the column is horizontal,
>> there would be no vacuum at all in the tube.
>> --
>> 73, Cecil http://www.qsl.net/w5dxp
>
>OK. A manometer as opposed to a thermometer.

No, a barometer.

1. Thermometer -- sealed at both ends -- height depends on
temperature.

2. Manometer -- open at both ends -- one end open to atmosphere; other
end open to space whose pressure you want to measure relative to
atmosphere; displacement from balanced level in each column dependent
on pressure differential.

3. Barometer -- sealed at top; open at bottom, which is submerged in
sizable puddle of mercury; vertical height, from surface of reservoir
to top of column (assuming adequately long tube and adequately large
mercury reservoir) dependent on pressure, but length of mercury column
dependent on tilt of tube. (sec or csc function, IIRC.)

1382. Re: Mid coil loaded CB to 2 meters.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 18:24:53 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <Vhyic.114859$04.1541463@twister.southeast.rr.com>
Source record: 96031

I have heard of a couple of people converting CB antennas to 2 meter. Mostly this was just using the avaialbe hardware to make a 2m antenna. Cutting off the coil and adjusting the remaining portion of the antenna to the proper length. One of my friends tried this and it worked as well as a 1/4 wl mobile can be expected. He got a lot of "picket fencing noise" while driving which was also present when using a commercially made1/4 wl antenna. Problem was solved by going to a commercially built 1/2 wl antenna.. I ve seen some base loaded antennas that could probably easily be converted to 5/8 wl 2m antennas by cutting the radiator to the appropriate length and rewinding the coil. Just find some basic antenna building projects and figure out how you can make use of the CB antenna parts in your plans to save a little fabrication time and money.

"R. Scott" <washingtonhamTHREAD@yahoo.com> wrote in message news:4086A0CB.F7C87238@yahoo.com...
> I have a mid coil loaded CB that came with my Goldwing I bought. I know
> Ive seen somewhere that you could convert a mid loaded CB to 2mtrs. I
> dont plan on using CB on my bike but would like 2mts.
>
> Did a Google search and came up emtpy.
>
> Anyone know where I could get ideas.
>
> Thanks
> --
> Rick N7HJ
> Everett, Washington
> Remove THREAD to reply.

1383. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 18:28:04 UTC
From: kashe@sonic.net
Message-ID: <2ccl80hki8dvc65m3e2h803cc160hi4pmp@4ax.com>
Source record: 96033

On Thu, 22 Apr 2004 18:29:46 -0500, Tom Ring <tarnews@taring.org>
wrote:

>Also the fact that anyone with an IQ
>above room temperature knows mercury has to be handled with some care.

So as room temperature drops, more inhabitants of the room
become aware of this important caution?

1384. Re: Anyone have back issues of Ham Radio Magazine Need Oct 86

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 19:34:13 UTC
From: Eskay <spark_gap2000@yahoo.ca>
Message-ID: <1ao2ve5vwu4q7.1d7zjzwzwc3ja$.dlg@40tude.net>
Source record: 96034

On Sat, 24 Apr 2004 16:25:45 GMT, R. Scott wrote:

> Article on page 52 is just what I need.
>
> Convert an inexpensive CB mag-mount antenna into a superb 2-meter whip K7DBA 52 Oct 86
>
>
> Thanks
>
> Rick N7HJ

Be happy to scan the article for you.
Please confirm by E-mail to: mycall at arrl dot net
73 de Sieb,,VE3JUA.

1385. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 20:03:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108li0pqq9kki74@corp.supernews.com>
Source record: 96035

John wrote:
>
> I didn't know I could model loops in EZNEC. But now I see that it has
> problems only with small loops. I guess a 1/4-wave loop is not considered
> small. I'll go back and try it.
> . . .

Because EZNEC uses NEC-2 for calculations, it has the same problems with small loops that NEC-2 does. It's able to model any kind of antenna that NEC-2 can, within its segment limitation.

Roy Lewallen, W7EL

1386. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 20:51:29 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0404241251.57be920a@posting.google.com>
Source record: 96036

raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote in message news:<408a9bfb.664122828@news.galilei.com>...
> Hi Slick
>
> Your getting above my head on that one.
>
> I know if I move the light back and forth a few inches it will dim and
> then go out, there are several points along a dipole where the lamp
> will have high brightness and this is where I put the lamps.
>
> I know the CBers used to put a neon lamp on the tip of their mobile
> antenna's. I first tried it on a 10 meter mobile and it worked fine.
> But on a ground plane it didn't work, then I started moving the light
> down the shaft of the antenna and found a spot where it did work just
> great.
>
> Back in the good ole days of the Heathkit Sixer lunchbox, I could put
> a flourescent lamp against my mobile antenna and it would light up on
> transmit. I never could get it to do that when I was using the Saturn
> V halo though.
>

So it sounds like once you find an area where the neon bulb is
very bright, that the brightness will be proportional to the ERP, or
the power that is delivered to the antenna.

This might be a decent, fast-and-dirty sort of power meter, where
you can tell if something is wrong if the bulb isn't as bright as it
should be (assuming it's not raining).

S.

1387. Capacitive loading-How?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 21:39:39 UTC
From: jgboyles@aol.com
Message-ID: <20040424173939.15479.00000238@mb-m05.aol.com>
Source record: 96037

Hi,
Anyone have any suggestions on how to physically realize 2500 ohms capacitive loading on a wire antenna element at 147 mhz? This works out to about .4 pf. Max voltage will be around 650 Vrms. I am familar with the various ways to make a capacitor, just can't decide the best way physically to do this. Also, how about measuring a .4 pf cap. at 147 mhz with an antenna analyzer that only goes up to 650 ohms? Measure with it stuck at the end of 1/4 wavelength transmission line? Any suggestions appreciated. Oh, and why do I want to do this, EDZ beam design I am playing with.
73 Gary N4AST

1388. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 21:50:28 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6enf702qj9@enews2.newsguy.com>
Source record: 96038

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108li0pqq9kki74@corp.supernews.com...
> John wrote:
> >
> > I didn't know I could model loops in EZNEC. But now I see that it has
> > problems only with small loops. I guess a 1/4-wave loop is not
considered
> > small. I'll go back and try it.
> > . . .
>
> Because EZNEC uses NEC-2 for calculations, it has the same problems with
> small loops that NEC-2 does. It's able to model any kind of antenna that
> NEC-2 can, within its segment limitation.
>
> Roy Lewallen, W7EL

I don't know what NEC-2 is able to do. Does this mean I can model folded
monopoles?

John

1389. Re: Capacitive loading-How?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-24 23:49:48 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c6euesada1@titan.btinternet.com>
Source record: 96039

The stray capacitances to the rest of the world will be of the same order as the required value of capacitance. The presence of stray capacitances, not being accounted for in the design, will cause whatever it is to behave in an unpredictable manner. Your electrical "circuit" or model will be different and more complicated than what you think it is.

Methinks you should re-engineer whatever it is to something which requires a capacitance of something greater than 0.4 pF and is of a more realiseable and predictable value.

Or better still, you may even re-design something to achieve the desired performance which does not require a loading capacitor at all.

Reg.

1390. DJ4VM Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 00:11:09 UTC
From: Bill <lbj@congress.com>
Message-ID: <HbDic.76779$UC4.68927@bignews2.bellsouth.net>
Source record: 96040

I am looking for information (any) on the DJ4VM loop antenna.
Any direction would be appreciated.

Bill N4WC

1391. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 00:14:08 UTC
From: Roger Halstead <Delete-Invallid.groups@tm.net>
Message-ID: <k60m80ha5hut6ragg0ob8kgaueasgr0von@4ax.com>
Source record: 96041

On Fri, 23 Apr 2004 19:03:39 -0500, Tom Ring <tarnews@taring.org>
wrote:

>Close, but not quite.
>
>An ISP will buy pipes, such as a DS3 that does 45Mbps, for a flat rate
>per month. Theoretically the upstream provider doesn't care if 1 bps or
>45 Mbps are passing through that pipe; from a billing perspective, they
>get the same money. But they have to play the statistical game on how
>much upstream pipe that they need to handle all the 45Mbps pipes they
>sold to ISPs like you. And eventually you get to the backbone
>providers, who have really really big pipes, and very expensive routers.
>
>This "power user" thing is something I've never heard anyone in the
>business speak of, so I have no idea why you would get bumped. If you

I've been hearing the term ever since I got on the net and that was in
96 with my own site and in 87 through the colleges.

>are not breaking the TOS agreement, ISPs don't care a rat's rear end how
>much traffic you generate. You buy a pipe from the ISP and you have

Maybe you don't but many do.
They price their services based on an average user and they have a
multi tiered service.

Here if the average user is on 32 hours a month they don't complain
until you hit around 5 or 6 times the average user.

As I'm on DSL and networked 24 X 7 I pay a different rate than the
dial up customer.

Then even as a commercial user rates are based on the "bandwidth"
used. I have both a high bandwidth limit and a lot of storage, but if
my use, or my site generates traffic beyond a given point the rates go
up, or like many sites I've attempted to visit you find the "This site
has exceeded it's bandwidth limit for today", please try again
tomorrow.

>every right to fill it if you can. The only exception to that would be
>that you have a maximum number of hours or bytes per month. They won't
>kick you if you exceed it, they just charge you an additional amount

Only if you have that agreement. Most I've seen just block access to
the site for the day, and I've come across a lot of those "this site
has exceeded...." pages.

Roger Halstead (K8RI & ARRL life member)
(N833R, S# CD-2 Worlds oldest Debonair)
www.rogerhalstead.com
Roger Halstead (K8RI & ARRL life member)
(N833R, S# CD-2 Worlds oldest Debonair)
www.rogerhalstead.com
>that you agreed to in your contract with them. Some ISPs may do it a
>bit differently, but that's fairly normal in the industry.
>
>tom
>K0TAR
>
>Tyas_MT wrote:
>
>> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
>> news:c6bl9bqq1@hercules.btinternet.com...
>>
>>>Anything which increases traffic volume benefits Internet service
>>
>> providers.
>>
>> Uhm no... If a normal customer is using more bandwidth (receiving and
>> sending more email, committing virus controlled DDoS attacks, etc) Internet
>> service providers LOSE MONEY. They pay by the byte, you don't. Most
>> customers pay a flat fee for internet access. This is true of most Cable,
>> DSL, ISDN, and Dial-up setups... they are priced based on an expectation of
>> 'normal' usage, and the ISP loses money in 'extreme' usage cases. Why I (a
>> 'power user') get nasty emails from ISP's and have to switch often.... this
>> one is good about that though.
>>
>>

1392. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 00:29:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108m1k77d211pc6@corp.supernews.com>
Source record: 96042

John wrote:
>
> I don't know what NEC-2 is able to do. Does this mean I can model folded
> monopoles?
>
> John

Sure. But you can't accurately model ones made with twinlead or window line, since NEC-2 or EZNEC can't account for the effect of the dielectric.

Roy Lewallen, W7EL

1393. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 00:44:47 UTC
From: AM200 <gt@am200.net>
Message-ID: <NQDic.512$M_1.477@newsfe1-win>
Source record: 96043

Hello,

That's what I suspect!

"Arrow146" <arrow146@aol.com> wrote in message
news:20040423124840.02695.00000175@mb-m21.aol.com...
> Who writes VIRUS programs ?
> Who makes a profit from it ?
>
> Any chance it could be those who sell the ANTI VIRUS software ?
> Just a thought!!
>
> 73 Al Lowe N0IMW

1394. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 00:46:08 UTC
From: AM200 <gt@am200.net>
Message-ID: <2SDic.514$M_1.222@newsfe1-win>
Source record: 96044

Hello,

So if you work at an ISP, why do people never block spammers? It's always the same companies people sign up to. You have the technology to block the users completely and/or take action after doing a trace. It can be done here in the UK.

"Tom Ring" <tarnews@taring.org> wrote in message news:4089a7b9$0$433$5cbedd26@news.real-time.com...
> Nope, absolutely incorrect. I work at an ISP, and with very few
> exceptions, we get the same money regardless of the traffic. It is
> therefore in our best interest to minimize traffic. This is a cutthroat
> business, and no one can raise prices without losing customers.
>
> tom
> K0TAR
>
> Reg Edwards wrote:
>
> > Anything which increases traffic volume benefits Internet service providers.
> >
> > ====================================
>

1395. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 00:55:36 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <408b0c92$0$433$5cbedd26@news.real-time.com>
Source record: 96045

Well, that's a tough question, because the modems are a totally
different situation than bandwidth usage. Modems are a real piece of
hardware that you are tieing up. And some ISPs like to skimp on what is
relatively cheap hardware. We don't tell our unlimited users they have
the responsibility to disconnect, but we do disconnect them where
longest idle (no traffic) users get kicked if, and only if, we are near
to filling up our modem bank. It's a bit more complex algorithm than
that, but that's close enough to what goes on at our place. Generally
our users can and do stay connected until the power fails at their house.

No, I won't tell you who I work for, and no, it's not who I use. No, I
won't go into why I use who I do.

On the shared accounts between ISPs, yes that goes on, and I believe
it's based on trading the amount of service used between them, but I'm
not quite sure. If so it implies that there is cash transferred if the
hours used are mismatched. It's a large pool among lots of ISPs, there
may be more than one of these pools, and I have no idea how they really
address the balance. I live on the tech side, not the money side.

tom
K0TAR

Gary V. Deutschmann, Sr. wrote:
> Hi Tom
>
> I'm not real adept at understanding much of the lingo, but you might
> be able to answer a question for me.
>
> I use standard 56k dialup. I assume that when I'm online I'm tying up
> one of the ISP's modems. Therefore I never stay online longer than
> necessary to get my work done. Although I know plenty of folks that
> leave their computers on and connected all the time.
>
> My late wife, after she had her major heart attack and could not leave
> the house worked out an agreement with her employer to do her work at
> home. This required staying on-line at least 8 hours a day connected
> to her employer.
> At first the ISP said 'no problem' you have an unlimited account.
> But then they later came back and told us we needed a different
> service, it was still dial-up, but in effect we owned our own modems
> located in the ISP's racks.
> After a couple of more heart attacks, she had to quit work completely.
> I began using the sevice she was using for my regular dialup to
> retrieve e-mail, read the newsgroups, surf the web, etc. About 3

> hours a day.
> I received a nasty note from the ISP saying I could not use that
> service in place of normal dialup, it was set up strictly for my wifes
> connection to her employer.
> I switched back to my original dial-up unlimited account, but still
> had to pay for the contract on the other dial-up account until it
> expired.
> Once it expired, I left that ISP and have been with my current one
> ever since.
>
> But lets get into a deeper question here.
> I moved to a different state but am still using the ISP I have used
> for years.
> I assume that my home ISP has a joint account with many ISPs around
> the country. I'm a ham radio operator and I can travel the country
> and use repeaters as a guest, because I AM a member of a repeater
> club.
> But how does this work as far as ISP's go?
> Should I change to a local ISP or is it OK to continue using one of
> the POP presences. How does the ISP I'm calling make any money from
> me?
>
> TTUL
> Gary
>

1396. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 01:02:49 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <408b0e44$0$432$5cbedd26@news.real-time.com>
Source record: 96046

The only part I would wonder about is did the Everquest trading break
the TOS. Other than that I don't see an issue if they were truly
offering unlimited accounts. Did you run any servers? Because many
ISPs don't allow that as you probably know.

tom
K0TAR

Tyas_MT wrote:

> Clarification accepted ISP's pay for the pipe not by the byte... but if you
> get lots of power users it's more average bandwidth, therefore more pipe
> needed.
>
> Let me see, the ones who have cut me off (rather than me cut them off) These
> are in the order they occur to me, not chronological:
> ISP1: cut off because of excessive email traffic. I can only guess that
> receiving so much spam (oh, 4 years ago) got me suspended. My machine was
> clean of any kind of spyware/viruses, and I certainly was not a spammer. And
> they didn't say I was. One thing I was doing at the time was transferring
> some rather large files around through email regularly (was telecommuting
> and the company I was working for didn't have an FTP server), but I still
> don't think it was that much (2-3 files of 6-10 mb a week). Account was
> 'unlimited dial up'
>
> ISP2: Exceeded allowable bandwidth (on my "unlimited broadband" account) 4
> months running. After they warned me the first month, I asked what
> 'allowable bandwidth' was. They could not tell me. I looked at my usage
> agreement, nothing about allowable bandwidth. Was a clause about 'abuse of
> service', but no allowable bandwidth. I cut back my usage, dinged me the
> next month. Called, talked to 7 people, got one guy who said 'yes, we have a
> cap. I can't tell you what it is, just that you will get cut off if you
> exceed it regularly'. Go-go stupid national cable ISP! Cut back usage,
> dinged me the third month. Again, I don't/didn't have spyware, viruses, (I
> don't run a virus program normally I will admit, but I use the online checks
> with housecall or Symantec once every month, and am careful beyond belief
> with material from the net. Download.com stuff gets scanned by the freebie
> virus program I use. I just don't keep it running. Ad aware/spybot once a
> month as well. No hits this year so far...) and I've never run file sharing
> software since I had a linux box with a linux version of napster long long
> ago. I know that's not active anymore, as the at the time the box was
> running FreeBSD, and not even on the network. Admittedly I tend to be a
> heavy downloader... CD iso's for various free OS's, that sort of thing. I
> think I've run every OS to come down the pike in the last half dozen years.
>

> ISP3: One month and out. 'Unlimited' dial-up account. Terminated for using
> ~320 hours in one month. Admittedly I was running a trader in EverQuest...
> you have to be online to enable people to purchase from you in that game.
> That was avg 2-3 hours a night playing, 9-10 hours from morning till I get
> back from work with my bot online (better sales than overnight...), doing
> other things on weekends.
>
> ISP4: Purchased Unlimited ISDN account at a premium fee. Disconnected for
> using 1300 hours the second month. (channel hours, 2 channels count time at
> twice the rate). After signing up with another ISP determined that the
> router they made me buy from them (We won't allow you to connect with a
> netgear. You must use our 3-com ISDN PoS router. Oh yes, you must have a
> block of static ip's if you want to use multiple computers with ISDN with
> us, we won't allow you to use a nat boundary. Your router will be
> accessible from our side so we can reconfigure it. Oh yes we charge lots of
> cash for static IPs.) was not working properly... would not drop channels
> (experiment: connect, transfer enough data to bring up BOD for second
> channel, disconnect network from router, go to work. Router set for 2 min
> BOD channel drop and 5 min inactivity timeout. Router still online when back
> from work.)
>
> So it's out there... you may not do it (I applaud you). the ISP I worked for
> didn't do it (they tracked hours and bytes, but unlimited accounts were just
> that, unlimited), and my current ISP isn't looking over my shoulder too
> much, but it is out there.
>
> Besides, to get back on the original topic, nothing you said refutes my
> point (and I am not saying you wanted to, please understand that. I think
> you actually agree with me.), which is that ISPs (except when they charge
> for overage or overtime, and most accounts don't have provisions for that..
> at least most I've seen do not) do not make more money on heavy usage. They
> make the most money on light usage. Therefore the ISP's are have little to
> no motivation to write these viruses.
>
> Now if you will excuse me I have 5 machines to work on who use the local
> cable provider that appear to have the latest infection... presumably
> because the cable ISP's entire virus protection scheme involves auto
> detecting if someone seems to have been infected (lots of email outbound
> traffic) and shutting them off till they come in with a clean bill of health
> from a tech, and a receipt that shows they have purchased Norton antivirus
> (only Norton... nothing else will be accepted) and presumably installed it.
>
>
>

1397. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 01:03:27 UTC
From: Roger Halstead <Delete-Invallid.groups@tm.net>
Message-ID: <482m8097l9sg9asmchjukeemoa8td76c5a@4ax.com>
Source record: 96047

On Fri, 23 Apr 2004 18:17:06 -0000, dplatt@radagast.org (Dave Platt)
wrote:

>In article <20040423124840.02695.00000175@mb-m21.aol.com>,
>Arrow146 <arrow146@aol.com> wrote:
>
>>Who writes VIRUS programs ?
>>Who makes a profit from it ?
<snip>
>
>- Spamming ability. Quite a few of the more recent viruses, worms,
> and trojan horses contain software which installs specialized
> email-processing software and web/email/TCP proxy servers. A large
> percentage (half or more, I've heard) of the spam flooding the
> Internet is now being sent through home PCs on DSL and cable-modem
> networks, which have been compromised by these viruses. Previous
> spam-fighting efforts had succeeded in shutting down many of the
> open email relays, and poorly-installed open proxy servers that the
> spammers had been abusing, and it's widely believed that major
> spam-gangs have commissioned virus-authors to implement these viral
> mail relays. The motive, in this case, is profit: spammers can
> flood millions of people with spam at almost no cost, and even a
> handful of sales can earn them enough money to be worth the effort.

You missed revenge and or jealousy...The DOS attacks against specific
sites because they either do or say something the writer happens to
disagree with, or doesn't like.

Most viruses and worms are relatively simple and many have depended on
the gullibility of the user to actually run them. Links to malicious
sites from newsgroup postings...(See what ever star in the shower,
Go here for an interesting site) There must be users dumb enough to
click on these links. Then there are the "updates" to show up as if
they are real when in fact they are viruses, Trojans, and worms.
Popular of late is: The e-mail server will be down for a couple of
days, please click on the link to update your file so we can forward
your e-mail during the outage. Of course there were the Microsoft
Security updates where you clicked on a link that didn't go to the MS
site.

As far as money, there are the "We are making changes and need to
update your e-bay account (quite a number of businesses have been
listed). It has you click on a link and it *appears* as if you have
been taken to the proper site where they ask for your account name and
have your log in. Of course while at it you have to update your credit

card information as well.

"Some" viruses/worms/Trojans are quite sophisticated and even "call home" to check the payload for the day, or week, or what ever. Some "morph" or evolve. Some are capable of running as soon as you open the mail and some e-mail will load information from malicious sites, which is a good reason for not using HTML e-mail. Macros can make a mess. Visual basic which is part of MS office apps can do virtually anything on your machine.

Some can search your machine looking for account and financial information, credit card numbers, SS#, ... and so on..
Some leave a keystroke logger which can be checked later for account names and pass words.

I can't imagine not having virus protection AND a fire wall. I've set here and watched a probe check all the ports on the machine and when it couldn't get in it started over. OTOH no machine is invulnerable when it's hooked to the net.

In one year I received over 250 viruses and worms. Although I haven't received many in a long time, I received 5 yesterday in half an hour. These are viruses that made it past the ISPs checking.

Roger Halstead (K8RI & ARRL life member)
(N833R, S# CD-2 Worlds oldest Debonair)
www.rogerhalstead.comRoger Halstead (K8RI & ARRL life member)
(N833R, S# CD-2 Worlds oldest Debonair)
www.rogerhalstead.com

1398. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 01:12:40 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <408b1094$0$431$5cbedd26@news.real-time.com>
Source record: 96048

On the tiered service, we do unlimited only, so I can't address that issue.

On the limited bytes, sounds like you are talking about a hosted site.
Totally different deal. Unless I am misunderstanding. We generally
don't do that, except on our high volume commercial customers. And then
we do charge by the byte, sort of. If a "free" site to one of our
dialup/DSL/ISDN customers gets out of hand we will speak to them about
it, of course, but nothing cuts it off automatically.

tom
K0TAR

Roger Halstead wrote:

> On Fri, 23 Apr 2004 19:03:39 -0500, Tom Ring <tarnews@taring.org>
> wrote:
>
>

>>are not breaking the TOS agreement, ISPs don't care a rat's rear end how
>>much traffic you generate. You buy a pipe from the ISP and you have
>
>
> Maybe you don't but many do.
> They price their services based on an average user and they have a
> multi tiered service.
>
> Here if the average user is on 32 hours a month they don't complain
> until you hit around 5 or 6 times the average user.
>
> As I'm on DSL and networked 24 X 7 I pay a different rate than the
> dial up customer.
>
> Then even as a commercial user rates are based on the "bandwidth"
> used. I have both a high bandwidth limit and a lot of storage, but if
> my use, or my site generates traffic beyond a given point the rates go
> up, or like many sites I've attempted to visit you find the "This site
> has exceeded it's bandwidth limit for today", please try again
> tomorrow.
>
>
>>every right to fill it if you can. The only exception to that would be
>>that you have a maximum number of hours or bytes per month. They won't
>>kick you if you exceed it, they just charge you an additional amount
>
>

> Only if you have that agreement. Most I've seen just block access to
> the site for the day, and I've come across a lot of those "this site
> has exceeded...." pages.
>
> Roger Halstead (K8RI & ARRL life member)
> (N833R, S# CD-2 Worlds oldest Debonair)
> www.rogerhalstead.com
> Roger Halstead (K8RI & ARRL life member)
> (N833R, S# CD-2 Worlds oldest Debonair)
> www.rogerhalstead.com
>
>>that you agreed to in your contract with them. Some ISPs may do it a
>>bit differently, but that's fairly normal in the industry.
>>
>>tom
>>K0TAR
>>
>>Tyas_MT wrote:
>>
>>
>>>"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
>>>news:c6bl9bqq1@hercules.btinternet.com...
>>>
>>>
>>>>Anything which increases traffic volume benefits Internet service
>>>
>>>providers.
>>>
>>>Uhm no... If a normal customer is using more bandwidth (receiving and
>>>sending more email, committing virus controlled DDoS attacks, etc) Internet
>>>service providers LOSE MONEY. They pay by the byte, you don't. Most
>>>customers pay a flat fee for internet access. This is true of most Cable,
>>>DSL, ISDN, and Dial-up setups... they are priced based on an expectation of
>>>'normal' usage, and the ISP loses money in 'extreme' usage cases. Why I (a
>>>'power user') get nasty emails from ISP's and have to switch often.... this
>>>one is good about that though.
>>>
>>>
>
>

1399. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 01:24:45 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <408b1367$0$431$5cbedd26@news.real-time.com>
Source record: 96049

If you could see our ACLs and how our mail servers are set up you would realize just how much we, and most ISPs, work at blocking spammers. The problem is that 1) spammers have ISPs that are dedicated to spamming and 2) windows machines are easy to hijack to spam with.

Those windows boxes are virtually impossible to block because they pop up seemingly at random, then disappear. To stop 90% of the spam in the world would actually be fairly easy in my opinion, just refuse connections from Windows NT. Unfortunately that would stop a lot of legitimate email; also it's easy to spoof that the box _isn't_ windows, so we are back to square one again.

tom
K0TAR

AM200 wrote:

> Hello,
>
> So if you work at an ISP, why do people never block spammers? It's always
> the same companies people sign up to. You have the technology to block the
> users completely and/or take action after doing a trace. It can be done
> here in the UK.
>
> "Tom Ring" <tarnews@taring.org> wrote in message
> news:4089a7b9$0$433$5cbedd26@news.real-time.com...
>
>>Nope, absolutely incorrect. I work at an ISP, and with very few
>>exceptions, we get the same money regardless of the traffic. It is
>>therefore in our best interest to minimize traffic. This is a cutthroat
>>business, and no one can raise prices without losing customers.
>>
>>tom
>>K0TAR
>>
>>Reg Edwards wrote:
>>
>>
>>>Anything which increases traffic volume benefits Internet service
>
> providers.
>
>>>==========
>>
>

>

1400. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 02:03:27 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6f69i02mjo@enews4.newsguy.com>
Source record: 96050

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108m1k77d211pc6@corp.supernews.com...
> John wrote:
> >
> > I don't know what NEC-2 is able to do. Does this mean I can model folded
> > monopoles?
> >
> > John
>
> Sure. But you can't accurately model ones made with twinlead or window
> line, since NEC-2 or EZNEC can't account for the effect of the dielectric.
>
> Roy Lewallen, W7EL

Okay, great!

I modeled a folded monopole at 434 MHz. Varying the length down from resonance, the element showed the terminal impedance getting lower in resistance and become increasingly capacitive just like the unfolded monopole.

I thought it was supposed to be backwards from the usual unfolded monopole such that it would go up in resistance and become inductive.?.

John

1401. F.S. NIB KLM 28-30-6 beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 02:43:14 UTC
From: wa4uso@aol.com
Message-ID: <20040424224314.20340.00000268@mb-m04.aol.com>
Source record: 96051

I have one KLM 28-30-6 six element 10 meter beam (new in the box) for sale, price $100.00 plus shipping. Can be picked up. Interested please email WA4USO@aol.com TNX D Darby

1402. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 03:05:31 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <0p6dnT0UoqBstxbdRVn-tA@comcast.com>
Source record: 96052

"John" <jocjo_john@yooha.com> wrote in message
news:c6f69i02mjo@enews4.newsguy.com...
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:108m1k77d211pc6@corp.supernews.com...
> > John wrote:
> > >
> > > I don't know what NEC-2 is able to do. Does this mean I can model
folded
> > > monopoles?
> > >
> > > John
> >
> > Sure. But you can't accurately model ones made with twinlead or window
> > line, since NEC-2 or EZNEC can't account for the effect of the
dielectric.
> >
> > Roy Lewallen, W7EL
>
>
> Okay, great!
>
> I modeled a folded monopole at 434 MHz. Varying the length down from
> resonance, the element showed the terminal impedance getting lower in
> resistance and become increasingly capacitive just like the unfolded
> monopole.
>
> I thought it was supposed to be backwards from the usual unfolded monopole
> such that it would go up in resistance and become inductive.?.
>
> John
>
>
Did you go down to 217 MHz and below? If not, check it out. Should hit
another resonance at something like 50,000 +j0, and stay inductive below
that.

Tam/WB2TT

1403. Re: Anyone have back issues of Ham Radio Magazine Need Oct 86

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 03:20:41 UTC
From: washingtonham@yahoo.com
Message-ID: <408b2f8b.19142239@news.verizon.net>
Source record: 96053

On Sat, 24 Apr 2004 15:34:13 -0400, Eskay <spark_gap2000@yahoo.ca> wrote:

>On Sat, 24 Apr 2004 16:25:45 GMT, R. Scott wrote:
>
>> Article on page 52 is just what I need.
>>
>> Convert an inexpensive CB mag-mount antenna into a superb 2-meter whip K7DBA 52 Oct 86
>>
>>
>> Thanks
>>
>> Rick N7HJ
>
>Be happy to scan the article for you.
>Please confirm by E-mail to: mycall at arrl dot net
>73 de Sieb,,VE3JUA.

Mail sent

1404. Re: Power cable routing, Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 03:57:07 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <nGGic.514482$Po1.201437@twister.tampabay.rr.com>
Source record: 96054
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

that is what i did i poked a hole in that boot and stuffed the cables
theu and fished them to the battery staying away from things that would
get hot

JLB wrote:
> Well, he also mentioned the possibility of poking a hole in the steering
> column boot. That may not be too bad, as there seems to be a lot of room
> there.
>

1405. Re: Power cable routing, Ford Taurus

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 04:23:44 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <V7OcnXXPCIkboBbdUSdV9g@ptd.net>
Source record: 96055
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc

"Dennis Kaylor" <k4oxg@tampabay.rr.com> wrote in message
news:nGGic.514482$Po1.201437@twister.tampabay.rr.com...
> that is what i did i poked a hole in that boot and stuffed the cables
> theu and fished them to the battery staying away from things that would
> get hot
>
> JLB wrote:
> > Well, he also mentioned the possibility of poking a hole in the steering
> > column boot. That may not be too bad, as there seems to be a lot of
room
> > there.

I did the same thing in my new Ford Explorer ... I first carefully scoped out BOTH sides of the boot, looking for "interference" issues, then I took a long, thick needle (a test pick/probe with about 3" of needle in about 5" of nylon handle) and carefully poked it through the boot in the target area to double check.

When all looked good, I removed the needle and used a sharp xacto knife to make an X cut, through which I pushed the red/black #10 "zip-cord" power cable (I used cable I bought from PowerEx along with some Andersen "PowerPole" connectors).

Some sealant (non-corrosive - don't use the "RTV" stuff that smells like vinegar - it contains acetic acid) was then applied carefully around both sides and the cable was fitted with the split, "corrugated" plastic cable sleeving that you can buy at most auto parts stores.

Remember to fuse BOTH pos and neg leads AT THE BATTERY with suitable fuses (PowerEx has fuse holders for the new automotive type fuses). You want to be SURE that the leads between the battery connection and the fuse holders are short enough and anchored well enough that no matter what you can't get a short from the positive lead to ground - otherwise, major fireworks could occur.

Good luck.

73,
Carl - wk3c

1406. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 05:15:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108miblitc4s7fe@corp.supernews.com>
Source record: 96056

John wrote:
> . . .
> I thought it was supposed to be backwards from the usual unfolded monopole
> such that it would go up in resistance and become inductive.?.

Why would it do that?

Roy Lewallen, W7EL

1407. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 05:42:07 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6fj3i09ap@enews4.newsguy.com>
Source record: 96057

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108miblitc4s7fe@corp.supernews.com...
> John wrote:
> > . . .
> > I thought it was supposed to be backwards from the usual unfolded
monopole
> > such that it would go up in resistance and become inductive.?.
>
> Why would it do that?
>
> Roy Lewallen, W7EL

Well, you said earlier that the folded monopole could be modeled as an unfolded monopole with a shorted transmission line in parallel. I thought I understood. When I modeled the unfolded monopole, I saw it do as usual when the element was varied in length. But when I included the shorted section of transmission line and varied it directly with the element, I thought I saw the terminal reactance go inductive as the length was decreased below 1/4-wave resonance and I thought the terminal resistance went up. So, I was expecting the same from EZNEC by modeling the folded version.

I guess I'm really lost here.

John

1408. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 10:59:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108n6gaqcllr7c6@corp.supernews.com>
Source record: 96058

I'll once again separate the "antenna" from the "transmission line" to make it easier to see what's happening.

If you're dealing with an air-dielectric folded dipole, the transmission line stub is nearly a quarter wavelength long. So at resonance, its impedance is high and it doesn't have much effect on the feedpoint impedance. As you lower the frequency or shorten the antenna, the resistance of the antenna (as opposed to the transmission line) drops fairly slowly, and the reactance becomes negative relatively quickly. This is in parallel with the transmission line, whose reactance becomes more positive as the line gets electrically shorter. If you look at the net result of this parallel combination, you get a feedpoint impedance that has a rising resistance as frequency drops or the antenna shortens, and a reactance that gets more negative.

At some frequency below resonance, the increasing positive reactance of the transmission line equals the negative reactance of the antenna, creating a parallel resonant (sometimes called anti-resonant) circuit. Just before this happens, the resistance skyrockets and the feedpoint reactance heads positive. Exactly at parallel resonance, the reactance is zero (by definition of resonance) and the resistance is very high. And just below that frequency, the reactance heads rapidly to a high positive value, then begins decreasing as the frequency drops below that. The frequency or length where you hit anti-resonance depends on the impedance of the transmission line. I fished up a model of a 17.56 foot high folded monopole with #12 conductors spaced 6 inches apart which I had lying around. It's resonant at about 13.25 MHz., where its feedpoint impedance is 143 ohms. It hits anti-resonance at about 8.5 MHz, where its feedpoint resistance is about 15k ohms. Below that, the feedpoint reactance is positive, and decreases as the frequency is lowered.

If you want to model a folded monopole as a separate unfolded monopole and transmission line (which is a way to model one made from twinlead, since you can separately adjust the transmission line length to account for the reduced velocity factor of the transmission line mode), here's what you have to do.

First, make the unfolded monopole from two wires, connected in parallel at the bottom and top, or from a single wire of equivalent diameter. Next, choose the impedance of the transmission line to be 1/4 the impedance of the actual line. You have to use a transmission line model for this, not a transmission line made from wires. Make sure it's in parallel, not series, with the source at the base of the monopole. In EZNEC, a transmission line is connected in parallel with a source if they're on the same segment. Finally, multiply the reported feedpoint

impedance by four to find the Z of the actual folded monopole.

Roy Lewallen, W7EL

John wrote:
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:108miblitc4s7fe@corp.supernews.com...
>
>>John wrote:
>>
>>>. . .
>>>I thought it was supposed to be backwards from the usual unfolded
>
> monopole
>
>>>such that it would go up in resistance and become inductive.?.
>>
>>Why would it do that?
>>
>>Roy Lewallen, W7EL
>
>
>
> Well, you said earlier that the folded monopole could be modeled as an
> unfolded monopole with a shorted transmission line in parallel. I thought I
> understood. When I modeled the unfolded monopole, I saw it do as usual when
> the element was varied in length. But when I included the shorted section of
> transmission line and varied it directly with the element, I thought I saw
> the terminal reactance go inductive as the length was decreased below
> 1/4-wave resonance and I thought the terminal resistance went up. So, I was
> expecting the same from EZNEC by modeling the folded version.
>
> I guess I'm really lost here.
>
> John
>
>

1409. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 11:25:13 UTC
From: raymond.murphy@sympatico.ca
Message-ID: <2fb6b410.0404250325.25a700b0@posting.google.com>
Source record: 96059

"Dave VanHorn" <dvanhorn@cedar.net> wrote in message
news:<Zb6dnd2KW9kZVR7d4p2dnA@comcast.com>...
>
> Unfortunately, they later found out they were oppositely polarized, and the
> husband had been looking up the skirt of a discone down the block.

Maybe he was a beverage antenna, and the bride only found out about
this after the wedding...

On the other hand, maybe he had cardiod problems...

Ray

1410. Re: cushcraft A3S Tribander HF beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 12:58:12 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <408BB5E4.9CAD1643@cwis.net>
Source record: 96060

Les,
Hygain uses the same insulator for several of their
antennas, and it can be a problem with all of them.
Replacing it with a 'solid' insulator of some kind is
one solution. I'm still hunting for a replacement for
one for an 'R-7' (the only difference is in the length).
Thought about using 'Delrin'(sp) or some other type of
plexiglas/perspex, but haven't found a source yet.
Good luck...
'Doc

1411. FS: UHF Base Antenna (430-490mhz) Ham/GMRS

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 13:43:04 UTC
From: Andy in NJ <"SHORECOGS at COMCAST DOT NET">
Message-ID: <I-mdnTmyqOrqXRbd4p2dnA@comcast.com>
Source record: 96061
Cross-posted to: rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.antenna

For sale is one UHF base antenna, model number UH-2401 from www.buxcomm.com. I bought this antenna last fall intending to use it with a GMRS base radio, but I do not have the radio anymore, so the antenna is surplus. You can find out more about this antenna at http://www.buxcommco.com/page10/ants.htm. Frequency range is 430 - 490 mhz, tunable. A few of the screws for the u-bolts are a little rusty, but they can be easily replaced for pennies at a local hardware store.

This is PICK UP only from Beachwood, NJ. I will not ship it as I don't have the original packaging anymore and don't want to pay Mailboxes Etc to pack it up for me. Asking $40 OBO.

--
73! de Andy KC2SSB
http://shorecogs.tripod.com
AIM: shorecogs

1412. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 14:59:07 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6gjnv01tku@enews4.newsguy.com>
Source record: 96063

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108n6gaqcllr7c6@corp.supernews.com...
> I'll once again separate the "antenna" from the "transmission line" to
> make it easier to see what's happening.
>
> If you're dealing with an air-dielectric folded dipole, the transmission
> line stub is nearly a quarter wavelength long. So at resonance, its
> impedance is high and it doesn't have much effect on the feedpoint
> impedance. As you lower the frequency or shorten the antenna, the
> resistance of the antenna (as opposed to the transmission line) drops
> fairly slowly, and the reactance becomes negative relatively quickly.
> This is in parallel with the transmission line, whose reactance becomes
> more positive as the line gets electrically shorter. If you look at the
> net result of this parallel combination, you get a feedpoint impedance
> that has a rising resistance as frequency drops or the antenna shortens,
> and a reactance that gets more negative.
>
> At some frequency below resonance, the increasing positive reactance of
> the transmission line equals the negative reactance of the antenna,
> creating a parallel resonant (sometimes called anti-resonant) circuit.
> Just before this happens, the resistance skyrockets and the feedpoint
> reactance heads positive. Exactly at parallel resonance, the reactance
> is zero (by definition of resonance) and the resistance is very high.
> And just below that frequency, the reactance heads rapidly to a high
> positive value, then begins decreasing as the frequency drops below
> that. The frequency or length where you hit anti-resonance depends on
> the impedance of the transmission line. I fished up a model of a 17.56
> foot high folded monopole with #12 conductors spaced 6 inches apart
> which I had lying around. It's resonant at about 13.25 MHz., where its
> feedpoint impedance is 143 ohms. It hits anti-resonance at about 8.5
> MHz, where its feedpoint resistance is about 15k ohms. Below that, the
> feedpoint reactance is positive, and decreases as the frequency is
lowered.
>
> If you want to model a folded monopole as a separate unfolded monopole
> and transmission line (which is a way to model one made from twinlead,
> since you can separately adjust the transmission line length to account
> for the reduced velocity factor of the transmission line mode), here's
> what you have to do.
>
> First, make the unfolded monopole from two wires, connected in parallel
> at the bottom and top, or from a single wire of equivalent diameter.
> Next, choose the impedance of the transmission line to be 1/4 the
> impedance of the actual line. You have to use a transmission line model

> for this, not a transmission line made from wires. Make sure it's in
> parallel, not series, with the source at the base of the monopole. In
> EZNEC, a transmission line is connected in parallel with a source if
> they're on the same segment. Finally, multiply the reported feedpoint
> impedance by four to find the Z of the actual folded monopole.
>
> Roy Lewallen, W7EL

I can see I did some things improperly. I'll go back and try again. Thanks a lot for explaining.

John

1413. Re: cushcraft A3S Tribander HF beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 15:10:51 UTC
From: Edward Lewis <kq6dx@pacbell.net>
Message-ID: <umkn80hbg871gt63on3h4ir6aqbodo5ijv@4ax.com>
Source record: 96062

On Sun, 25 Apr 2004 07:58:12 -0500, 'Doc <w5lz@cwis.net> wrote:
The center insulator that comes with the A744 40 meter kit for the A3S
is stronger than the insulator that comes with the A3S although it is
still not solid Maybe cushcraft has them for sale. My guess is that
the hollow insulator is not a problem at least not in california.
>Les,
> Hygain uses the same insulator for several of their
>antennas, and it can be a problem with all of them.
>Replacing it with a 'solid' insulator of some kind is
>one solution. I'm still hunting for a replacement for
>one for an 'R-7' (the only difference is in the length).
>Thought about using 'Delrin'(sp) or some other type of
>plexiglas/perspex, but haven't found a source yet.
> Good luck...
> 'Doc

1414. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 15:30:16 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <408bce46.742533421@news.galilei.com>
Source record: 96064

Hi Slick

Back when I first got into ham radio, I was just a poor widdle kid and had to home brew my first couple of rigs or get some really old Eicocraft or abandoned Heath gear for the shack.
My first receiver was a simple HR10B if I have the number right and I had home brewed a simple 40/80 meter single tube transmitter.
I saved up my money from working after school and built an HW101, which I still owned up until only a few short years ago.

The only SWR meter I had was one I picked up at a swap fest for 5 bucks. I think it was originally made for CBer's but covered all of the HF spectrum, but also could only handle up to around 10 watts.

My first antenna's were simple dipoles, and because I could only afford one length of coax I connected all of my antennas spider fashion without a balun (didn't even know what one of those were back then). But fortunately, the old rigs had a lot of tolerance for mismatched loads and high SWRs. Little by little I would get my antennas in tune.
I enjoyed CW so much that I spent almost 20 years using nothing but CW on HF, having never once plugged a microphone into my HW101 back then.

After I learned to drive, I even ran CW in my car, using a military code key that clipped to my leg with a large clamp designed for that purpose. I wish I still had the abilities I had back when I was a bubble gummer! CW was just like talking to me, I heard the words not the individual letters, never had to write anything down.

Then I got sick and was out like a light for over a week, had caught that darn Hong Kong flu virus, which was bad enough, but about a week after that I was hit with Encephalitis which caused a large memory loss and I have had periods of decreasing epileptic seizures ever since. They are now about 8 to 10 years apart and mild, but wipe out small parts of recent memory.

After surviving the Encephalitis attack, CW was as strange to me as it would be someone who never ever heard it before. It was a long hard road to learn it all over again, and it gave all of those I normally talked with on CW a chance to get their come uppance by getting even with me by using higher and higher speeds. I never regained my ability to hear the words as plainly as before.

A number of years later, long after marriage, kids and eventually buying a home, a mild seizure caused my engineerings skills to deteriorate considerable, but at the same time made learning

electronics a snap. Things at work were virtually over my head and I left that engineering companies employ and went to a company where I worked my way into chip level repairs in their electronics division. Everything just came natural to me, almost like I knew it my whole life. There was not a circuit board problem that I couldn't fix. Then after working there for about 4-1/2 years, I got hit with another seizure, this one a little rougher than the last.
The boss liked my work and held my position open for me. I went back to work, but wouldn't accept any pay until I could get back into the swing of things. I tied up a station for almost three months and could not grasp anything. Even trying to repair a simple analog power supply was far beyond my capabilities and I just wasn't getting anything back. So I left and got back into something I had done from my youth, and for the rest of my life had stayed away from anything learned beyond the age of 18, as I never forgot things from back then, except the CW from my first sickness.

I was working in electronics when I designed the antenna's I placed on my web page, they were good designs and worked great. I could run with the best of them in describing the hows and whys these antennas performed so well for me. But along with my memory loss in electronics, also came my memory loss regarding these antennas, other than I know they worked. I can look at my calculations and formulas and just go duh, having no idea what they mean. It's very frustrating to say the least. Makes one look like a blithering idiot most of the time, especially when you talk to someone you had given excellent advice to years earlier and now you can't even tie a shoelace so to speak!

My web pages went unchanged for years because I couldn't remember how to access them or write the changes in .html, had to learn that all over again too! A royal pain.

Although you don't hear about it much, there are about 1 in every 10,000 who have the same types of problems I do, and about 1 in every 1,000 who suffer from the same illness, just affected in different ways, like loss of large or small motor skills, temporary deafness, temporary blindness, that lasts for months or in some cases permanently, etc.

I have been one of the fortunate ones if you view it in a certain light. I may forget everything, but something else has always seemed to take it's place and be so sharp that it becomes natural to me. The downside is, you have to change jobs every few years. So I decided to work for myself, that way I wouldn't disappoint another employer down the road who came to count on me. I've tried, but I just can come to firing myself, hi hi.....

TTUL
Gary

1415. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 15:44:51 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <408bd997.745430921@news.galilei.com>
Source record: 96065

Thanks Tom

My ISP boasts something like 1,500 POP presences accross the country.
So almost anywhere I travel, I can access my account just like I was
at home.

My ISP knows I have moved permanently to a different state and has had
to make changes to allow my access to things like newsfeeds etc.
Because he is relatively a small provider as compared to most others,
I have never found one better or as concerned about his users.

My take on the situation is, he probably has many more outside clients
of this ring he belongs to using his services as they travel, than
what our few members use outside of his service.
So, if there is a fee, he is probably on the receiving end if money is
involved.

Being totally illiterate about how the internet actually works, but
being conscious of the local end of the wire. I set my computers to
disconnect if idle for 5 minutes. But at the same time, I do spend at
least 4 hours per day on line.

As long as it's Kosher, I would like to remain with my current ISP!
But at the same time, I don't want to make whatever ISPs phone numbers
I am using to get disgruntled about it. I may be breaking a clause in
a contract between ISPs and not even knowing about it.
I have absolutely NO idea what ISPs I work through, as my own ISP
provides only the dialup telephone numbers we use nationwide.
Although, because I'm here permanently, he did give me a different
phone number to use that does not appear on the travelers list of
numbers.

Thanks for your input Tom!

TTUL - 73+ de Gary - KG ZP

1416. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 16:05:18 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <WrudnZGcSe4jfBbdRVn-sw@comcast.com>
Source record: 96066

What kind of pest does it explain?

"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message >
> One of the pest explanations I know of can be found at:
>
>
http://home.iag.net/~w2du/Reflections2Chapter21SomeAspectsoftheBalunProblem.pdf

1417. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 17:23:19 UTC
From: "Dan Richardson"
Message-ID: <rusn80l1m5opgg8m6uv6aqe60p4tpoe003@4ax.com>
Source record: 96068

If you had followed the tread you would have seen where I had
addressed the typo.

On Sun, 25 Apr 2004 09:05:18 -0700, "CW" <clinton.magers@comcast.net>
wrote:

>What kind of pest does it explain?
>
>"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message >
>> One of the pest explanations I know of can be found at:
>>
>>
>http://home.iag.net/~w2du/Reflections2Chapter21SomeAspectsoftheBalunProblem.pdf
>

1418. Re: cushcraft A3S Tribander HF beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 17:33:36 UTC
From: les <gm4jnw@nospamhotmail.com>
Message-ID: <108ntk3kafpasc3@corp.supernews.com>
Source record: 96067

Thanks for that.
I took it that Cushcraft would have tested the antennas to destruction, so thought I was being over causious but have heard from others that the fiberglass breaks down after a while as it ages.
I have managed to get hold of an original (or at least its on its way) If I an get a replacement I will the first chance I get.
Will look at Delrin on the net and see what it is. Guess the insulator is not soild due to the extra it would cost in manufacture.
Thanks again
Les

"Edward Lewis" <kq6dx@pacbell.net> wrote in message news:umkn80hbg871gt63on3h4ir6aqbodo5ijv@4ax.com...
> On Sun, 25 Apr 2004 07:58:12 -0500, 'Doc <w5lz@cwis.net> wrote:
> The center insulator that comes with the A744 40 meter kit for the A3S
> is stronger than the insulator that comes with the A3S although it is
> still not solid Maybe cushcraft has them for sale. My guess is that
> the hollow insulator is not a problem at least not in california.
> >Les,
> > Hygain uses the same insulator for several of their
> >antennas, and it can be a problem with all of them.
> >Replacing it with a 'solid' insulator of some kind is
> >one solution. I'm still hunting for a replacement for
> >one for an 'R-7' (the only difference is in the length).
> >Thought about using 'Delrin'(sp) or some other type of
> >plexiglas/perspex, but haven't found a source yet.
> > Good luck...
> > 'Doc
>

1419. Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 18:54:28 UTC
From: Pat Myers <captain-death@to-spammers-texas.net>
Message-ID: <nsudnbVB1pvGlBHdRVn-hw@texas.net>
Source record: 95969

I have posted this on eHam.com, but thought I'd try here as well.

Sorry if this story is rather convoluted, but I'm in a bit of a quandary and any help would be appreciated.

I am getting back into ham radio after a ten year absence, and HF operating has always been my favorite. In the past I lived in a rural area, and could put up whatever sort of antennas I wanted, and was even pretty good at making my own dipoles for various bands.

However, I now live in a subdivision that, while antennas are not forbidden outright, the civic association is vicious and not to be trifled with, hence I wanted to go with something at once stealthy but versatile.

At first I thought to try the old stand-by, the G5RV, but in doing my Internet research on the issue, I came across this "Carolina Windom" multiband antenna, which seemed to give more bangs for the buck. I ended up purchasing one from an outfit that will remain nameless here, to the tune of around $150, when you include shipping, rope and other incidentals.

It was a bear of a job to put up, since I had to threat it through tree branches and whatnot (which is why I got the one with the insulated wire), but I got it up. Suspended from trees, the "matching transformer" (looks like a balun to me) and the long segment of wire was up about 35', more or less horizontal. The shorter end sloped down, with the end about 10' up (I had no alternative in this).

After making up the 100 or so foot feed line (RG-8X) and grounding the rig (8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was through the roof on all bands.

Anything more than a few watts, on 80 through 10m, made the radio shut down. I checked continuity all the way back to the antenna, and everything seems OK, except the balun shows a dead short on my VOM. However, the antenna maker says their balun is supposed to show a dead short, and when I took the antenna back down I could find nothing else wrong with it (no damaged insulation, all connections weatherproofed to the max, not that it had been up long enough to get wet, etc).

Except for power and phone lines running along the back property line (and the slinky antenna I put up later is no further away from those than the Windom was, and I am having no problems with it), there was nothing metallic nearby to detune the antenna, and even if there was, I can't imagine even that would create the high SWR I am seeing.

I called the manufacturer up and after telling me there was nothing wrong with the antenna based on what I told them, they just said to send the

antenna back to them and they would "check it out".

We finally get to my question. I have been working on getting an antenna for weeks, and am tired of fooling with assorted vendors (have dealt with several during this process, and none have impressed me).

Given how much I will pay out further on shipping the antenna both ways and the like, I am wondering if I would be better off simply buying a decent 4:1 balun, replace the existing "matching transformer" with it, and use the rest of the antenna components (wire, coax, RF choke), and if so, is this more likely to work? Based on my research, the original Windom antenna design used a 4:1 balun, and the wire lengths of the antenna I bought look to be pretty close to specs per that design, which is why I suggest this option.

Unfortunately I am no antenna guru, and even with all the information I've found on the Windom, the data is a bit ambiguous on this point. So, before I throw any more good money after bad, I would appreciate any help you all could give me in this matter. Thanks and 73.

PS What to take out of my email address to make it work is pretty obvious...:)

1420. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 19:04:54 UTC
From: richardharrison@webtv.net
Message-ID: <22480-408C0BD6-260@storefull-3257.bay.webtv.net>
Source record: 95970

John wrote:
"I`ll go back and try again."

John has the best help there is in Roy Lewallen, the creator of EZNEC. The idea of breaking the behavior of a folded dipole or unipole into its differential (transmission line)-mode and common (antenna)-mode behaviors goes back according to Paul H. Lee in "The Amateur Radio Vertical Antenna Handbook" to W.V. Roberts, "Input Impedance of a Folded Dipole", RCA Review, Vol.8, No.2, June 1947, p. 289.

Around the 1/4-wave length, the folded monopole`s resistance is steadily rising with frequency. High radiation resistance as compared with loss is good. This happens with the open-circuit 1/4-wave vertical too.

Around the 1/4-wave length, the folded monopole undergoes an abrupt change from inductive reactance when it is too short for resonance to capacitive reactance when it is too long for resonance. The open-circuit whip undergoes a similar change but it has a capacitive reactance when it is too short for resonance and an inductive reactance when it is too long for resonance..

One contributor to this folded monopole thread said he found a coil shunted across the feedpoint of an Andrew Corporation folded monopole. On page 26-12 of my 19th edition of the "ARRL Antenna Book" is described a matching technique using such a coil. It`s called the "helical hairpin" (with tongue in cheek). This method seems convenient, in conjunction with length adjustment of the folded monopole, to get a 50 + j0 impedance at the specified operating frequency. I am not privy to Andrew`s actual practice as we just placed the orders and the antennas worked as advertised.

Figure 17 on page 6-9 of my 19th edition of the "ARRL Antenna Book" is very similar in appearance to the Andrew Corporation folded monopole. There is a lot of good information in the Antenna Book on folded antennas, and more.

Best regards, Richard Harrison, KB5WZI

1421. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 19:56:06 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <qJUic.20518$YP5.1514504@attbi_s02>
Source record: 95971

Pat, before you jump off the world do you live near other hams or have a
ham club nearby? The reason I ask is that an Antenna Analyzer would help
understand what's happening. Not every ham owns one, but, generally
there are several hams in a club of 50 or more hams who would own one.

Deacon Dave, W1MCE
+ + +
Pat Myers wrote:
> I have posted this on eHam.com, but thought I'd try here as well.
>
> Sorry if this story is rather convoluted, but I'm in a bit of a quandary and
> any help would be appreciated.
>
> I am getting back into ham radio after a ten year absence, and HF operating
> has always been my favorite. In the past I lived in a rural area, and could
> put up whatever sort of antennas I wanted, and was even pretty good at
> making my own dipoles for various bands.
>
> However, I now live in a subdivision that, while antennas are not forbidden
> outright, the civic association is vicious and not to be trifled with, hence
> I wanted to go with something at once stealthy but versatile.
>
> At first I thought to try the old stand-by, the G5RV, but in doing my
> Internet research on the issue, I came across this "Carolina Windom"
> multiband antenna, which seemed to give more bangs for the buck. I ended up
> purchasing one from an outfit that will remain nameless here, to the tune of
> around $150, when you include shipping, rope and other incidentals.
>
> It was a bear of a job to put up, since I had to threat it through tree
> branches and whatnot (which is why I got the one with the insulated wire),
> but I got it up. Suspended from trees, the "matching transformer" (looks
> like a balun to me) and the long segment of wire was up about 35', more or
> less horizontal. The shorter end sloped down, with the end about 10' up (I
> had no alternative in this).
>
> After making up the 100 or so foot feed line (RG-8X) and grounding the rig
> (8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
> through the roof on all bands.
>
> Anything more than a few watts, on 80 through 10m, made the radio shut down.
> I checked continuity all the way back to the antenna, and everything seems
> OK, except the balun shows a dead short on my VOM. However, the antenna
> maker says their balun is supposed to show a dead short, and when I took the
> antenna back down I could find nothing else wrong with it (no damaged

> insulation, all connections weatherproofed to the max, not that it had been
> up long enough to get wet, etc).
>
> Except for power and phone lines running along the back property line (and
> the slinky antenna I put up later is no further away from those than the
> Windom was, and I am having no problems with it), there was nothing metallic
> nearby to detune the antenna, and even if there was, I can't imagine even
> that would create the high SWR I am seeing.
>
> I called the manufacturer up and after telling me there was nothing wrong
> with the antenna based on what I told them, they just said to send the
> antenna back to them and they would "check it out".
>
> We finally get to my question. I have been working on getting an antenna for
> weeks, and am tired of fooling with assorted vendors (have dealt with
> several during this process, and none have impressed me).
>
> Given how much I will pay out further on shipping the antenna both ways and
> the like, I am wondering if I would be better off simply buying a decent 4:1
> balun, replace the existing "matching transformer" with it, and use the rest
> of the antenna components (wire, coax, RF choke), and if so, is this more
> likely to work? Based on my research, the original Windom antenna design
> used a 4:1 balun, and the wire lengths of the antenna I bought look to be
> pretty close to specs per that design, which is why I suggest this option.
>
> Unfortunately I am no antenna guru, and even with all the information I've
> found on the Windom, the data is a bit ambiguous on this point. So, before I
> throw any more good money after bad, I would appreciate any help you all
> could give me in this matter. Thanks and 73.
>
> PS What to take out of my email address to make it work is pretty
> obvious...:)
>
>
>

1422. PCB Loop antenna using Ensemble Sv

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 20:11:12 UTC
From: Lance <lscarey@pclv.com>
Message-ID: <CXUic.37514$dZ1.143@fed1read04>
Source record: 95972

I looking to layout a loop or spiral antenna using ensemble sv.
Has anybody done this? I have completed some designs with the software based on some application notes. My problem is I having difficulty matching 50 ohm impedance and a VSWR of less than 1.5.
If someone has done this I would appreciate some advice.
Thanks

1423. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 21:01:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <469o80trkv5vl4lv6lg7me7ue9187f1hsi@4ax.com>
Source record: 95973

On Sun, 25 Apr 2004 13:54:28 -0500, "Pat Myers"
<captain-death@to-spammers-texas.net> wrote:

>At first I thought to try the old stand-by, the G5RV, but in doing my
>Internet research on the issue, I came across this "Carolina Windom"
>multiband antenna, which seemed to give more bangs for the buck.

There are simpler, cheaper ways to accomplish the same end, so let's
just make the best of what you got.

>After making up the 100 or so foot feed line (RG-8X) and grounding the rig
>(8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
>through the roof on all bands.

A copper ground rod is only good for an AC safety ground. If you want
an RF ground, you need some radials. We will skip this for the time
being.

>Anything more than a few watts, on 80 through 10m, made the radio shut down.

This is a symptom of Common Mode problems. Your feedline is
radiating. How much is immaterial until it causes the shut down. It
is apparent that the BalUn is a conventional 4:1 with no choking
action (no point in asking them why not). Put a 1:1 Current BalUn
just before it, or wrap your coax into 6-8 loops of 6 inches (at the
feed point).

>Except for power and phone lines running along the back property line (and
>the slinky antenna I put up later is no further away from those than the
>Windom was, and I am having no problems with it), there was nothing metallic
>nearby to detune the antenna, and even if there was, I can't imagine even
>that would create the high SWR I am seeing.

None of these will be so disruptive. It is Common Mode problems.
>
>I called the manufacturer up and after telling me there was nothing wrong
>with the antenna based on what I told them, they just said to send the
>antenna back to them and they would "check it out".

A waste of everyone's time.

>Given how much I will pay out further on shipping the antenna both ways and
>the like, I am wondering if I would be better off simply buying a decent 4:1
>balun, replace the existing "matching transformer" with it, and use the rest
>of the antenna components (wire, coax, RF choke), and if so, is this more
>likely to work? Based on my research, the original Windom antenna design
>used a 4:1 balun, and the wire lengths of the antenna I bought look to be

>pretty close to specs per that design, which is why I suggest this option.

The choke (or added 1:1 Current BalUn) should fix it to the point you can tune it in. You ARE using a tuner are you not? This isn't a magic antenna.

The only multiband wire antennas (with names) that do not require tuners are the ones that come with resistors built in. You did not purchase this option. You WILL need a tuner.

73's
Richard Clark, KB7QHC

1424. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 21:10:07 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6h9fl02lu7@enews2.newsguy.com>
Source record: 95977

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:22480-408C0BD6-260@storefull-3257.bay.webtv.net...
> John wrote:
> "I`ll go back and try again."
>
> John has the best help there is in Roy Lewallen, the creator of EZNEC.

I agree wholeheartedly.

> The idea of breaking the behavior of a folded dipole or unipole into its
> differential (transmission line)-mode and common (antenna)-mode
> behaviors goes back according to Paul H. Lee in "The Amateur Radio
> Vertical Antenna Handbook" to W.V. Roberts, "Input Impedance of a Folded
> Dipole", RCA Review, Vol.8, No.2, June 1947, p. 289.
>
> Around the 1/4-wave length, the folded monopole`s resistance is steadily
> rising with frequency. High radiation resistance as compared with loss
> is good. This happens with the open-circuit 1/4-wave vertical too.

This is what I'm trying to see using EZNEC. I agree with the resistance
trend, but I keep seeing capacitive reactance below 1/4-wave resonance and
inductive reactance above 1/4-wave resonance.

> Around the 1/4-wave length, the folded monopole undergoes an abrupt
> change from inductive reactance when it is too short for resonance to
> capacitive reactance when it is too long for resonance. The open-circuit
> whip undergoes a similar change but it has a capacitive reactance when
> it is too short for resonance and an inductive reactance when it is too
> long for resonance..

I see no difference in the trends.

> One contributor to this folded monopole thread said he found a coil
> shunted across the feedpoint of an Andrew Corporation folded monopole.
> On page 26-12 of my 19th edition of the "ARRL Antenna Book" is described
> a matching technique using such a coil. It`s called the "helical
> hairpin" (with tongue in cheek). This method seems convenient, in
> conjunction with length adjustment of the folded monopole, to get a 50 +
> j0 impedance at the specified operating frequency. I am not privy to
> Andrew`s actual practice as we just placed the orders and the antennas
> worked as advertised.
>
> Figure 17 on page 6-9 of my 19th edition of the "ARRL Antenna Book" is
> very similar in appearance to the Andrew Corporation folded monopole.
> There is a lot of good information in the Antenna Book on folded
> antennas, and more.

>
> Best regards, Richard Harrison, KB5WZI

My copy of the book is the 18th edition.

John

1425. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 21:23:16 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6ha8702luh@enews4.newsguy.com>
Source record: 95979

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:22480-408C0BD6-260@storefull-3257.bay.webtv.net...

> Around the 1/4-wave length, the folded monopole`s resistance is steadily
> rising with frequency. High radiation resistance as compared with loss
> is good. This happens with the open-circuit 1/4-wave vertical too.
>
> Around the 1/4-wave length, the folded monopole undergoes an abrupt
> change from inductive reactance when it is too short for resonance to
> capacitive reactance when it is too long for resonance. The open-circuit
> whip undergoes a similar change but it has a capacitive reactance when
> it is too short for resonance and an inductive reactance when it is too
> long for resonance..

Hey, Richard -

Take a look at Roy's second paragraph:

"If you're dealing with an air-dielectric folded dipole, the transmission
line stub is nearly a quarter wavelength long. So at resonance, its
impedance is high and it doesn't have much effect on the feedpoint
impedance. As you lower the frequency or shorten the antenna, the
resistance of the antenna (as opposed to the transmission line) drops
fairly slowly, and the reactance becomes negative relatively quickly.
This is in parallel with the transmission line, whose reactance becomes
more positive as the line gets electrically shorter. If you look at the
net result of this parallel combination, you get a feedpoint impedance
that has a rising resistance as frequency drops or the antenna shortens,
and a reactance that gets more negative."

What Roy is saying is also what I'm seeing with EZNEC. You are saying the
opposite reactance occurs with a folded monopole.

John

1426. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 21:23:34 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0404251323.2160b3e5@posting.google.com>
Source record: 95974

raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote in message
news:<408bce46.742533421@news.galilei.com>...
> Hi Slick
>
>
> After I learned to drive, I even ran CW in my car, using a military
> code key that clipped to my leg with a large clamp designed for that
> purpose. I wish I still had the abilities I had back when I was a
> bubble gummer! CW was just like talking to me, I heard the words not
> the individual letters, never had to write anything down.
>

Well, that must have been interesting to have that sort of
ability.

>
> Although you don't hear about it much, there are about 1 in every
> 10,000 who have the same types of problems I do, and about 1 in every
> 1,000 who suffer from the same illness, just affected in different
> ways, like loss of large or small motor skills, temporary deafness,
> temporary blindness, that lasts for months or in some cases
> permanently, etc.

Well, i found this site:
http://kidshealth.org/parent/infections/bacterial_viral/encephalitis.html

So, did you get your case from a virus?

>
> I have been one of the fortunate ones if you view it in a certain
> light. I may forget everything, but something else has always seemed
> to take it's place and be so sharp that it becomes natural to me. The
> downside is, you have to change jobs every few years. So I decided to
> work for myself, that way I wouldn't disappoint another employer down
> the road who came to count on me. I've tried, but I just can come to
> firing myself, hi hi.....
>

Well, from the Tao, we get, "Loss can be a Gain", and in your case
it might be that you gained by losing the boss!

hehe!

Slick

1427. Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 21:27:40 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408C2D4B.585CE32C@sonic.net>
Source record: 95975

Seems like everyone I talk to about using ladder line to my proposed 540' horizontal skywire loop does a double take when I say I want to use ladder line into the shack. I was curious if there are any fans of ladderline feed systems who can relate positive experiences, or am I about to really court disaster here.

The ARRL antenna book says that coax to this type of antenna is not as "multiband" friendly as was once fantasized....they recommend ladder line.

Anyone actually have such a loop? What is your experience?

Bill, K6TAJ

1428. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 21:32:59 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <48Wic.17068$S42.11272@lakeread03>
Source record: 95976

http://www.qsl.net/w5dxp/notuner.htm

"zeno" <zeno@sonic.net> wrote in message news:408C2D4B.585CE32C@sonic.net...
> Seems like everyone I talk to about using ladder line to my
> proposed 540' horizontal skywire loop does a double take when
> I say I want to use ladder line into the shack. I was curious
> if there are any fans of ladderline feed systems who can
> relate positive experiences, or am I about to really court
> disaster here.
>
> The ARRL antenna book says that coax to this type of antenna
> is not as "multiband" friendly as was once fantasized....they
> recommend ladder line.
>
> Anyone actually have such a loop? What is your experience?
>
>
> Bill, K6TAJ
>

1429. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 21:41:54 UTC
From: les <gm4jnw@nospamhotmail.com>
Message-ID: <108oc5dbsj3au40@corp.supernews.com>
Source record: 95978

The advise you have been given is good.
I will tell you my experience of Windoms. I built my own via info in the Radio communications handbook, loads of info is on the net anyway. I have a 4-1 balun at the point where the 2 horizontal wires meet and a 1-1 balun at 22ft down from this. My antenna elements run as horizontal as possible and the downlead drops down and as far away from any object that I could make it. It works brilliant THROUGH A TUNER. In my opinion you will never get the swr quoted by all the manuafactured windoms without a tuner.
BUT dont worry about the swr being a little high. All multiband antennas are a compromise, but how many of us can put up a dipole for each band.
Good luck youll find the windom works well. Basically Im saying use a tuner and dont get stressed out about the swr.

Les

"Richard Clark" <kb7qhc@comcast.net> wrote in message news:469o80trkv5vl4lv6lg7me7ue9187f1hsi@4ax.com...
> On Sun, 25 Apr 2004 13:54:28 -0500, "Pat Myers"
> <captain-death@to-spammers-texas.net> wrote:
>
> >At first I thought to try the old stand-by, the G5RV, but in doing my
> >Internet research on the issue, I came across this "Carolina Windom"
> >multiband antenna, which seemed to give more bangs for the buck.
>
> There are simpler, cheaper ways to accomplish the same end, so let's
> just make the best of what you got.
>
> >After making up the 100 or so foot feed line (RG-8X) and grounding the rig
> >(8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
> >through the roof on all bands.
>
> A copper ground rod is only good for an AC safety ground. If you want
> an RF ground, you need some radials. We will skip this for the time
> being.
>
> >Anything more than a few watts, on 80 through 10m, made the radio shut down.
>
> This is a symptom of Common Mode problems. Your feedline is
> radiating. How much is immaterial until it causes the shut down. It
> is apparent that the BalUn is a conventional 4:1 with no choking
> action (no point in asking them why not). Put a 1:1 Current BalUn
> just before it, or wrap your coax into 6-8 loops of 6 inches (at the
> feed point).

>
> >Except for power and phone lines running along the back property line
(and
> >the slinky antenna I put up later is no further away from those than the
> >Windom was, and I am having no problems with it), there was nothing
metallic
> >nearby to detune the antenna, and even if there was, I can't imagine even
> >that would create the high SWR I am seeing.
>
> None of these will be so disruptive. It is Common Mode problems.
> >
> >I called the manufacturer up and after telling me there was nothing wrong
> >with the antenna based on what I told them, they just said to send the
> >antenna back to them and they would "check it out".
>
> A waste of everyone's time.
>
> >Given how much I will pay out further on shipping the antenna both ways
and
> >the like, I am wondering if I would be better off simply buying a decent
4:1
> >balun, replace the existing "matching transformer" with it, and use the
rest
> >of the antenna components (wire, coax, RF choke), and if so, is this more
> >likely to work? Based on my research, the original Windom antenna design
> >used a 4:1 balun, and the wire lengths of the antenna I bought look to be
> >pretty close to specs per that design, which is why I suggest this
option.
>
> The choke (or added 1:1 Current BalUn) should fix it to the point you
> can tune it in. You ARE using a tuner are you not? This isn't a
> magic antenna.
>
> The only multiband wire antennas (with names) that do not require
> tuners are the ones that come with resistors built in. You did not
> purchase this option. You WILL need a tuner.
>
> 73's
> Richard Clark, KB7QHC

1430. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 22:07:36 UTC
From: richardharrison@webtv.net
Message-ID: <9270-408C36A8-237@storefull-3251.bay.webtv.net>
Source record: 95980

Ron Wrote:
"What happens to cause radiation to begin?"

Ronold W.P. King wrote in "Transmission Lines, Antennas, and Wave Guides, by King, Mimno, and Wing on page 224:
"Any closed loop of wire that is not confined to the near zone (shielded) and that does not carry equal and opposite currents very close together (adjacent and perfectly balanced though opposite) radiates at least a fraction of the power supplied at its terminals."

Radiation is a phenomenon. Energy tries to spread out from where it is to elsewhere. Unless it encounters barriers it just continues to spread.

Electromagnetic wave radiation is sustained by perpetual regeneration from mutual stimulation. The electric wave contains all the energy for an instant. The growth and decline of the electric field creates a magnetic field which in turn creates an electric field and so on. These fields can exchange their energies in a vacuum devoid of electrons or electricity. They continue through the vacuum at the speed of light. The waves go so far so fast that much energy escapes the attraction of its source to recall it.

Terman says in his 1937 edition on page 700:
"A concentric transmission line radiates no energy under ordinary conditions because the outer conductor acts as a substantially perfect shield.

The power radiated from a non-resonant two-wire line:

Power radiated=160Isqd(pi a/lambda)sqd watts

I= line current

a/lambda= spacing in wavelengths""

In a resonant line, radiation is increased by about the ratio of peak current to load current.

Best regards, Richard Harrison, KB5WZI

1431. Re: Vertical Antenna suggestions?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 22:23:13 UTC
From: No Way <YourName@home.com>
Message-ID: <Xns94D6B0E31CC5AYourNamehomecom@204.127.199.17>
Source record: 95981

I srongly suggest the Hustler 4-BTV antenna or the 5-BTV. Depending on the bands you want to use the 4-BTV does 10, 15, 20 and 40 very well. I have one and have reached Spain, Russia, South America, the Galopigos Is., and many other places far away from my Iowa shack.

It works very well.

The 5-BTV gives you 80 meter on top of the 4 offered by the 4-BTV.

73s.

"Old Ed" <eseniorsR-E-M-O-V-E@earthlink.net> wrote in news:8oUcc.107$k05.47@newsread2.news.pas.earthlink.net:

> Hi Paul -
>
> The Hy-Gain AV620 and AV640 models have good reputations for this
> type of antenna.
>
> If you have a little bigger budget, can put in a full radial system,
> and don't mind running a control cable, the SteppIR verticals should
> perform extremely well.
>
> I have a Sommer T-25, which is OK on 40, 20, 17, and 12, excellent
> on 30 and 10, but poor on 15. I normally use my dipoles on all bands
> except 10, where the Sommer performs best.
>
> I suggest you check the eHam.net Reviews on antennas. It also
> provides links to manufacturers sites, where you can (sometimes) get
> additional information.
>
> 73, Ed, W6LOL
>
> "Paul Logan" <paul.logan4@btinternet.com> wrote in message
> news:c4srkedae1@sparta.btinternet.com...
>>
>> Hi all,
>>
>> just wondering can anyone suggest some good verticals (available in
>> the
> UK)
>> for HF- say 40- 10m and also a tribander or dual bander covering 6
>> and 2m.
>>
>> regards and thanks for any help-
>>

>>
>> --
>> Paul Logan,
>> Lisnaskea, N. Ireland.
>>
>>
>>
>
>
>
>

1432. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 22:30:09 UTC
From: No Way <YourName@home.com>
Message-ID: <Xns94D6B1C7745CCYourNamehomecom@204.127.199.17>
Source record: 95982

MondayMornin <Monday@aol.com> wrote in
Who the fuck wants to listen to a bunch of crying liberals?

Hell you can hear the same shit on NBC, CBS, ABC, CNN, MSNBC, PBS, CNBC
and any of the other liberal owned radio and TV stations.

I find it fucking funny that the liberals don't feel represended on the
airwaves and think that opening up a radio station specifically for
liberals will stand a chance against the very few Conservative stations.

The problem is, you can go anywhere for liberal views, but only a few
places for conservative ones. That is why the conservative stations have
become so successful.

Air America is already showing signs of a early death. Hell they can't
even pay their bills (probably don't think they have to since liberals
usually live off of the money earned by others).

Oh well, PT. Barnum said it best when he said "There's a sucker born
every minute" and I bet that he was talking about liberals.

LOL.

news:2004040710201111272%Monday@aolcom:

> If you want to listen to Air America, check out
> alt.binaries.sounds.radio.misc
> Lots of posts there.
>
> In case you are in one of these cities, here are the Air America
> frequencies:
>
> New York: WLIB 1190 AM
> Los Angeles: KBLA 1580 AM
> Chicago: WNTD 950 AM
> Portland: KPOJ 620 AM
> Inland Empire, CA: KCAA 1050 AM
>
> XM Satellite radio
> Live Internet stream at http://www.airamericaradio.com/
>
> Many more coming soon.
>
> Drug addict Lush Limbaugh and other servants of Dingbat Bush & Co.
> are the past.
> Air America is the future- get used to it!
>

>
>

1433. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 22:30:10 UTC
From: No Way <YourName@home.com>
Message-ID: <Xns94D6B1FA625AYourNamehomecom@204.127.199.17>
Source record: 95983

MondayMornin <Monday@aol.com> wrote in
Who the fuck wants to listen to a bunch of crying liberals?

Hell you can hear the same shit on NBC, CBS, ABC, CNN, MSNBC, PBS, CNBC and any of the other liberal owned radio and TV stations.

I find it fucking funny that the liberals don't feel represended on the airwaves and think that opening up a radio station specifically for liberals will stand a chance against the very few Conservative stations.

The problem is, you can go anywhere for liberal views, but only a few places for conservative ones. That is why the conservative stations have become so successful.

Air America is already showing signs of a early death. Hell they can't even pay their bills (probably don't think they have to since liberals usually live off of the money earned by others).

Oh well, PT. Barnum said it best when he said "There's a sucker born every minute" and I bet that he was talking about liberals.

LOL.

news:20040407102011112 72%Monday@aolcom:

> If you want to listen to Air America, check out
> alt.binaries.sounds.radio.misc
> Lots of posts there.
>
> In case you are in one of these cities, here are the Air America
> frequencies:
>
> New York: WLIB 1190 AM
> Los Angeles: KBLA 1580 AM
> Chicago: WNTD 950 AM
> Portland: KPOJ 620 AM
> Inland Empire, CA: KCAA 1050 AM
>
> XM Satellite radio
> Live Internet stream at http://www.airamericaradio.com/
>
> Many more coming soon.
>
> Drug addict Lush Limbaugh and other servants of Dingbat Bush & Co.
> are the past.
> Air America is the future- get used to it!
>

>
>

1434. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 22:53:40 UTC
From: richardharrison@webtv.net
Message-ID: <18346-408C4174-270@storefull-3258.bay.webtv.net>
Source record: 95984

John wrote:
"What Roy is saying is also what I`m seeing with EZNEC. You are saying the opposite reactance occurs with a folded monopole."

On Fri. Apr. 23. 2004, 4:19 pm (CDT-2) Roy Lewallen wrote:
"This can be resonated as Richard Harrison recently pointed out, with a series capacitor."

Why? look above in Roy`s posting:
"---EZNEC shows a feedpoint impedance of 46.1 + j1893 ohms."

The + j1893 is inductive, not capacitive. It`s the reactance shown by a too short (less than 1/4-wave) folded monopole or short-circuit stub.

I believe I am on the same page with Roy.

Best regards, Richard Harrison, KB5WZI

1435. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 23:05:53 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6hg8k02o8n@enews1.newsguy.com>
Source record: 95986

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108n6gaqcllr7c6@corp.supernews.com...
> I'll once again separate the "antenna" from the "transmission line" to
> make it easier to see what's happening.

Okay! I did it!

I didn't separate out the transmission line from the antenna. Instead, I just modeled the folded monopole. I plotted on a Smith chart the resultant terminal impedance as the vertical element varied from .23 wavelengths to .245 wavelengths. It went from (73.31 - J 40.81) through (85.71 + J 0.7908) to (93.59 + J 22.56). Easy!

I found that a vertical element of .2325 wavelengths gave me 76.05 - J 30.27 ohms. That's a sweet spot for this particular antenna in that feeding it with a .143 wavelength piece of 75 Ohm coax will match to a 50 Ohm source.

To further my education, I also checked the anti-resonance point you mentioned.

Thanks!

John

1436. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 23:13:57 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <k-SdnZdVm7e02xHdRVn-jg@comcast.com>
Source record: 95985

"John" <jocjo_john@yooha.com> wrote in message
news:c6h9fl02lu7@enews2.newsguy.com...
>
> "Richard Harrison" <richardharrison@webtv.net> wrote in message
> news:22480-408C0BD6-260@storefull-3257.bay.webtv.net...
> > John wrote:
> > "I`ll go back and try again."
> >
> > John has the best help there is in Roy Lewallen, the creator of EZNEC.
>
>
> I agree wholeheartedly.
>
>
> > The idea of breaking the behavior of a folded dipole or unipole into its
> > differential (transmission line)-mode and common (antenna)-mode
> > behaviors goes back according to Paul H. Lee in "The Amateur Radio
> > Vertical Antenna Handbook" to W.V. Roberts, "Input Impedance of a Folded
> > Dipole", RCA Review, Vol.8, No.2, June 1947, p. 289.
> >
> > Around the 1/4-wave length, the folded monopole`s resistance is steadily
> > rising with frequency. High radiation resistance as compared with loss
> > is good. This happens with the open-circuit 1/4-wave vertical too.
>
>
> This is what I'm trying to see using EZNEC. I agree with the resistance
> trend, but I keep seeing capacitive reactance below 1/4-wave resonance and
> inductive reactance above 1/4-wave resonance.
>
John,
For a 1/4 wave folded monopole working above a ground plane, you have to go
below the frequency where the monopole is 1/8 wavelength before it goes
inductive. For a folded DIPOLE it is 1/4 wavelength. You are already doing
EZNEC, spend another 3 minutes with it.

Tam/WB2TT
>
> > Around the 1/4-wave length, the folded monopole undergoes an abrupt
> > change from inductive reactance when it is too short for resonance to
> > capacitive reactance when it is too long for resonance. The open-circuit
> > whip undergoes a similar change but it has a capacitive reactance when
> > it is too short for resonance and an inductive reactance when it is too
> > long for resonance..
>

>
> I see no difference in the trends.
>
>
> > One contributor to this folded monopole thread said he found a coil
> > shunted across the feedpoint of an Andrew Corporation folded monopole.
> > On page 26-12 of my 19th edition of the "ARRL Antenna Book" is described
> > a matching technique using such a coil. It`s called the "helical
> > hairpin" (with tongue in cheek). This method seems convenient, in
> > conjunction with length adjustment of the folded monopole, to get a 50 +
> > j0 impedance at the specified operating frequency. I am not privy to
> > Andrew`s actual practice as we just placed the orders and the antennas
> > worked as advertised.
> >
> > Figure 17 on page 6-9 of my 19th edition of the "ARRL Antenna Book" is
> > very similar in appearance to the Andrew Corporation folded monopole.
> > There is a lot of good information in the Antenna Book on folded
> > antennas, and more.
> >
> > Best regards, Richard Harrison, KB5WZI
>
>
> My copy of the book is the 18th edition.
>
> John
>
>

1437. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 23:36:23 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <408c5255_2@newsfeed.slurp.net>
Source record: 95992

I don't have a loop like yours, but I do feed a couple of antennas with commercial 450-ohm ladder line. No problems bringing it into the house. In fact, it cleaned up a few TVI problems I had when feeding an antenna with coax.

73,
Mike KI6P{R
El Rancho R.F., CA

"zeno" wrote
> Seems like everyone I talk to about using ladder line to my
> proposed 540' horizontal skywire loop does a double take when
> I say I want to use ladder line into the shack. I was curious
> if there are any fans of ladderline feed systems who can
> relate positive experiences, or am I about to really court
> disaster here.
>
> The ARRL antenna book says that coax to this type of antenna
> is not as "multiband" friendly as was once fantasized....they
> recommend ladder line.
>
> Anyone actually have such a loop? What is your experience?
>
>
> Bill, K6TAJ
>

1438. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-25 23:39:22 UTC
From: Dan/W4NTI <w4nti@get>
Message-ID: <K_Xic.11021$gH6.7921@newsread3.news.atl.earthlink.net>
Source record: 95987

"zeno" <zeno@sonic.net> wrote in message news:408C2D4B.585CE32C@sonic.net...
> Seems like everyone I talk to about using ladder line to my
> proposed 540' horizontal skywire loop does a double take when
> I say I want to use ladder line into the shack. I was curious
> if there are any fans of ladderline feed systems who can
> relate positive experiences, or am I about to really court
> disaster here.
>
> The ARRL antenna book says that coax to this type of antenna
> is not as "multiband" friendly as was once fantasized....they
> recommend ladder line.
>
> Anyone actually have such a loop? What is your experience?
>
>
> Bill, K6TAJ
>

I use 450 ohm ladder line on two seperate antennas here. One is a full sized 40 meter loop, in right triangle configuration, vertical. I run the line straight into the shack and into a EF Johnson Matchbox. Works all bands 40 thr 10 just fine. I run 600 watts into it, and no problems. No TVI, No computer faults, no telephone problems.

On the other antenna I have a 140 CF doublet with 450 Ladder Line feed. This into a Heathkit SA-2040 tuner. Same same as above.

The reason I am able to run the LL into the shack is that I have a large out building that I have the shack in. Run it right through, not a problem.

Just keep the line away from conductive objects and I run it up to my ceiling then out.

Dan/W4NTI

1439. Re: Capacitive loading-How?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 00:01:50 UTC
From: jgboyles@aol.com
Message-ID: <20040425200150.26642.00000434@mb-m11.aol.com>
Source record: 95988

>The stray capacitances to the rest of the world will be of the same order as
>the required value of capacitance. The presence of stray capacitances, not
>being accounted for in the design, will cause whatever it is to behave in an
>unpredictable manner.

You may be right Reg, however the capacitive loading I need is not distributed throughout the length on the antenna. Seems the stray capacitance would be distributed. In particular I need -j2500 ohms at a specific point on the antenna.
What I am attempting is to change the current distribution on an Extended Double Zepp (1.25 lambda dipole) such that the gain and F/B ratio are more to my liking. There is a published article on doing just this on a 40M EDZ. -2500 ohms at 7.2 mhz is 9pf. I just scaled it up to 147mhz to .4pf. I have tried different values of loading, and different positions on the antenna, but this seems optimum.
What I have now is a 3 element beam with 17dbi forward gain with 12 db F/B ratio, at least on paper.
>Methinks you should re-engineer whatever it is to something which requires a capacitance of something greater than 0.4 pF and is of a more realiseable
>and predictable value.
Maybe back to the drawing board? Decrease loading and change position. What size cap. would be resonable?

73 Gary N4AST

1440. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 00:02:20 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <408c5191$0$438$5cbedd26@news.real-time.com>
Source record: 95989

Roy Lewallen wrote:
> I'll once again separate the "antenna" from the "transmission line" to
> make it easier to see what's happening.

<snip>

Is it possible for someone to post the "file"/spreadsheet for this? As someone who uses EZNEC less than some other programs, I'm not sure how to set up the feed and the antenna in parallel.

Also, we had a nice presentation on the use of EZNEC at the 2004 Aurora yesterday by W0ZQ. Aurora is the yearly conference of the Northern Lights Radio Society. Other speakers included VE4MA, noted cutting edge moonbouncer - first on 24Ghz, covering broadband over powerline.

tom
K0TAR

1441. Re: Transmission line radiation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 00:03:37 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <h5CdndJ8FK9EzBHd4p2dnA@comcast.com>
Source record: 95990

I did and I did, in order. I responded before reading further.

"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
news:rusn80l1m5opgg8m6uv6aqe60p4tpoe003@4ax.com...
> If you had followed the tread you would have seen where I had
> addressed the typo.
>
> On Sun, 25 Apr 2004 09:05:18 -0700, "CW" <clinton.magers@comcast.net>
> wrote:
>
> >What kind of pest does it explain?
> >
> >"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
>
> >> One of the pest explanations I know of can be found at:
> >>
> >>
>
>http://home.iag.net/~w2du/Reflections2Chapter21SomeAspectsoftheBalunProblem
.pdf
> >
>

1442. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 00:03:49 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c6hjl5kkr1@sparta.btinternet.com>
Source record: 95991

With general purpose, multi-band antennas such as yours, taking one band with another, the higher the feedline impedance the less the loss in the feedline.

This is because feedline attenuation in dB is directly proportional to R/Zo where R is the resistance of the feedline conductors and Zo is the line impedance. This simple relationship applies from 50-ohm coax (or lower) up to 600-ohm (or more) wide-spaced open-wire line.

Ordinary 50-ohm coax is fine ONLY when the input impedance of the antenna is itself approximately 50 ohms purely resistive and the line length is not very long. But with multi-band antennas Zin is most unlikely to be anywhere near 50-ohms on any band. It is more likely, taking one band with another, to be several hundred ohms or even 1000 ohms with a high reactance component.

Assuming the conductor resistance to be of the same order for both coax and balanced-pair lines of the same length, line loss will be appreciably less for the higher impedance lines. In fact, for the physical sizes usually involved, spaced balanced wires have a lower conductor resistance than ordinary coax and this swings the use of spaced lines further in their favour.

Even a 300-ohm twin line with substantial conductors, not the flimsy old TV downlead type, will effect an improvement over the usual sort of coax. 450-ohm ladder line is most popular because of cheapness and relative ease of installation. But for perfectionists, on very long lines, a 5" or 6" spaced 600-ohm work-of-art cannot be bettered.

With low-loss, high-Zo lines SWR on the line can usually be forgotten about. But a high SWR can make severe demands on the tuner however.

Transmission line Zo, of course, is unrelated to antenna efficiency which with a high antenna is nearly always good enough to be considered 100%.

Reg, G4FGQ

1443. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 00:15:24 UTC
From: dt <NOSPAM@nospam.net>
Message-ID: <vjko80lgtn3n43tv0uli2aeck2speqjs9c@4ax.com>
Source record: 95993

I have owned an successfully used two of the 160 meter "Carolina
Windoms" from Radiworks. First commercial wire antennas I've ever
used, but I made the decsision to buy & not build, in order to save
time and get something up in the air quickly.

These antennas work well. Your installed height is not really great,
but if that's all you have to work with, then so be it.

Radioworks' Carolina Windom (at least the 160M version) has around a
2:1 to 3:1 SWR on the 160-10M ham bands....which pretty much dictates
the use of a tuner; with your height, SWR will probably be a bit
higher. The design has some kind of balun at the junction of the
horizontal elements, and an RF choke at the end of the 22' "radiating
feedline".

With insulated wire, I don't know what variables you'll have...sounds
like it is made by another company, so your mileage may vary.

Good luck & 73
dt

On Sun, 25 Apr 2004 13:54:28 -0500, "Pat Myers"
<captain-death@to-spammers-texas.net> wrote:

>I have posted this on eHam.com, but thought I'd try here as well.
>
>Sorry if this story is rather convoluted, but I'm in a bit of a quandary and
>any help would be appreciated.
>
>I am getting back into ham radio after a ten year absence, and HF operating
>has always been my favorite. In the past I lived in a rural area, and could
>put up whatever sort of antennas I wanted, and was even pretty good at
>making my own dipoles for various bands.
>
>However, I now live in a subdivision that, while antennas are not forbidden
>outright, the civic association is vicious and not to be trifled with, hence
>I wanted to go with something at once stealthy but versatile.
>
>At first I thought to try the old stand-by, the G5RV, but in doing my
>Internet research on the issue, I came across this "Carolina Windom"
>multiband antenna, which seemed to give more bangs for the buck. I ended up
>purchasing one from an outfit that will remain nameless here, to the tune of
>around $150, when you include shipping, rope and other incidentals.
>
>It was a bear of a job to put up, since I had to threat it through tree
>branches and whatnot (which is why I got the one with the insulated wire),

>but I got it up. Suspended from trees, the "matching transformer" (looks
>like a balun to me) and the long segment of wire was up about 35', more or
>less horizontal. The shorter end sloped down, with the end about 10' up (I
>had no alternative in this).
>
>After making up the 100 or so foot feed line (RG-8X) and grounding the rig
>(8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
>through the roof on all bands.
>
>Anything more than a few watts, on 80 through 10m, made the radio shut down.
>I checked continuity all the way back to the antenna, and everything seems
>OK, except the balun shows a dead short on my VOM. However, the antenna
>maker says their balun is supposed to show a dead short, and when I took the
>antenna back down I could find nothing else wrong with it (no damaged
>insulation, all connections weatherproofed to the max, not that it had been
>up long enough to get wet, etc).
>
>Except for power and phone lines running along the back property line (and
>the slinky antenna I put up later is no further away from those than the
>Windom was, and I am having no problems with it), there was nothing metallic
>nearby to detune the antenna, and even if there was, I can't imagine even
>that would create the high SWR I am seeing.
>
>I called the manufacturer up and after telling me there was nothing wrong
>with the antenna based on what I told them, they just said to send the
>antenna back to them and they would "check it out".
>
>We finally get to my question. I have been working on getting an antenna for
>weeks, and am tired of fooling with assorted vendors (have dealt with
>several during this process, and none have impressed me).
>
>Given how much I will pay out further on shipping the antenna both ways and
>the like, I am wondering if I would be better off simply buying a decent 4:1
>balun, replace the existing "matching transformer" with it, and use the rest
>of the antenna components (wire, coax, RF choke), and if so, is this more
>likely to work? Based on my research, the original Windom antenna design
>used a 4:1 balun, and the wire lengths of the antenna I bought look to be
>pretty close to specs per that design, which is why I suggest this option.
>
>Unfortunately I am no antenna guru, and even with all the information I've
>found on the Windom, the data is a bit ambiguous on this point. So, before I
>throw any more good money after bad, I would appreciate any help you all
>could give me in this matter. Thanks and 73.
>
>PS What to take out of my email address to make it work is pretty
>obvious...:)
>
>

1444. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 00:19:13 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <5AYic.21677$cF6.901671@attbi_s04>
Source record: 95994

I don't have a loop but I have used 600 ohm open wire line for years and
love it!

It does require good tuner or, in Cecil's designs, controlled lengths of
line, for a good match. I transition from ladder line to coax using a
current balun and bring the coax into the shack. This is about a 10 foot
run of coax. I run a KW when required and no problems in wind, rain,
snow or ice.

Deacon Dave, W1MCE
+ + +

zeno wrote:

> Seems like everyone I talk to about using ladder line to my
> proposed 540' horizontal skywire loop does a double take when
> I say I want to use ladder line into the shack. I was curious
> if there are any fans of ladderline feed systems who can
> relate positive experiences, or am I about to really court
> disaster here.
>
> The ARRL antenna book says that coax to this type of antenna
> is not as "multiband" friendly as was once fantasized....they
> recommend ladder line.
>
> Anyone actually have such a loop? What is your experience?
>
>
> Bill, K6TAJ
>

1445. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 00:26:28 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86vfjnfutn.fsf@duchess.twilley.org>
Source record: 95995

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Peter" == Uncle Peter <Uncle> writes:

Peter> http://www.qsl.net/w5dxp/notuner.htm

That is the cleverest thing I've seen today. Wow. Very nifty.

My only concern when constructing something like that is how to store
the longer lengths (eight and sixteen) of ladder line -- can they be
coiled up? If so, it's less unwieldy and can scale even higher.

Of course, those hams who know binary arithmetic will luck out here.

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAjFdMGPFSfAB/ezgRArzcAJ42I07VGe2bpeKCs9sdN9V2jNfpDgCdGLPL
Yul13ErgNKsQLK1xE4fxco8=
=KS37
-----END PGP SIGNATURE-----
```

1446. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 00:54:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108one8a1399saf@corp.supernews.com>
Source record: 95996

No. The example with the positive reactance is at a frequency below parallel resonance, where the reactance goes the other way than it does just below normal resonance.

As I pointed out in my most recent posting, the antenna reactance becomes more negative at frequencies just below resonance, and the transmission line reactance more positive. Beginning at resonance, the net feedpoint reactance (the reactive part of the parallel combination of the antenna and transmission line impedances) becomes more negative as frequency decreases or the antenna gets shorter -- until parallel resonance is reached. At parallel resonance, the reactance abruptly jumps from a large negative value to a large positive value, then decreases as frequency further decreases or the antenna shortens. The example I gave in that posting showed the parallel resonance at a frequency somewhat higher than where the antenna is an eighth wave high. But the earlier example antenna with 46.1 + j1893 ohm feedpoint Z is about an eighth wave high, shorter than self resonance. Don't forget that the actual frequency of parallel resonance depends on the impedance of the transmission line, so don't make generalizations about where parallel resonance will occur for all antennas. But if you know that the folded monopole or dipole is shorter than a resonant length and its feedpoint reactance is positive, it's below parallel resonance and the reactance will decrease as frequency drops or the antenna gets shorter. If its feedpoint reactance is negative, it's above parallel resonance and the reactance will become more negative as the frequency drops or the antenna becomes shorter.

An unfolded monopole's impedance is monotonic below resonance. That is, the resistance drops and the reactance becomes more negative as you go lower in frequency, as far as you want to go. Not so with a folded monopole -- it has one behavior down to the parallel resonant point, then the magnitude of the reactance goes the other way below that. The reason is that there are two separate mechanisms at work, rather than the single one for an unfolded monopole. So if you want to make a rule about which way the reactance goes, you've got to specify whether you're above or below parallel resonance.

Roy Lewallen, W7EL

Richard Harrison wrote:
> John wrote:
> "What Roy is saying is also what I`m seeing with EZNEC. You are saying
> the opposite reactance occurs with a folded monopole."
>
> On Fri. Apr. 23. 2004, 4:19 pm (CDT-2) Roy Lewallen wrote:

> "This can be resonated as Richard Harrison recently pointed out, with a
> series capacitor."
>
> Why? look above in Roy`s posting:
> "---EZNEC shows a feedpoint impedance of 46.1 + j1893 ohms."
>
> The + j1893 is inductive, not capacitive. It`s the reactance shown by a
> too short (less than 1/4-wave) folded monopole or short-circuit stub.
>
> I believe I am on the same page with Roy.
>
> Best regards, Richard Harrison, KB5WZI

1447. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 00:58:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108onm99gs10gc3@corp.supernews.com>
Source record: 95997

Those impedances seem pretty low for a folded monopole, unless the conductor diameter is large.

When modeling two parallel wires like a folded monopole or dipole with any NEC-2 based program, it's essential that the segment junctions be aligned. For the folded dipole or monopole, simply make the wires the same lengths and give them the same number of segments.

Roy Lewallen, W7EL

John wrote:

> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:108n6gaqcllr7c6@corp.supernews.com...
>
>>I'll once again separate the "antenna" from the "transmission line" to
>>make it easier to see what's happening.
>
>
>
> Okay! I did it!
>
> I didn't separate out the transmission line from the antenna. Instead, I
> just modeled the folded monopole. I plotted on a Smith chart the resultant
> terminal impedance as the vertical element varied from .23 wavelengths to
> .245 wavelengths. It went from (73.31 - J 40.81) through (85.71 + J 0.7908)
> to (93.59 + J 22.56). Easy!
>
> I found that a vertical element of .2325 wavelengths gave me 76.05 - J 30.27
> ohms. That's a sweet spot for this particular antenna in that feeding it
> with a .143 wavelength piece of 75 Ohm coax will match to a 50 Ohm source.
>
> To further my education, I also checked the anti-resonance point you
> mentioned.
>
> Thanks!
>
> John
>
>

1448. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 01:37:53 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <SJZic.41278$fq4.23897@lakeread05>
Source record: 95998

"Dan/W4NTI" <w4nti@get rid of this mindspring.com> wrote in message
news:K_Xic.11021$gH6.7921@newsread3.news.atl.earthlink.net...
>
> "zeno" <zeno@sonic.net> wrote in message
news:408C2D4B.585CE32C@sonic.net...
> > Seems like everyone I talk to about using ladder line to my
> > proposed 540' horizontal skywire loop does a double take when
> > I say I want to use ladder line into the shack. I was curious
> > if there are any fans of ladderline feed systems who can
> > relate positive experiences, or am I about to really court
> > disaster here.
> >
> > The ARRL antenna book says that coax to this type of antenna
> > is not as "multiband" friendly as was once fantasized....they
> > recommend ladder line.
> >
> > Anyone actually have such a loop? What is your experience?
> >
> >
> > Bill, K6TAJ
> >
>
> I use 450 ohm ladder line on two seperate antennas here. One is a full
> sized 40 meter loop, in right triangle configuration, vertical. I run
the
> line straight into the shack and into a EF Johnson Matchbox. Works all
> bands 40 thr 10 just fine. I run 600 watts into it, and no problems. No
> TVI, No computer faults, no telephone problems.
>
> On the other antenna I have a 140 CF doublet with 450 Ladder Line feed.
> This into a Heathkit SA-2040 tuner. Same same as above.
>
> The reason I am able to run the LL into the shack is that I have a large
out
> building that I have the shack in. Run it right through, not a problem.
>
> Just keep the line away from conductive objects and I run it up to my
> ceiling then out.
>
> Dan/W4NTI

slightly off topic....

Hi Dan,

What kind of lightning protection do you employ for straight ladderline? What are the options (besides tossing it out the window) - if you aren't using any? I don't run any feeds through my windows, so I wondered what options that left for ladderline, etc.

Thanks

Jack
Virginia Beach

1449. Re: Antenna Joke

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 02:09:09 UTC
From: jder8745@aol.com
Message-ID: <20040425220909.02766.00000032@mb-m23.aol.com>
Source record: 95999

I think this couple were mismatched from the very start.

K9CUN

1450. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 02:47:27 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0404251847.48d84bbc@posting.google.com>
Source record: 96000

(Richard Harrison) wrote ...
> Around the 1/4-wave length, the folded monopole`s resistance is steadily
> rising with frequency. High radiation resistance as compared with loss
> is good. This happens with the open-circuit 1/4-wave vertical too.
>
> Around the 1/4-wave length, the folded monopole undergoes an abrupt
> change from inductive reactance when it is too short for resonance to
> capacitive reactance when it is too long for resonance. The open-circuit
> whip undergoes a similar change but it has a capacitive reactance when
> it is too short for resonance and an inductive reactance when it is too
> long for resonance..

Not to be picky and unncessarily perpetuate this discussion, but it's already been correctly stated in this thread that a folded monopole or dipole exhibits the same impedance characteristics around resonance as a conventional antenna. That is, when it's too short for resonance, reactance is capacitive, and is inductive if too long. And resistance is 4 times the resistance of a conventional antenna, and actually *increases* on either side of resonance, according to models.

The above statements are only true in the region of operation around 1/4 wavelength (folded monopole). As frequency or length is decreased more significantly, past the anti-resonant point (something that doesn't happen with conventional 1/4-wavelength monopoles), its characteristics take on a completely different twist, where reactance suddenly becomes (and stays) inductive and decreasing, and resistance decreases rapidly.

A folded monopole (or folded dipole) is, in some respects, like two different antennas, with two different sets of characteristics, depending on whether you are operating above or below anti-resonance. One of the problems in discussing folded monopoles/dipoles is because of just this reason -- you simply can't make general statements about how it works unless you also provide some of the parametric assumptions.

Al WA4GKQ

1451. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 03:07:24 UTC
From: jopl <hl@vn.com>
Message-ID: <c6hurt0dja@enews2.newsguy.com>
Source record: 96002

No Way wrote:

>MondayMornin <Monday@aol.com> wrote in
>Who the fuck wants to listen to a bunch of crying liberals?
>
>Hell you can hear the same shit on NBC, CBS, ABC, CNN, MSNBC, PBS, CNBC
>and any of the other liberal owned radio and TV stations.
>
>I find it fucking funny that the liberals don't feel represended on the
>airwaves and think that opening up a radio station specifically for
>liberals will stand a chance against the very few Conservative stations.
>
>The problem is, you can go anywhere for liberal views, but only a few
>places for conservative ones. That is why the conservative stations have
>become so successful.
>
>Air America is already showing signs of a early death. Hell they can't
>even pay their bills (probably don't think they have to since liberals
>usually live off of the money earned by others).
>
>Oh well, PT. Barnum said it best when he said "There's a sucker born
>every minute" and I bet that he was talking about liberals.
>
>LOL.
>
>
>news:20040407102011112 72%Monday@aolcom:
>
>
>
>>If you want to listen to Air America, check out
>>alt.binaries.sounds.radio.misc
>>Lots of posts there.
>>
>>In case you are in one of these cities, here are the Air America
>>frequencies:
>>
>>New York: WLIB 1190 AM
>>Los Angeles: KBLA 1580 AM
>>Chicago: WNTD 950 AM
>>Portland: KPOJ 620 AM
>>Inland Empire, CA: KCAA 1050 AM
>>
>>XM Satellite radio

>>Live Internet stream at http://www.airamericaradio.com/
>>
>>Many more coming soon.
>>
>> Drug addict Lush Limbaugh and other servants of Dingbat Bush & Co.
>>are the past.
>>Air America is the future- get used to it!
>>
>>
>>
>>
>>
>
>
>
You just like saying the word liberal. You don't really know what it
means but
you hear fruitcakes like Mr. Oxycotin, O'Really and that freak Hannity
use it.
You hear them throw the liberal word around in their name calling and you
think its cool to come here and do the same.
Bush is the dumbest president we have had in a long long time. He hasn't a
clue on what is going on. Chenney has his hand up dumb Bush's ass like a
sock puppet
getting George to say and do anything. Bush is a murderer. He started an
unnecessary war that
has resulted in the deaths of 711 Americans and nearly 4000 seriously
injured. And counting.
Bush has no heart or soul. I can hardly wait until the debates as Kerry
rips him to shreads and
makes Bush look like a fool in front of the whole world. He has so much
material to work with.
He is going back to Teeeeexas. God that accent makes him sound so stupid.

1452. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 03:25:57 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <4rvo80p606g86qdl0rcej2qoek7rtilge8@4ax.com>
Source record: 96001

```
On Sun, 25 Apr 2004 21:37:53 -0400, "Jack Painter" <223bthp@cox.net>
wrote:

>
>"Dan/W4NTI" <w4nti@get rid of this mindspring.com> wrote in message
>news:K_Xic.11021$gH6.7921@newsread3.news.atl.earthlink.net...
>>
>> "zeno" <zeno@sonic.net> wrote in message
>news:408C2D4B.585CE32C@sonic.net...
>> > Seems like everyone I talk to about using ladder line to my
>> > proposed 540' horizontal skywire loop does a double take when
>> > I say I want to use ladder line into the shack. I was curious
>> > if there are any fans of ladderline feed systems who can
>> > relate positive experiences, or am I about to really court
>> > disaster here.
>> >
>> > The ARRL antenna book says that coax to this type of antenna
>> > is not as "multiband" friendly as was once fantasized....they
>> > recommend ladder line.
>> >
>> > Anyone actually have such a loop? What is your experience?
>> >
>> >
>> > Bill, K6TAJ
>> >
>>
>> I use 450 ohm ladder line on two seperate antennas here. One is a full
>> sized 40 meter loop, in right triangle configuration, vertical. I run
>the
>> line straight into the shack and into a EF Johnson Matchbox. Works all
>> bands 40 thr 10 just fine. I run 600 watts into it, and no problems. No
>> TVI, No computer faults, no telephone problems.
>>
>> On the other antenna I have a 140 CF doublet with 450 Ladder Line feed.
>> This into a Heathkit SA-2040 tuner. Same same as above.
>>
>> The reason I am able to run the LL into the shack is that I have a large
>out
>> building that I have the shack in. Run it right through, not a problem.
>>
>> Just keep the line away from conductive objects and I run it up to my
>> ceiling then out.
>>
>> Dan/W4NTI
```

>
>slightly off topic....
>
>Hi Dan,
>
>What kind of lightning protection do you employ for straight ladderline?
>What are the options (besides tossing it out the window) - if you aren't
>using any? I don't run any feeds through my windows, so I wondered what
>options that left for ladderline, etc.

I've found the easiest thing is to insert banana jacks/plugs in the
ladderline just outside the window. When the clouds come, I simply
unplug.

The Wireman sells a balanced-line lightning arrester built around a
couple of spark plugs, but I'm not sure how well it works.

Bob
k5qwg

>
>Thanks
>
>Jack
>Virginia Beach
>

1453. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 03:34:16 UTC
From: JOE <JOE74465@hotmail.com>
Message-ID: <d39e6673aaaac17f6a6574eedf96975a@news.meganetnews.com>
Source record: 96003

> You just like saying the word liberal. You don't really know what it
> means

No, I think he has it just about right. What works works. What is a
waste of time fails. The proof is in the success.

Yup - he just about nailed the point. Good riddance, Air America.
No one gives a shit what you folks want to say. I can read USA
Today or the Clinton News Network and get your stale, old point
of view any day!

John Fitzgerald Kerry and his billionaire wife (who's company sends
57% of HER jobs off-shore) don't stand a chance.

Wahoo!

1454. Re: cushcraft A3S Tribander HF beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 04:20:47 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <408C8E1F.68AAE39C@cwis.net>
Source record: 96004

Edward,
I have 'good' days and 'bad' days. Seems like when
I posted that one, it must'a been a really 'bad' day.
Oh well. The 'R-7' is by Cushcraft (duh), but the rest
of it was correct. 'Delrin'(sp?) comes in all shapes
and sizes, just a form of plastic that handles RF and
sun light well. Also a brand name, and I have no idea
what the chemical composition is (other than a 47 letter
name that I could care less about). If it's an insulator,
the correct size, pretty strong, and a pretty shade of
red, almost anything would work in place of the original
fibreglass (I like red)...
'Doc

1455. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 05:15:31 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408C9AF3.97E55701@sonic.net>
Source record: 96005

Reg Edwards wrote:

> Even a 300-ohm twin line with substantial conductors, not the flimsy old TV
> downlead type, will effect an improvement over the usual sort of coax.
> 450-ohm ladder line is most popular because of cheapness and relative ease
> of installation. But for perfectionists, on very long lines, a 5" or 6"
> spaced 600-ohm work-of-art cannot be bettered.

any reason that silicon sealant would not be as good as anything else when fixing (gluing) the wires to the slotted holes of the spacers in a homebrew ladder line? Any reason why this same substance would not be appropriate to seal up the ceramic tubes where such lines go through a wall?

this stuff is tough, weather resistant, sticks, and stays flexible.

Bill, K6TAJ

1456. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 06:11:37 UTC
From: richardharrison@webtv.net
Message-ID: <9270-408CA819-299@storefull-3251.bay.webtv.net>
Source record: 96007

Roy, W7EL wrote:
"No, the example with the positive reactance is at a frequency below parallel resonance, where the reactance goes the other way than it does just below normal resonance."

Just as the usual folded dipole selected for a particular frequency is 1/2-wave, the usual folded monopole is a 1/4-wave. Shorter or longer antennas are used and harmonically related frequencies may or may not have convenient drivepoint impedances depending on which harmonic.

The folded monopole is usually tuned to be a short-circuit stub at some particular frequency and it has the shield side of the coax also connected to an elevated radial system to keep signal off the outside of the coax, and it replaces the "missing half" of a dipole. The ground plane leaves the radiation up to the vertical antenna element.

The folded monopole antenna is a resonant system with distributed constants.

Terman says on page 893 of his 1955 edition:
"As a result, the impedance of an antenna behaves in much the same manner as does the impedance of a transmission line (see Sec. 4-7)"

Sec. 4-7 is found on page 98. Here Terman says:
"The expression "Transmission-line impedance" applied to a point on a transmission line signifies the vector ratio of line voltage to line current at that particular point. This is the impedance that would be obtained if the transmission line were cut at the point in question, and the impedance looking toward the load were measured on a bridge."

In the case of a short-circuit 1/4-wave stub, Terman has Fig. 4-10(b) on page 99 of the 1955 edition. At the load, the short at the antenna tip, the power factor is shown lagging by 90-degrees which by my electronics dictionary is:
"Laggibng load - A predominantly inductive load - i.e., one in which the current lags the voltage."

What`s more, the 90-degree lag persists almost unchanged until a point is reached nearly 1/4-wavelength back from the short.In the folded monole, that would approach the drivepoint.

If the folded monopole were lengthened beyond 1/4-wave, an abrupt flip to a leading power factor angle of nearly 90-degrees would be experienced on passage through the 1/4-wave resonance point. The phase variations become less abrupt at subsequent flip points as any added 90-degree points become farther removed from the antenna tip short-circuit. The frequency is getting higher so that the antenna

appears longer in terms of wavelength or the antenna is gaining in number of 1/4-wavelengths some other way to produce multiple phase reversals.

Best regards, Richard Harrison, KB5WZI

1457. Re: cushcraft A3S Tribander HF beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 06:23:13 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404252223.1968697c@posting.google.com>
Source record: 96006

'Doc <w5lz@cwis.net> wrote in message news:<408BB5E4.9CAD1643@cwis.net>...
> Les,
> Hygain uses the same insulator for several of their
> antennas, and it can be a problem with all of them.
> Replacing it with a 'solid' insulator of some kind is
> one solution. I'm still hunting for a replacement for
> one for an 'R-7' (the only difference is in the length).
> Thought about using 'Delrin'(sp) or some other type of
> plexiglas/perspex, but haven't found a source yet.
> Good luck...
> 'Doc

I've got a A4S which has the same thing on the driven element...I've
often wondered what I'll do if that thing ever breaks...Guess the
delrin rod is one idea. I've wondered about a wood dowel that is
varnished as one solution...Or convert to boom grounded, and replace
with aluminum...But then you'd have to add a matching device...MK

1458. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 06:30:03 UTC
From: ken chattenton <k.chattenton@btopenworld.com>
Message-ID: <c6ia9b$j3u$1@titan.btinternet.com>
Source record: 96008

HI Pat,
"Pat Myers" <captain-death@to-spammers-texas.net> wrote in message
news:nsudnbVB1pvGlBHdRVn-hw@texas.net...
> I have posted this on eHam.com, but thought I'd try here as well.
>
> Sorry if this story is rather convoluted, but I'm in a bit of a quandary
and
> any help would be appreciated.
>
>
> After making up the 100 or so foot feed line (RG-8X) and grounding the rig
> (8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
> through the roof on all bands.
>
You must use an ATU with this antenna.
It is NOT a resonant ant on any band (the same as the G5RV, with the
exception of 20m in a good installation).
Most built-in ATU's will not handle the high VSWR on this type of ant also.
The only exception I have seen to this is the 'ICOM-756PRO', it seems to
manage quite well into the 'Carolina Windom'

Try an ATU before you start ripping down the ant and rebuilding it just to
find you have the same problem Pat.....cheers and good luck, Ken,
G4KIR.

1459. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 06:30:04 UTC
From: ken chattenton <k.chattenton@btopenworld.com>
Message-ID: <c6ia9b$j3u$2@titan.btinternet.com>
Source record: 96009

Hi from Ken,
"zeno" <zeno@sonic.net> wrote in message news:408C2D4B.585CE32C@sonic.net...
> Seems like everyone I talk to about using ladder line to my
> proposed 540' horizontal skywire loop does a double take when
> I say I want to use ladder line into the shack. I was curious
> if there are any fans of ladderline feed systems who can
> relate positive experiences, or am I about to really court
> disaster here.
>
> The ARRL antenna book says that coax to this type of antenna
> is not as "multiband" friendly as was once fantasized....they
> recommend ladder line.
>
> Anyone actually have such a loop? What is your experience?
>
>
> Bill, K6TAJ
>

You need to use a true 'balanced ATU' for best performance with this type of
antenna.
BalUns in a 'TransMatch' type of ATU do not make up for using a truly
balanced ATU.
Hope this helps, cheers and good luck, Ken, G4KIR.

1460. vertical dipole array

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 07:23:36 UTC
From: Angela & Gary <gmbelcas@charter.net>
Message-ID: <gmbelcas-104E6F.00233526042004@comcast.ash.giganews.com>
Source record: 96010

I would like to consider this for 20m dxing. Anyone done this/seen it published anywhere or otherwise have suggestions?? Thanks.

Gary

1461. [ANNOUNCE] --- new arm board philip LPC 2106

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 07:39:29 UTC
From: ARM MCU DEVELOPEMENT <nospamail@no_email.com>
Message-ID: <c6iep0$ile9@imsp212.netvigator.com>
Source record: 96012
Cross-posted to: rec.models.rockets,rec.radio.amateur.antenna,sci.electronics.cad,sci.electronics.design

http://arm.web7days.com

Uses Philips ARM LPC2106 microcontroller with 128kbyte Flash and 64kbyte SRAM.RTC, 2x UARTs, I2C, SPI, 2x 32bit TIMERS, 7x CCR, 6x PWM, WDT, 5V tolerant I/O, up to 60MHz operationRTC, 2x UARTs, I2C, SPI, 2x 32bit TIMERS, 7x CCR, 6x PWM, WDT, 5V tolerant I/O, up to 60MHz operation
2. Two on board voltage regulators 1.8V and 3.3V with up to 800mA current on-board

and mnay more

mcu development team

http://arm.web7days.com

1462. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 08:02:45 UTC
From: richardharrison@webtv.net
Message-ID: <22719-408CC225-286@storefull-3253.bay.webtv.net>
Source record: 96011

Al, WA4GKO wrote:
"---when it`s too short for resonance, reactance is capacitive, and is inductive if too long."

Thats exactly correct for an open circuit dipole or monopole, but folded elements are backwards because they operate like loops and shorted transmission lines.

Kraus says:
"Consider a two-wire folded dipole shown in Fig. 14-27a. The terminal resistance is approximately 300 ohms. By modifying the dipole to the general form shown in Fig. 14-27b, a wide range of terminal resistances can be obtained, depending on the value of D. This arrangement is called a T-match antenna."

The ARRL Antenna Book says:
See Fig 9. Each such T conductor and associated antenna conductor can be looked upon as a section of transmission line shorted at the end. (This is also true of the short folded monopole.) Because it is shorter than 1/4-wave it has inductive (Not Capacitive) reactance. As a consequence, if the antenna itself is exactly resonant at the operating frequency, the input impedance must be tuned out if a good match to the transmission line is to be obtained. This can be done either by shortening the antenna to obtain a value of capacitive reactance (The T-match antenna itself is open-ended) at the input terminals, or by inserting a capacitance of the proper value in series at the input terminals as shown in Fig. 10A."

The too-short T-match has excess inductance to be cancelled just as does a too-small loop or folded antenna. This is accomplished by adding capacitive reactance. This is the opposite of your short mobile whip which needs a coil.

Best regards, Richard Harrison, KB5WZI

1463. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 09:05:39 UTC
From: richardharrison@webtv.net
Message-ID: <1175-408CD0E3-346@storefull-3252.bay.webtv.net>
Source record: 96013

alhearn wrote:
"That is, when it`s too short for resonance, reactance is capacitive,
and is inductive if too long."

Just look at Terman`s phase diagram for a shorted transmission line and
I think you will agree with Capt. Lee.

Capt. Raul H. Lee, USNR, K6TS on page 31 of "The Amateur Radio Vertical
Antenna Handbook" wrote:
"The folded unipole feed principle may be easily applied to the short,
top loaded vertical radiator. The transformer action of the folded
unipole is used to give a more favorable input resistance than can be
obtained with a series feed. Another thing that the folded unipole feed
does is to reverse the sign of the input reactance. The input reactance
of a series fed tower shorter than 1/4 wavelength is always capacitive.
This means a series loading coil (spoken of in high power as a helix)
must be used to resonate the tower. With folded unipole input the feed
point reactance is always positive. (Consider the tower and feed wire to
be a shorted transmission line less than 1/4 wave long. Its input
reactance is positive.) Thus, the folded unipole may be fed with a
low-loss capacitive feed network.

Best regards, Richard Harrison, KB5WZI

1464. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 09:21:12 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c6ika8$8m4$1@titan.btinternet.com>
Source record: 96014

The electrical properties of sealing materials and greases are not defined or specified. They probably make poor dielectrics when surrounding or are in between transmission line conductors. I wouldn't use the stuff. A few spots of super-glue would be ok.

There's no need to run open-wire line through walls and windows via two spaced holes. The building material between the wires will probably be of awful dielectric quality anyway.

Just bring the pair of insulated wires close together for a short distance and run them through a single somewhat larger hole lined with a short, pvc or polythene tube. Slope the tube and the line to prevent rainwater from running indoors.

When coming through glass or DRY varnished timber a single hole is fine. On high power lines make sure the insulation on the wires where they are close together is thick enough to withstand the high voltage at high SWR.

At HF, the discontinuity in Zo due to bringing the wires close together for a few inches, even a foot or more, is absolutely negligeable. And there's nothing wrong with changing from a long open-wire line (outdoors) to a short ladder line to the transmitter (indoors).

Use a simple choke balun between the transmitter end of balanced lines and the tuner. The luxury of a balanced tuner is unnecessary.

Reg, G4FGQ

==========
> Reg Edwards wrote:
>
> > Even a 300-ohm twin line with substantial conductors, not the flimsy old
TV
> > downlead type, will effect an improvement over the usual sort of coax.
> > 450-ohm ladder line is most popular because of cheapness and relative
ease
> > of installation. But for perfectionists, on very long lines, a 5" or 6"
> > spaced 600-ohm work-of-art cannot be bettered.
>
> any reason that silicon sealant would not be as good as anything else when
> fixing (gluing) the wires to the slotted holes of the spacers in a
homebrew
> ladder line? Any reason why this same substance would not be appropriate
to
> seal up the ceramic tubes where such lines go through a wall?
>

> this stuff is tough, weather resistant, sticks, and stays flexible.
>
> Bill, K6TAJ
>

1465. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 10:22:22 UTC
From: David J Windisch <davidw@copper.net>
Message-ID: <408ce324_3@newsfeed.slurp.net>
Source record: 96015

Hi, all concerned:

Re: subject: The simple answer is, "Yes". Then, it gets, well, complicated. TDIITDetails, YK.

After several fires-on-the-feedline with QRO and commercial steel-cored owl's, I rolled my own, and I close the (vinyl "AIRTITE"-brand) windows on parallel strips of copper flashing, fastened to the sills inside and out, to get up to the legal limit of r-f into or out of the shack. Parallel-tuned or series-tuned ckts in the shack take care of the coax-to-owl transitions.

It once was a quickie way to get on 160M, to yak with one's buddies, by deliberately tying together the ends of the owl feeder to an 80M dipole right in the shack, and feeding the thing as a wire against what ever ground was available. That mode can occur as an unintended consequence of simply using what ever lengths of "antenna" and "feedline" that fit one's situation. BT, DT .

I forestall many rfi problems in the shack by having several layers of aluminum foil, under the rug, with drain wires connected to equipment and earth ground. This cools metal microphones and knobs down nicely if one uses the quickie fix to get on 160M.

HTH.

73, Dave, N3HE

"zeno" <zeno@sonic.net> wrote in message news:408C2D4B.585CE32C@sonic.net...
> Seems like everyone I talk to about using ladder line to my
> proposed 540' horizontal skywire loop does a double take when
> I say I want to use ladder line into the shack. I was curious
> if there are any fans of ladderline feed systems who can
> relate positive experiences, or am I about to really court
> disaster here.
>
> The ARRL antenna book says that coax to this type of antenna
> is not as "multiband" friendly as was once fantasized....they
> recommend ladder line.
>
> Anyone actually have such a loop? What is your experience?
>
>
> Bill, K6TAJ
>

1466. OT: SPAM

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 10:39:47 UTC
From: David J Windisch <davidw@copper.net>
Message-ID: <408ce731_5@newsfeed.slurp.net>
Source record: 96016

Hi, all concerned:

FWIW, turned this OT annoyance into a game-condition by saving it in an OE6 file, and sorting it by "alpha" by "subject" by "from". Eventually, I'll get a life, I guess, but in the meantime, it's interesting to analyze trends and read headers. Seems to be lots of spoofs out there.

The file's getting huge ;o)

73, Dave, N3HE

1467. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 13:09:29 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6j1me01k3j@enews2.newsguy.com>
Source record: 96017

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108onm99gs10gc3@corp.supernews.com...
> Those impedances seem pretty low for a folded monopole, unless the
> conductor diameter is large.
>
> When modeling two parallel wires like a folded monopole or dipole with
> any NEC-2 based program, it's essential that the segment junctions be
> aligned. For the folded dipole or monopole, simply make the wires the
> same lengths and give them the same number of segments.
>
> Roy Lewallen, W7EL

You are correct again. I had different numbers of segments of the parallel wires. When the segments are about the same number, the terminal impedance goes up. I am also trying to run as many segments as practical so the accuracy is greatest.

John

1468. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 14:11:18 UTC
From: Bill Grimwood <bill@grimwood.net>
Message-ID: <108sq8tp7q5ot56@corp.supernews.com>
Source record: 95961

I have a Carolina Windom 160 up 50 feet and am using an Icom 756 Pro. The ATU in the pro will not quite tune the antenna so I added an MFJ tuner and am able to tune it up fine.

73 Bill W4WEG

"Pat Myers" <captain-death@to-spammers-texas.net> wrote in message news:nsudnbVB1pvGlBHdRVn-hw@texas.net...
> I have posted this on eHam.com, but thought I'd try here as well.
>
> Sorry if this story is rather convoluted, but I'm in a bit of a quandary and
> any help would be appreciated.
>
> I am getting back into ham radio after a ten year absence, and HF operating
> has always been my favorite. In the past I lived in a rural area, and could
> put up whatever sort of antennas I wanted, and was even pretty good at
> making my own dipoles for various bands.
>
> However, I now live in a subdivision that, while antennas are not forbidden
> outright, the civic association is vicious and not to be trifled with, hence
> I wanted to go with something at once stealthy but versatile.
>
> At first I thought to try the old stand-by, the G5RV, but in doing my
> Internet research on the issue, I came across this "Carolina Windom"
> multiband antenna, which seemed to give more bangs for the buck. I ended up
> purchasing one from an outfit that will remain nameless here, to the tune of
> around $150, when you include shipping, rope and other incidentals.
>
> It was a bear of a job to put up, since I had to threat it through tree
> branches and whatnot (which is why I got the one with the insulated wire),
> but I got it up. Suspended from trees, the "matching transformer" (looks
> like a balun to me) and the long segment of wire was up about 35', more or
> less horizontal. The shorter end sloped down, with the end about 10' up (I
> had no alternative in this).
>
> After making up the 100 or so foot feed line (RG-8X) and grounding the rig
> (8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
> through the roof on all bands.

>
> Anything more than a few watts, on 80 through 10m, made the radio shut
down.
> I checked continuity all the way back to the antenna, and everything seems
> OK, except the balun shows a dead short on my VOM. However, the antenna
> maker says their balun is supposed to show a dead short, and when I took
the
> antenna back down I could find nothing else wrong with it (no damaged
> insulation, all connections weatherproofed to the max, not that it had
been
> up long enough to get wet, etc).
>
> Except for power and phone lines running along the back property line (and
> the slinky antenna I put up later is no further away from those than the
> Windom was, and I am having no problems with it), there was nothing
metallic
> nearby to detune the antenna, and even if there was, I can't imagine even
> that would create the high SWR I am seeing.
>
> I called the manufacturer up and after telling me there was nothing wrong
> with the antenna based on what I told them, they just said to send the
> antenna back to them and they would "check it out".
>
> We finally get to my question. I have been working on getting an antenna
for
> weeks, and am tired of fooling with assorted vendors (have dealt with
> several during this process, and none have impressed me).
>
> Given how much I will pay out further on shipping the antenna both ways
and
> the like, I am wondering if I would be better off simply buying a decent
4:1
> balun, replace the existing "matching transformer" with it, and use the
rest
> of the antenna components (wire, coax, RF choke), and if so, is this more
> likely to work? Based on my research, the original Windom antenna design
> used a 4:1 balun, and the wire lengths of the antenna I bought look to be
> pretty close to specs per that design, which is why I suggest this option.
>
> Unfortunately I am no antenna guru, and even with all the information I've
> found on the Windom, the data is a bit ambiguous on this point. So, before
I
> throw any more good money after bad, I would appreciate any help you all
> could give me in this matter. Thanks and 73.
>
> PS What to take out of my email address to make it work is pretty
> obvious...:)
>
>
>

1469. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 15:23:53 UTC
From: Tuuk <bangkokbob@yahoo.com>
Message-ID: <XP9jc.2056$_o1.239552@read2.cgocable.net>
Source record: 96018

"'''' Bush is a murderer. He started an
unnecessary war that
has resulted in the deaths of 711 Americans and nearly 4000 seriously
injured. And counting.
Bush has no heart or soul."'"''

If you knew what you were talking about you might be able to hide your
hatred for Bush. It is obvious that your hatred for Bush has seriously
distorted your knowledge of the world. I though Hams were more knowledgeable
of the world.
O, by the way, did you know that because of Bush's campaign in Iraq, the net
lives saved is approximately 35,000 each year since Saddam's fall? I would
hope that you do value each ethnic or nationality lives the same....

"jopl" <hl@vn.com> wrote in message news:c6hurt0dja@enews2.newsguy.com...
> No Way wrote:
>
> >MondayMornin <Monday@aol.com> wrote in
> >Who the fuck wants to listen to a bunch of crying liberals?
> >
> >Hell you can hear the same shit on NBC, CBS, ABC, CNN, MSNBC, PBS, CNBC
> >and any of the other liberal owned radio and TV stations.
> >
> >I find it fucking funny that the liberals don't feel represended on the
> >airwaves and think that opening up a radio station specifically for
> >liberals will stand a chance against the very few Conservative stations.
> >
> >The problem is, you can go anywhere for liberal views, but only a few
> >places for conservative ones. That is why the conservative stations have
> >become so successful.
> >
> >Air America is already showing signs of a early death. Hell they can't
> >even pay their bills (probably don't think they have to since liberals
> >usually live off of the money earned by others).
> >
> >Oh well, PT. Barnum said it best when he said "There's a sucker born
> >every minute" and I bet that he was talking about liberals.
> >
> >LOL.
> >
> >
> >news:200404071020111272%Monday@aolcom:
> >
> >
> >

> >>If you want to listen to Air America, check out
> >>alt.binaries.sounds.radio.misc
> >>Lots of posts there.
> >>
> >>In case you are in one of these cities, here are the Air America
> >>frequencies:
> >>
> >>New York: WLIB 1190 AM
> >>Los Angeles: KBLA 1580 AM
> >>Chicago: WNTD 950 AM
> >>Portland: KPOJ 620 AM
> >>Inland Empire, CA: KCAA 1050 AM
> >>
> >>XM Satellite radio
> >>Live Internet stream at http://www.airamericaradio.com/
> >>
> >>Many more coming soon.
> >>
> >> Drug addict Lush Limbaugh and other servants of Dingbat Bush & Co.
> >>are the past.
> >>Air America is the future- get used to it!
> >>
> >>
> >>
> >>
> >>
> >
> >
> >
> You just like saying the word liberal. You don't really know what it
> means but
> you hear fruitcakes like Mr. Oxycotin, O'Really and that freak Hannity
> use it.
> You hear them throw the liberal word around in their name calling and you
> think its cool to come here and do the same.
> Bush is the dumbest president we have had in a long long time. He hasn't a
> clue on what is going on. Chenney has his hand up dumb Bush's ass like a
> sock puppet
> getting George to say and do anything. Bush is a murderer. He started an
> unnecessary war that
> has resulted in the deaths of 711 Americans and nearly 4000 seriously
> injured. And counting.
> Bush has no heart or soul. I can hardly wait until the debates as Kerry
> rips him to shreads and
> makes Bush look like a fool in front of the whole world. He has so much
> material to work with.
> He is going back to Teeeeexas. God that accent makes him sound so stupid.

1470. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 15:43:52 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <408d2754.830867906@news.galilei.com>
Source record: 95919

Hi Slick

> Well, that must have been interesting to have that sort of
>ability.

Actually, what makes CW hard is trying to learn it at different
speeds. CW is entirely different at different speed levels.
I guess I should say the SOUND of a word is what is different.

When your talking to someone in person, you don't say aich eye bee oh
bee, you simply say Hi Bob

Low speed CW is like saying aich eye bee oh bee.
High speed CW is like saying Hi Bob.

A good example of this is listening for someone calling CQ, after you
do it long enough, you no longer hear the letters CQ, you hear the
SOUND the code makes for those letters and easily recognize a call for
CQ, just by the sound of it.

A new typist can tell you where every key on the keyboard is!
A seasoned typist will have trouble doing this, because the word they
are typing goes from their eyes or ears or mind, right through the
fingertips to the printed text, it's automatic, they don't stop and
think about each letter they are pressing, their fingers just do it
automatically.

Pick up some code tapes that run at 20 words per minute and you no
longer hear the individual letters, you hear words.
Good high speed code tapes work by using only a single word for
several itterations, than add a new word for several itterations, then
combine a few words into a sentence.
Pretty soon you HEAR only the words and not the individual letters.

The only time you slow your sending speed is when sending your
callsign or an unknown unfamiliar word, like an obscure town name.

In essence, you hear the PHONICS of the sound of the code that make
words, thus large words are as simple to understand as short words.

> So, did you get your case from a virus?

Yes, it was the result of high fever associated with the Hong Kong Flu
(a virus).

> Well, from the Tao, we get, "Loss can be a Gain", and in your case
>it might be that you gained by losing the boss!

I honestly have!
And really do consider myself fortunate in many ways.

From the outside looking in, it appears I have suffered some great losses and had to start over many times during my life.

Even most recently, what appears as a serious tragedy to many, has actually been the best blessing of my life.

I won't get into it unless you really want to hear about it. Suffice it to say, I dropped out of the 40 hour rat race and 100k a year, to a position of no debt and more disposable income and more time to enjoy time with my family. And NO I don't get any handouts! I work to earn my living! Just not nearly as many hours and for much less money. But I disposed of my debts by selling everything I owned and paying it all off. What I used to pay in interest charges, I now use for entertainment and time off.

TTUL
Gary

1471. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 15:46:22 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c6jase$51q$1@sparta.btinternet.com>
Source record: 95920

I thought Hams were more knowledgeable
> of the world.
==========

Hams know as much about the world as they do about SWR meters.

1472. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 16:09:17 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <408d2cee.832301328@news.galilei.com>
Source record: 95921

Hi Bill

I don't know whether my system is considered right or wrong, but it has worked for 20 years with no problems at all and no TVI.

On the wall outside of my shack is a 1/16" thick copper plate that measures about 14" x 18" A #6 braided copper cable, brazed along the left edge, along with 3 bolts through it as well, connects to an 8 foot grounding rod with clamps. It is through holes in this copper plate that all wires lead into the shack.

On the inside of the house, a section of drywall was removed from between the studs temporarily, in order to install 9 gas bottle lighting arresters inside the wall. The grounding cables from them #8 copper pass through clamps (similar to romex connectors) at the bottom of the copper plate and also connect to the grounding rod. Two open ports (from inside to outside) were made through the wall using 3 inch partially flattened PVC pipe with TWO 3/4 inch PVC pipes spaced to the edges of this pipe, the center was filled with a 1-1/4 inch PVC pipe and around it filled with spray foam and trimmed flush after drying. The drywall section removed was drilled where the gas bottles and 2 openings were made and refitted to the wall and finished off with joint compound, etc. so it looks like it was never removed.

This setup gives my place for through the wall connections to my antenna's and I never needed to use all of the ports I installed in my 20 years there.

I have handled ladderline in a couple of different ways over the years. Initially, I passed my ladder line, one leg through each of the 3/4 PVC tubes and on the inside to my tuner, on the outside to the antenna it was used with, in this case a loop skywire.

A rotor cable was fed through one of the 3/4 inch PVC tubes at the other end of the panel. A major mistake as when I did take a lightning hit, the only place it got into the shack was through this abandoned rotor cable. No real harm done other than a rotor cable welded to the back of two filing cabinets by lighting, and a pooch who will never come into my shack again after getting dowsed with flying sparks.

I later, after moving my desk to a different wall and didn't want open ladder line running free in the room, used the gas bottles as lead ins for the ladder line and coax from the gas bottle to the tuner. I saw no difference in performance doing it this way, and it was much safer in my opinion. Previously, I used a knife switch to run the ladder to

ground when not in use. Now it just stays connected all the time through the gas bottles.

As an aside, I had a similar set-up at my former house, only without the gas bottle lightning arresters. Then I would use connectors through the copper plate which grounded the braid to the copper plate.

In all cases, after my system was installed, I heavily sprayed the copper plate with like 4 coats of trumpet laquer, which also sealed all of the connections against moisture. Silicone was not available at that time (30 years ago) to the public that I know of. We also used a lot of tar strips back in those days also to wrap around connectors and areas of exposure to the elements.

In places where it is feasible, I prefer ladder line over coax! One of the best ladder lines I ever constructed was using some of my sons Monster Cable that he had used with his stereo speaker system. This heavy cable for some reason made a noticable difference in how my 80 meter loop skywire functioned. Bandwidth was definately greater, and many received station signals were stronger. Logical NO, but they were.

As an aside, I often used miniature plastic I-Beams from the hobby shop instead of wood for my spacers. When glued using an oil of mustard based glue, the adhesion was permanent. With wood, I often had the glues come loose and the spacers shift as the wood aged, and/or absorbed moisture and redried, etc.

TTUL - 73+ de Gary - KGZP

1473. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 16:19:21 UTC
From: jopl <hl@vn.com>
Message-ID: <c6jdbs070k@enews3.newsguy.com>
Source record: 95923

JOE wrote:

>>You just like saying the word liberal. You don't really know what it
>>means
>>
>>
>
>No, I think he has it just about right. What works works. What is a
>waste of time fails. The proof is in the success.
>
>Yup - he just about nailed the point. Good riddance, Air America.
>No one gives a shit what you folks want to say. I can read USA
>Today or the Clinton News Network and get your stale, old point
>of view any day!
>
>John Fitzgerald Kerry and his billionaire wife (who's company sends
>57% of HER jobs off-shore) don't stand a chance.
>
>Wahoo!
>
>
>
>
No. I think he has it wrong. You are just a parrot.

1474. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 16:27:58 UTC
From: jopl <hl@vn.com>
Message-ID: <c6jds707k9@enews3.newsguy.com>
Source record: 95927

Tuuk wrote:

>"''' Bush is a murderer. He started an
>unnecessary war that
>has resulted in the deaths of 711 Americans and nearly 4000 seriously
>injured. And counting.
>Bush has no heart or soul."'"'''
>
>
>If you knew what you were talking about you might be able to hide your
>hatred for Bush. It is obvious that your hatred for Bush has seriously
>distorted your knowledge of the world. I though Hams were more knowledgeable
>of the world.
>O, by the way, did you know that because of Bush's campaign in Iraq, the net
>lives saved is approximately 35,000 each year since Saddam's fall? I would
>hope that you do value each ethnic or nationality lives the same....
>
>
>
>
>
>
>
>
>"jopl" <hl@vn.com> wrote in message news:c6hurt0dja@enews2.newsguy.com...
>
>
>>No Way wrote:
>>
>>
>>
>>>MondayMornin <Monday@aol.com> wrote in
>>>Who the fuck wants to listen to a bunch of crying liberals?
>>>
>>>Hell you can hear the same shit on NBC, CBS, ABC, CNN, MSNBC, PBS, CNBC
>>>and any of the other liberal owned radio and TV stations.
>>>
>>>I find it fucking funny that the liberals don't feel represended on the
>>>airwaves and think that opening up a radio station specifically for
>>>liberals will stand a chance against the very few Conservative stations.
>>>
>>>The problem is, you can go anywhere for liberal views, but only a few
>>>places for conservative ones. That is why the conservative stations have
>>>become so successful.

>>>
>>>Air America is already showing signs of a early death. Hell they can't
>>>even pay their bills (probably don't think they have to since liberals
>>>usually live off of the money earned by others).
>>>
>>>Oh well, PT. Barnum said it best when he said "There's a sucker born
>>>every minute" and I bet that he was talking about liberals.
>>>
>>>LOL.
>>>
>>>
>>>news:200404071020111272%Monday@aolcom:
>>>
>>>
>>>
>>>
>>>
>>>>>>If you want to listen to Air America, check out
>>>>>>alt.binaries.sounds.radio.misc
>>>>>>Lots of posts there.
>>>>>>
>>>>>>In case you are in one of these cities, here are the Air America
>>>>>>frequencies:
>>>>>>
>>>>>>New York: WLIB 1190 AM
>>>>>>Los Angeles: KBLA 1580 AM
>>>>>>Chicago: WNTD 950 AM
>>>>>>Portland: KPOJ 620 AM
>>>>>>Inland Empire, CA: KCAA 1050 AM
>>>>>>
>>>>>>XM Satellite radio
>>>>>>Live Internet stream at http://www.airamericaradio.com/
>>>>>>
>>>>>>Many more coming soon.
>>>>>>
>>>>>>Drug addict Lush Limbaugh and other servants of Dingbat Bush & Co.
>>>>>>are the past.
>>>>>>Air America is the future- get used to it!
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>
>>>
>>>
>>You just like saying the word liberal. You don't really know what it
>>means but

>>you hear fruitcakes like Mr. Oxycotin, O'Really and that freak Hannity
>>use it.
>>You hear them throw the liberal word around in their name calling and you
>>think its cool to come here and do the same.
>>Bush is the dumbest president we have had in a long long time. He hasn't a
>>clue on what is going on. Chenney has his hand up dumb Bush's ass like a
>>sock puppet
>>getting George to say and do anything. Bush is a murderer. He started an
>>unnecessary war that
>>has resulted in the deaths of 711 Americans and nearly 4000 seriously
>>injured. And counting.
>>Bush has no heart or soul. I can hardly wait until the debates as Kerry
>>rips him to shreads and
>>makes Bush look like a fool in front of the whole world. He has so much
>>material to work with.
>>He is going back to Teeeeexas. God that accent makes him sound so stupid.
>>
>>
>
>
>
>
Actually your ignorance is showing again. I supported Bush until Iraq.
Daddy Bush looked like a fool after Hussein got done with him. Little
boy Bush didn't like Daddy Bush getting threatened by assassination from
Hussein.
If there is one thing good you could say about Hussein is he knew how
to keep his little area of his world Al-Quida free. Little Boy Bush fucked
everything up. Has the whole arab world hating us. Arab world is like a
hornet's
nest. Little Boy Bush's approach
to international diplomacy is to pick up a basenball bat and pound the
hell out of the hornet's
nest. Started an unnecessary war to divert attention from his failure
in Iraq, revenge for the assassination threat. But its understandable,
boy Bush
has no soul or heart. I'd like to see boy Bush send his 2 daughters over
there
to get shot at.
Come back and I'll give you some more learnen.

1475. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 16:28:29 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408D38AD.A0636569@sonic.net>
Source record: 95922

It seems to me that the slightly larger single hole through my house wall up near the peak (which is nothing more than an inch of wood really) is more intrusive than two small spaced holes through which I could insert a 3-4" long old style ceramic insulator tube. There would be a short run of 10 feet to a spot in the ceiling (again nothing more than 1/2" of redwood) into which I could use the same type of ceramic tube, after that it is only a couple more feet to the rig. I do like your idea of angling the tube coming from outside to counter the possible dripping in of moisture (rain), also will put what is called a drip loop in the line before it enters the tubes so the wires are aiming uphill at that point. I already have a balanced tuner on hand so I might as well include the luxury since I have it. I will take your advice and avoid these sealants and use a dab of super glue. In the end, if this line gives me trouble (with the neighbors phones etc.) I will go to coax. But I do want to give this old style balanced line a shot first since there seems to be a handful of operators who do recommend it.

73 Bill K6TAJ

Reg Edwards wrote:

> The electrical properties of sealing materials and greases are not defined
> or specified. They probably make poor dielectrics when surrounding or are in
> between transmission line conductors. I wouldn't use the stuff. A few
> spots of super-glue would be ok.
>
> There's no need to run open-wire line through walls and windows via two
> spaced holes. The building material between the wires will probably be of
> awful dielectric quality anyway.
>
> Just bring the pair of insulated wires close together for a short distance
> and run them through a single somewhat larger hole lined with a short, pvc
> or polythene tube. Slope the tube and the line to prevent rainwater from
> running indoors.
>
> When coming through glass or DRY varnished timber a single hole is fine. On
> high power lines make sure the insulation on the wires where they are close
> together is thick enough to withstand the high voltage at high SWR.
>
> At HF, the discontinuity in Zo due to bringing the wires close together for
> a few inches, even a foot or more, is absolutely negligeable. And there's
> nothing wrong with changing from a long open-wire line (outdoors) to a short
> ladder line to the transmitter (indoors).
>
> Use a simple choke balun between the transmitter end of balanced lines and
> the tuner. The luxury of a balanced tuner is unnecessary.

> ----
> Reg, G4FGQ
>
> ==========
> > Reg Edwards wrote:
> >
> > > Even a 300-ohm twin line with substantial conductors, not the flimsy old
> TV
> > > downlead type, will effect an improvement over the usual sort of coax.
> > > 450-ohm ladder line is most popular because of cheapness and relative
> ease
> > > of installation. But for perfectionists, on very long lines, a 5" or 6"
> > > spaced 600-ohm work-of-art cannot be bettered.
> >
> > any reason that silicon sealant would not be as good as anything else when
> > fixing (gluing) the wires to the slotted holes of the spacers in a
> homebrew
> > ladder line? Any reason why this same substance would not be appropriate
> to
> > seal up the ceramic tubes where such lines go through a wall?
> >
> > this stuff is tough, weather resistant, sticks, and stays flexible.
> >
> > Bill, K6TAJ
> >

1476. Help: Need Kansas City Tracker software / KC Tracker driver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 16:52:17 UTC
From: harry@connix.com
Message-ID: <3045d40e.0404260852.39ec824c@posting.google.com>
Source record: 95924
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.amateur.antenna

Thx for reading. I need the software/drivers for the Kansas City
Tracker board. Not online that I can find, not at amsat and
llgrace.com is a dead link. There are drivers for modified boards and
the like, but not the original .drv
Hope that someone with the software will find it in his heart to help!
I've been staring at this board (and the corrupt disk) for a long time
:-(
Thanks!
Harry
N1QVE

1477. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 16:57:59 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <408D3F97.C8F56359@uci.edu>
Source record: 95925

kashe@sonic.net wrote:
>
> On Wed, 21 Apr 2004 14:17:14 -0700, Jim Kelley <jwkelley@uci.edu>
> wrote:
>
> >Cecil Moore wrote:
> >>
> >> Jim Kelley wrote:
> >>
> >> > Cecil Moore wrote:
> >> >
> >> >>Jim Kelley wrote:
> >> >>>How much does the length change when you tilt it at 45 degrees?
> >> >>
> >> >>By the factor of the square root of two.
> >> >
> >> > Sounds kinda like one of those mythical cable stretchers. :-)
> >>
> >> By Golly, I have been looking for a cable stretcher. A tilted
> >> mercury column will perform that function.
> >
> >How so?
>
> Pascal's law.

Are you implying that any and every column of mercury must obey Pascal's
law?

73, ac6xg

1478. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 17:01:05 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408D4050.9AE981AC@sonic.net>
Source record: 95926

Hi Gary,

That is some vivid and colorful experience you describe there.

I haven't ever heard anything like that gounded copper "face" plate at the entry point to the house. What is the theory there? If it wants to arc it goes to ground?

> I don't know whether my system is considered right or wrong, but it
> has worked for 20 years with no problems at all and no TVI.
>

I am glad to hear that, since I do have a few neighbors here.

> On the wall outside of my shack is a 1/16" thick copper plate that
> measures about 14" x 18" A #6 braided copper cable, brazed along the
> left edge, along with 3 bolts through it as well, connects to an 8
> foot grounding rod with clamps. It is through holes in this copper
> plate that all wires lead into the shack.
>

What kind of insulators did you install in that copper plate for the wires to go through?

> On the inside of the house, a section of drywall was removed from
> between the studs temporarily, in order to install 9 gas bottle
> lighting arresters inside the wall.

I am not sure what this gas bottle arrester is. Are you talking about a homebrew made from some recycled material of some kind?

"I have handled ladderline in a couple of different ways over the

> years. Initially, I passed my ladder line, one leg through each of
> the 3/4 PVC tubes and on the inside to my tuner, on the outside to the
> antenna it was used with, in this case a loop skywire.
>

your use of the pvc tubes is not that different my intended use of those old ceramic tubes, It just happen to have saved a bunch here at the farm and have a bucket full of them. They were used to run the ac wires through wooden chicken house walls, you know they left those lights on so the chickens would lay more eggs....there were an awful lot of these lights running along to 100' long chicken houses. I have spent many years dismantling and remodelling these old buildings. Now we only have a half

dozen chickens and that is even too many..hi hi...what were we talking about,,,,oh yes....ladder line....

>

> As an aside, I had a similar set-up at my former house, only without
> the gas bottle lightning arresters. Then I would use connectors
> through the copper plate which grounded the braid to the copper plate.
>

I am in K6 here, not much lightning, however, I think I will put a big old knife switch in

> In places where it is feasible, I prefer ladder line over coax!
> One of the best ladder lines I ever constructed was using some of my
> sons Monster Cable that he had used with his stereo speaker system.
> This heavy cable for some reason made a noticable difference in how my
> 80 meter loop skywire functioned. Bandwidth was definately greater,
> and many received station signals were stronger. Logical NO, but they
> were.
>

Are you saying that you made your ladderline out of monster cable (braided #12 or so) by separating the two stands and keeping the insulation on it and using spacers? Or are you saying you used monster speaker cable "as is" for ladder line (those two strands would be kind of close that way, maybe that gave you a favorable impedance in that situation. I am trying to get the picture. I do have a bunch of that cable on hand as well and never even gave it a thought as applying to ham radio....it fits into my audio and speaker building hobby.....

>
> As an aside, I often used miniature plastic I-Beams from the hobby
> shop instead of wood for my spacers.

yes, the search for good spacers.....I am thinking of using those small dia. uv/pvc tubes (4") that are used as ferrules for rain gutter spikes. The company is sending me a bad of 250 without the spikes for a nominal price....samples you know.....

I don't why I am so fixed on this ladder line idea...maybe because I want to design one of those old fashioned qsl cards with a cartoon of a chicken house ham shack up on a hill with a cartoon latter line going up to a wire antenna with old fashioned glass strain insulators etc.....dah, di dah, di dah dah dah being pounded out on a log drum.......with sparks flying out to all points in the ionosphere.....

73 Bill k6taj

1479. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 17:43:19 UTC
From: Dan/W4NTI <w4nti@get>
Message-ID: <XSbjc.3470$g31.2627@newsread2.news.atl.earthlink.net>
Source record: 95928

```
"Jack Painter" <223bthp@cox.net> wrote in message
news:SJZic.41278$fq4.23897@lakeread05...
>
> "Dan/W4NTI" <w4nti@get rid of this mindspring.com> wrote in message
> news:K_Xic.11021$gH6.7921@newsread3.news.atl.earthlink.net...
> >
> > "zeno" <zeno@sonic.net> wrote in message
> news:408C2D4B.585CE32C@sonic.net...
> > > Seems like everyone I talk to about using ladder line to my
> > > proposed 540' horizontal skywire loop does a double take when
> > > I say I want to use ladder line into the shack. I was curious
> > > if there are any fans of ladderline feed systems who can
> > > relate positive experiences, or am I about to really court
> > > disaster here.
> > >
> > > The ARRL antenna book says that coax to this type of antenna
> > > is not as "multiband" friendly as was once fantasized....they
> > > recommend ladder line.
> > >
> > > Anyone actually have such a loop? What is your experience?
> > >
> > >
> > > Bill, K6TAJ
> > >
> >
> > I use 450 ohm ladder line on two seperate antennas here. One is a full
> > sized 40 meter loop, in right triangle configuration, vertical. I run
> the
> > line straight into the shack and into a EF Johnson Matchbox. Works all
> > bands 40 thr 10 just fine. I run 600 watts into it, and no problems.
No
> > TVI, No computer faults, no telephone problems.
> >
> > On the other antenna I have a 140 CF doublet with 450 Ladder Line feed.
> > This into a Heathkit SA-2040 tuner. Same same as above.
> >
> > The reason I am able to run the LL into the shack is that I have a large
> out
> > building that I have the shack in. Run it right through, not a problem.
> >
> > Just keep the line away from conductive objects and I run it up to my
> > ceiling then out.
> >
> > Dan/W4NTI
```

>
> slightly off topic....
>
> Hi Dan,
>
> What kind of lightning protection do you employ for straight ladderline?
> What are the options (besides tossing it out the window) - if you aren't
> using any? I don't run any feeds through my windows, so I wondered what
> options that left for ladderline, etc.
>
> Thanks
>
> Jack
> Virginia Beach
>
>

I don't have any lightning protection on them at this point. I normally disconnect things when I leave the 'shack' anyway.

However back in the old days the use of spark gaps were common for open wire line. Get some of the real Old Timers here to talk about that one.

Dan/W4NTI

1480. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 17:44:51 UTC
From: richardharrison@webtv.net
Message-ID: <22720-408D4A93-119@storefull-3253.bay.webtv.net>
Source record: 95929

alhearn wriote:
"That is, when it`s too short for resonance, reactance is capacitive and is inductive if too long."

True that a too-short open-circuit vertical radiator is impeded by a capacitive reactance and that a slightly too-long open-circuit radiator is impeded by inductive reactance. We are aiming for a 1/4-wave antenna. The switch from leading to lagging power factor or vice versa when passing through the resonance point is abrupt. See Terman`s diagram. The folded monopole is a short-circuit 1/4-wave transmission line stub and it behaves like one.

My 1998 ARRL Handbook displays a group of too-short antennas in Fig 20.44 on page 20.22.
Item (E) of a group of 6 would be 1/4-wave antennas is called a tri-wire unipole. It`s a vertical tower with a top support to suspend a parallel wire on either side of the tower. The tower itself is #1 wire of the tri-wire assembly and it is grounded, not insulated at the earth. Wire #2 connects the top of the tower to the earth through a variable capacitor. wire #3 drives the top of the tower and it is insulated from the earth, and is driven against the earth.

The variable capacitor is used to tune out the too-short folded monopole`s excess inductance and present 50 ohms to the feedline. The text says:

"This technique will not be suitable for matching to 50 ohm line unless the tower is less than an electrical quarter wavelength high."

Why? Over 1/4-wavelength high, the folded unipole is capacitive and adding more capacitive reactance will detune it even more. The unipole is synonymous with monopole.

It`s a fact that the sign of the reactance in the folded antenna is inverted in the too-short folded antenna from that in the too-short open-circuit antenna. That is a powerful advantage in that low-loss capacitance can be used to match the too-short folded antenna and your practical choice may have to be a lossy loading coil to match the too-short open-circuit antenna.

What`s right is right and isn`t decided by a vote, but on the probabilities from all the examples I`ve presented they are likely right by the numbers.

I have a comment on the results of WA4GKQ`s modeling results of the folded monopole. Models can be wrong for many reasons including garbage in, garbage out. I`ve measured many folded monopoles in service, at

resonance, accepting measured full power and reflecting negligible measured power and I`m sure these antennas are working well as evidenced by expected performance every day over decades at many places here and abroad. Seeing is believing for me.

Best regards, Richard Harrison, KB5WZI

1481. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 18:41:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7jkq805kgcgr1teisg20mjfj43lc2frd9p@4ax.com>
Source record: 95930

Jeez Reggie,

On Mon, 26 Apr 2004 09:21:12 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:

>The electrical properties of sealing materials and greases are not defined
>or specified.
However...
>A few spots of super-glue would be ok.

I would be MOST curious about the defined properties of this wondrous
material. However, super-glue is not a void filler a function which
may still need to be performed.

Bet let us continue.
>
>There's no need to run open-wire line through walls and windows via two
>spaced holes. The building material between the wires will probably be of
>awful dielectric quality anyway.

seems to contradict:

>When coming through glass or DRY varnished timber a single hole is fine. On
>high power lines make sure the insulation on the wires where they are close
>together is thick enough to withstand the high voltage at high SWR.

Which in turn seems to lead to another contradiction:

> At HF, the discontinuity in Zo due to bringing the wires close together for
>a few inches, even a foot or more, is absolutely negligeable.

Hmm, just about spark gap dimensioning, close to combustibles, High
SWR jacked up even higher to boost voltage nodes more (I don't know
how the "short" distance ameliorates this - must be in the actuarial
tables somewhere).

This was certainly the most obscure way of saying don't worry about
it. ;-)

73's
Richard Clark, KB7QHC

1482. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 20:11:41 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <12ejc.25796$cF6.1116838@attbi_s04>
Source record: 95931

Reg Edwards wrote:

> I thought Hams were more knowledgeable
>
>>of the world.
>
> ==========
>
> Hams know as much about the world as they do about SWR meters.
>
>

When did hams learn about SWR meters??

1483. DCTL Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 20:56:44 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0404261256.71e27686@posting.google.com>
Source record: 95932
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

The DCTL Antenna design is at http://www.n5nw.org/antennas.html

The MFJ magnetic loop antennas are quite expensive and don't cover the low bands. Homebrewing magnetic loop antennas is very tricky due to the need for WELDED connections and special capacitors that can handle thousands of volts. These tricky issues probably explain why magnetic loop antennas are so expensive. (I'm also surprised that MFJ doesn't make a larger version of the magnetic loop antennas for 80m that's perhaps 6 feet wide and long.)

The DCTL Antenna is a loop antenna made out of twin lead, and it has received rave reviews. From what I've heard, it performs well compared to other antennas of a similar size. (Obviously, it can't be as good as a full-size loop or dipole.) I believe the DCTL Antenna uses the shorted stub and open stub as loading capacitors. It's not as small as the magnetic loop antennas (4-foot wide square for 40m instead of 3-foot wide loop), but that allows the DCTL to have more radiation resistance (so that welded connections aren't needed).

Has anyone here constructed and used a DCTL Antenna? Some questions:
1. How seriously is it affected by nearby metal? I know any antenna is affected, but some are affected less than others. For example, monopoles are affected less by nearby metal. This is why apartment dwellers using a
balcony with metal railings are generally advised to use a monopole antenna and use the metal railing as the antenna ground. Mobile antennas are always monopoles instead of dipoles.
2. How do you insulate and reinforce the wires at the feedpoint? I think this could be a mechanical weak spot. Would coax sealer help? Epoxy glue? Perhaps a non-metallic box with holes drilled in for the wires?
3. Could the length of the open stub LC be adjustable to modify the resonant frequency? Perhaps one could put in a connector (Molex, PowerPole, etc.) and then add in a small open stub. Perhaps something similar could be done with the shorted end as well. Perhaps one could add ferrite chokes to electrically (but not mechanically) terminate the stub, as the RF would be mostly on the outer surface of the wires. With these adjustments, it may even be possible to make the antenna multiband. Of course, this would require deviating from the provided formulas.
4. How much feedpoint resistance can one expect from the DCTL? The author suggests using a 6:1 balun. So it sounds like the DCTL Antenna should be about 300 ohms. 300 ohms is about the characteristic impedance of twin lead. But I thought that smaller antennas normally

have feedpoint resistances WELL BELOW 50 ohms, which is an even farther cry from 300 ohms. Or do those stubs work as a matching network as well?

Jason Hsu, AG4DG
personal AAAATTTT jasonhsu.com
http://www.jasonhsu.com/ee.html
http://groups.yahoo.com/group/eeham/
http://groups.yahoo.com/group/resume_hyperinflation_fighters/
http://groups.yahoo.com/group/gmu-ece-control

1484. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 22:38:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <to3r80l4c59hgan4e56j82r5p9d98kqpf4@4ax.com>
Source record: 95933

On Mon, 26 Apr 2004 20:11:41 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:
>Reg Edwards wrote:
>
>> I thought Hams were more knowledgeable
>>>of the world.
>> Hams know as much about the world as they do about SWR meters.
>
>When did hams learn about SWR meters??

Back during WWII with the British development of RADAR and its
plumbing.

1485. Re: Help: Need Kansas City Tracker software / KC Tracker driver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 22:40:21 UTC
From: "Alan P. Biddle" <APBIDDLE@ATT.NET>
Message-ID: <jk3r805lgdep6sj19qpdr3r7vkem0gn4cg@4ax.com>
Source record: 95934

Harry,

You might try posting this to rec.radio.amateur.space.

The original DOS drivers are very old, and were a bit buggy even in their last versions. Most Windows tracking programs have their own drivers. FWIW.

Alan
WA4SCA

1486. Re: Who writes this stuff ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 22:47:43 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <408d918f$1@news.vallnet.com>
Source record: 95935

"Tom Ring" <tarnews@taring.org> wrote in message
news:408b0e44$0$432$5cbedd26@news.real-time.com...
> The only part I would wonder about is did the Everquest trading break
> the TOS. Other than that I don't see an issue if they were truly
> offering unlimited accounts. Did you run any servers? Because many
> ISPs don't allow that as you probably know.
>
> tom
> K0TAR
>
Well... I was doing in-game trader stuff.. which doesn't violate the EQ terms of service, of course.

And my account was unlimited, though it did have an 'abuse' clause. 320 hours is quite a bit of use, but I would have expected a warning message after the first month... oh well

I don't run servers on a home internet connection... well occasionally a temporary game server or something... but if I want a server that's what co-loc is for.

1487. Re: vertical dipole array

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 23:31:10 UTC
From: j999w@aol.com
Message-ID: <20040426193110.24879.00000307@mb-m18.aol.com>
Source record: 95937

How many do you want to run? Four maybe ... like a " 4 square " ?

jw
K9RZZ

1488. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 23:36:57 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <408D9D19.363D45A@cwis.net>
Source record: 95938

Bill,
I used a loop fed with ladder line through a tuner for
years. Worked pretty well on all bands but 15 meters. It
wasn't the highest thing at all, but did fine for my uses.
I placed a board in a window to feed the ladder line through.
Drilled a couple of holes, fed a couple of short sections of
wire through them, sealed them with 'hot glue' and had no
particular problems for years (no water leaking in, etc.).
I couldn't tell you the exact length of the feed line, I never
knew, and since there were no problems, I really didn't much
care how long it was. My tuner has a balun in it (suspect a
4:1?) and handled the impedances well even at full legal
limits.
My loop came down in an ice storm a couple of years ago
and as soon as I get over my 'bout' of lazy, I'll put it
back up. I didn't have any unusual FRI problems (the neighbors
did, but that's a different story, and one that was solved).
The phone and computer are only a couple of feet from the
entrance point of the ladder line and radio/amplifier. Curing
telephone and computer RFI isn't what you asked about so I
won't go into it (mine's solved anyway).
Have fun...
'Doc

zeno wrote:
>
> Seems like everyone I talk to about using ladder line to my
> proposed 540' horizontal skywire loop does a double take when
> I say I want to use ladder line into the shack. I was curious
> if there are any fans of ladderline feed systems who can
> relate positive experiences, or am I about to really court
> disaster here.
>
> The ARRL antenna book says that coax to this type of antenna
> is not as "multiband" friendly as was once fantasized....they
> recommend ladder line.
>
> Anyone actually have such a loop? What is your experience?
>
> Bill, K6TAJ

1489. A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-26 23:45:04 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <4ahjc.40373$Aq.4673@nwrddc03.gnilink.net>
Source record: 95939

I would like to estimate the radiation pattern from a pair of dipoles.
I've been told that there are computer programs available for drawing
antenna patterns. I's like to try drawing the pattern from my antenna
concept, but would sure like to get some help with learning how to do it
with EZNEC. Is there anyone on this news froup who has time and patience
and who might be willing to E-mail help to me??

Jerry

1490. Re: Folded monopole dilemma

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 01:00:43 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <%gijc.13984$e4.3714@newsread2.news.pas.earthlink.net>
Source record: 95940

"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:22719-408CC225-286@storefull-3253.bay.webtv.net...
> Al, WA4GKO wrote:
> "---when it`s too short for resonance, reactance is capacitive, and is
> inductive if too long."
>
> Thats exactly correct for an open circuit dipole or monopole, but folded
> elements are backwards because they operate like loops and shorted
> transmission lines.
>
> Kraus says:
> "Consider a two-wire folded dipole shown in Fig. 14-27a. The terminal
> resistance is approximately 300 ohms. By modifying the dipole to the
> general form shown in Fig. 14-27b, a wide range of terminal resistances
> can be obtained, depending on the value of D. This arrangement is called
> a T-match antenna."

On the page before that, page 417, Kraus also gives the impedance of the
folded dipole. He says it is 4 times the impedance of a two-wire dipole.
This means that, if the 2 wire dipole is capacitive slightly below
resonance, so is the terminal impedance of the folded dipole. Multiplying a
complex number by a real number does not change the sign of the imaginary
part.

John

1491. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 01:01:40 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <108rc7kjam5dn0c@corp.supernews.com>
Source record: 95941

Dear Jerry Martes - no call - no location:
EZNEC contains a few files describing simple antennas and good
instructions. You should work through some of those files and
read/study the instruction provided. Prof. Cebik's web site contains
additional instruction and useful observations about antenna modeling
programs. Cebik.Com
As I recall, Prof. Cebik has a book on the subject too.
Jump in. 73 Mac N8TT
P.S. Are you KD6JDJ, who has a name that is similar to yours?
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:4ahjc.40373$Aq.4673@nwrddc03.gnilink.net...
> I would like to estimate the radiation pattern from a pair of
dipoles.
> I've been told that there are computer programs available for drawing
> antenna patterns. I's like to try drawing the pattern from my antenna
> concept, but would sure like to get some help with learning how to do
it
> with EZNEC. Is there anyone on this news froup who has time and
patience
> and who might be willing to E-mail help to me??
>
> Jerry
>
>

1492. Re: vertical dipole array

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 02:07:31 UTC
From: Angela & Gary <gmbelcas@charter.net>
Message-ID: <gmbelcas-8270EF.19073026042004@comcast.ash.giganews.com>
Source record: 95942

In article <20040426193110.24879.00000307@mb-m18.aol.com>,
j999w@aol.com (J999w) wrote:

> How many do you want to run? Four maybe ... like a " 4 square " ?
>
> jw
> K9RZZ

I was thinking perhaps a triangle which would likely not have very sharp nulls at any bearing. I'm certain this will involve phase lines and relay switching but need a primer of sorts to get off on the right foot. Anyone else got ideas?? Thanks in advance.

Gary

1493. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 02:17:55 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <So-dnfrlYKdOXxDdRVn-sw@comcast.com>
Source record: 95943

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:4ahjc.40373$Aq.4673@nwrddc03.gnilink.net...
> I would like to estimate the radiation pattern from a pair of dipoles.
> I've been told that there are computer programs available for drawing
> antenna patterns. I's like to try drawing the pattern from my antenna
> concept, but would sure like to get some help with learning how to do it
> with EZNEC. Is there anyone on this news froup who has time and patience
> and who might be willing to E-mail help to me??
>
> Jerry
>
Jerry,

I have a dumb question (maybe). Do you mean two interconnected dipoles, at
the same time, or one dipole at a time?

Tam/WB2TT

1494. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 02:37:30 UTC
From: kashe@sonic.net
Message-ID: <mqhr80ts227mpb3rmapqujqnj79i78au2l@4ax.com>
Source record: 95944

On Mon, 26 Apr 2004 09:57:59 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:
>> >
>> >How so?
>>
>> Pascal's law.
>
>Are you implying that any and every column of mercury must obey Pascal's
>law?

Any column of any liquid should. Would you care to cite a
counter example?

1495. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 02:41:46 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <KLjjc.45598$G_.38653@nwrddc02.gnilink.net>
Source record: 95945

J.

Yeah, I renewed my KD6JDJ license. I used to have K6LZC and before that KL&LL. But, I sure dont know anything about HAM radio any more. I havent operated a HAM radio in about 30 years.

I've been playing with receiving pictures from the NOAA VHF satellites and I want to know about antennas for that project.

I heard about the EZNEC program this morning. I seem to have dificulty learning anything associated with computer programs. But Ill look for the program on the web tonight and try to make sense of it.

Thanks
Jerry

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:108rc7kjam5dn0c@corp.supernews.com...
> Dear Jerry Martes - no call - no location:
> EZNEC contains a few files describing simple antennas and good
> instructions. You should work through some of those files and
> read/study the instruction provided. Prof. Cebik's web site contains
> additional instruction and useful observations about antenna modeling
> programs. Cebik.Com
> As I recall, Prof. Cebik has a book on the subject too.
> Jump in. 73 Mac N8TT
> P.S. Are you KD6JDJ, who has a name that is similar to yours?
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>
>
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> news:4ahjc.40373$Aq.4673@nwrddc03.gnilink.net...
> > I would like to estimate the radiation pattern from a pair of
> dipoles.
> > I've been told that there are computer programs available for drawing
> > antenna patterns. I's like to try drawing the pattern from my antenna
> > concept, but would sure like to get some help with learning how to do
> it
> > with EZNEC. Is there anyone on this news froup who has time and
> patience
> > and who might be willing to E-mail help to me??
> >
> > Jerry
> >

> >
>

1496. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 03:02:51 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <C2kjc.42975$iX1.706127@news20.bellglobal.com>
Source record: 95946

If the best counterexample is a 'frozen' mass of Hg, it would be a wee letdown.

kashe@sonic.net wrote:
> On Mon, 26 Apr 2004 09:57:59 -0700, Jim Kelley <jwkelley@uci.edu>
> wrote:
>
>>>>How so?
>>>
>>> Pascal's law.
>>
>>Are you implying that any and every column of mercury must obey Pascal's
>>law?
>
>
> Any column of any liquid should. Would you care to cite a
> counter example?

1497. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 03:55:53 UTC
From: kashe@sonic.net
Message-ID: <6dmr805vmqe20g9ptlh2scorapgcoau68g@4ax.com>
Source record: 95947

On Mon, 26 Apr 2004 23:02:51 -0400, Bob <nowhere@nospam.org> wrote:

>If the best counterexample is a 'frozen' mass of Hg, it would be a wee
>letdown.
>

Hence my specification of "liquid".

>
>kashe@sonic.net wrote:
>> On Mon, 26 Apr 2004 09:57:59 -0700, Jim Kelley <jwkelley@uci.edu>
>> wrote:
>>
>>>>>>How so?
>>>>
>>>> Pascal's law.
>>>
>>>Are you implying that any and every column of mercury must obey Pascal's
>>>law?
>>
>>
>> Any column of any liquid should. Would you care to cite a
>> counter example?

1498. Re: PCB Loop antenna using Ensemble Sv

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 04:17:27 UTC
From: spam@spam.com
Message-ID: <408ddc9d.29586250@news.east.cox.net>
Source record: 95948

On Sun, 25 Apr 2004 13:11:12 -0700, "Lance" <lscarey@pclv.com> wrote:

>I looking to layout a loop or spiral antenna using ensemble sv.
>Has anybody done this? I have completed some designs with the software based
>on some application notes. My problem is I having difficulty matching 50 ohm
>impedance and a VSWR of less than 1.5.
>If someone has done this I would appreciate some advice.
>Thanks
>
>

Closed loops in Ensemble are interpreted as solid areas. You would need to define an air layer to remove the "middle" of the loop. I'm not sure you can do this with the SV version because the number of layers is limited. You may want to try disabling the ground layer and drawing an object on the dielectric layer to see if you can "fool" the program into making this work.

Ansoft shows examples in their literature of what's required to properly represent a microstrip quadrature hybrid network by drawing an air "object" in the middle of the hybrid.

Spirals (that do not close on themselves) may simulate properly, assuming you have enough triangles to represent the design.

Good luck.

Mark
Mark

1499. Re: vertical dipole array

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 04:32:25 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0404262032.1cd7be59@posting.google.com>
Source record: 95949

Angela & Gary <gmbelcas@charter.net> wrote in message
news:<gmbelcas-104E6F.00233526042004@comcast.ash.giganews.com>...
> I would like to consider this for 20m dxing. Anyone done this/seen it
> published anywhere or otherwise have suggestions?? Thanks.
>
> Gary

Sure, it's quite common. How many do you have in mind? Two? More? You can feed as broadside or endfire arrays. Sometimes both, for a multiband setup. In general, the maximum gain with a broadside array is with the spacing at appx 5/8 wave. In general, an endfire array will have maximum gain with about an 1/8 wave spacing. But you can use other spacings with good results. Of course, if you have a way to change phasing, IE: adjusting feedline lengths, L/C phasing box, etc, you can steer the pattern. You can get many details in the ARRL antenna handbook. Also plots of the various patterns with changes in phasing. I've paired up verticals and ran them as broadside arrays on the higher bands, but as endfire arrays on lower bands. Once ran a pair of elevated 5/8 ground planes on 10m, and crudely steered by changing coax lengths. Worked quite well for what I needed. I used them as a broadside array on 10m, but I used them as an endfire array on 30m. The "maximum" gain you can get from a pair of verticals is as a broadside array. It's peak is slightly more than the peak maximum gain of an endfire array. But the endfire gets fairly close, and can be handy sometimes being the spacing is less. 1/4 wave is a common spacing. Two verticals 1/4 wave apart, and fed 90 degrees out of phase gives a nice fat unidirectional pattern, and can easily be reversed. As I said, the possibilities of spacing/feed combinations could fill three pages of text I bet...:/ The ARRL antenna book covers it in good detail, and also the best ways to feed. There are other useful books also of course, but just that one will do the trick, and covers most other ant related topics. MK

1500. Re: vertical dipole array

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 05:07:24 UTC
From: Angela & Gary <gmbelcas@charter.net>
Message-ID: <gmbelcas-D44313.22072426042004@comcast.ash.giganews.com>
Source record: 95950

In article <25eb70d7.0404262032.1cd7be59@posting.google.com>,
nm5k@wt.net (Mark Keith) wrote:

> Angela & Gary <gmbelcas@charter.net> wrote in message
> news:<gmbelcas-104E6F.00233526042004@comcast.ash.giganews.com>...
> > I would like to consider this for 20m dxing. Anyone done this/seen it
> > published anywhere or otherwise have suggestions?? Thanks.
> >
> > Gary
>
> Sure, it's quite common. How many do you have in mind? Two? More? You
> can feed as broadside or endfire arrays. Sometimes both, for a
> multiband setup. In general, the maximum gain with a broadside array
> is with the spacing at appx 5/8 wave. In general, an endfire array
> will have maximum gain with about an 1/8 wave spacing. But you can use
> other spacings with good results. Of course, if you have a way to
> change phasing, IE: adjusting feedline lengths, L/C phasing box, etc,
> you can steer the pattern. You can get many details in the ARRL
> antenna handbook. Also plots of the various patterns with changes in
> phasing. I've paired up verticals and ran them as broadside arrays on
> the higher bands, but as endfire arrays on lower bands. Once ran a
> pair of elevated 5/8 ground planes on 10m, and crudely steered by
> changing coax lengths. Worked quite well for what I needed. I used
> them as a broadside array on 10m, but I used them as an endfire array
> on 30m. The "maximum" gain you can get from a pair of verticals is as
> a broadside array. It's peak is slightly more than the peak maximum
> gain of an endfire array. But the endfire gets fairly close, and can
> be handy sometimes being the spacing is less. 1/4 wave is a common
> spacing. Two verticals 1/4 wave apart, and fed 90 degrees out of phase
> gives a nice fat unidirectional pattern, and can easily be reversed.
> As I said, the possibilities of spacing/feed combinations could fill
> three pages of text I bet...:/ The ARRL antenna book covers it in good
> detail, and also the best ways to feed. There are other useful books
> also of course, but just that one will do the trick, and covers most
> other ant related topics. MK

Mark, thanks for the info. I was thinking of perhaps placing 3 vertical
dipoles at the apices of an equilateral triangle. What I need to
research is optimum spacing in such an arrangement (quarter perhaps?)
and details on putting together a nifty steering circuit. I must admit
that I forgot 'bout the venerable ARRL antenna book. I perused the
handbook last nite and came up dry. I will try to hit our local lib
this wkend to ferret out the details. Thanks again.

Gary

1501. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 05:53:19 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <jzmjc.46665$G_.40309@nwrddc02.gnilink.net>
Source record: 95951

Tam

I have the two dipoles fed in phase and spaced 1/4 wave apart The anrenna
really works well. I'd like to try to improve it but first need to know
more about what I'm getting now.

Jerry

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:So-dnfrIYKdOXxDdRVn-sw@comcast.com...
>
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> news:4ahjc.40373$Aq.4673@nwrddc03.gnilink.net...
> > I would like to estimate the radiation pattern from a pair of dipoles.
> > I've been told that there are computer programs available for drawing
> > antenna patterns. I's like to try drawing the pattern from my antenna
> > concept, but would sure like to get some help with learning how to do it
> > with EZNEC. Is there anyone on this news froup who has time and
patience
> > and who might be willing to E-mail help to me??
> >
> > Jerry
> >
> Jerry,
>
> I have a dumb question (maybe). Do you mean two interconnected dipoles, at
> the same time, or one dipole at a time?
>
> Tam/WB2TT
>
>

1502. Re: vertical dipole array

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 07:29:38 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86hdv5ev4t.fsf@duchess.twilley.org>
Source record: 95952

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

http://www.cebik.com/triv.html

This looks like what you are talking about. I hope it helps.

Jack.
(I want to make one someday.)
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAjgvnGPFSfAB/ezgRAlYFAKDEE4kXq8Lsy9hMEZ8klxH+U+06VQCfW6gO
CraRaspf8Dj4FVDhWSGeHLE=
=lPgx
-----END PGP SIGNATURE-----
```

1503. Re: DCTL Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 09:38:00 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0404270138.c5233b9@posting.google.com>
Source record: 95953
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0404261256.71e27686@posting.google.com>...

Hi Jason,
I tried to make a DCTL antenna for 80 m from a 300 ohm TV twinlead.
Unfortunately, after I made some measurements, a strom approached and
I put the antenna down. I have never continued the experiments since
then.

> 1. How seriously is it affected by nearby metal?
Sorry, no experience.

> 2. How do you insulate and reinforce the wires at the feedpoint?
I used several layers of adhesive tape only, as it was a temporary
experimental installation. A better construction seems to be necessary
for long-term usage. One proposal is at
http://www.radiohc.org/Distributions/Dxers/dctl-antenna.html

> 3. Could the length of the open stub LC be adjustable to modify the
> resonant frequency?
The antenna is "fine-tuned" by the open stub. The formula given in
http://www.n5nw.org/antennas.html works quite well.

> 4. How much feedpoint resistance can one expect from the DCTL? The
> author suggests using a 6:1 balun. So it sounds like the DCTL Antenna
> should be about 300 ohms. 300 ohms is about the characteristic
> impedance of twin lead.
Despite that, the RF-1 bridge showed approx. 150 ohm impedance around
resonance. Maybe it is always one half of the characteristic impedance
of the twinlead used ? And remember, the input of the antenna is
balanced.

Some more links:
http://www.io.com/~n5fc/dctl_ant.htm
http://www.radiohc.org/Distributions/Dxers/dctl-antenna.html

73 Ivan OK1SIP

1504. Re: DCTL Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 09:42:57 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0404270142.2ef2e7ed@posting.google.com>
Source record: 95954
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi, see my comments in the antenna group.
73 Ivan OK1SIP

1505. Re: DCTL Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 12:12:06 UTC
From: Alexandr Nikolaievitj Onym <a.n.onym@nowhere.tk>
Message-ID: <408E4E16.6065CC77@nowhere.tk>
Source record: 95955
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jason Hsu wrote:

> The DCTL Antenna design is at http://www.n5nw.org/antennas.html
>
> The MFJ magnetic loop antennas are quite expensive and don't cover the
> low bands. Homebrewing magnetic loop antennas is very tricky due to
> the need for WELDED connections and special capacitors that can handle
> thousands of volts. These tricky issues probably explain why magnetic
> loop antennas are so expensive. (I'm also surprised that MFJ doesn't
> make a larger version of the magnetic loop antennas for 80m that's
> perhaps 6 feet wide and long.)

>
>
> The DCTL Antenna is a loop antenna made out of twin lead, and it has
> received rave reviews. From what I've heard, it performs well
> compared to other antennas of a similar size. (Obviously, it can't be
> as good as a full-size loop or dipole.) I believe the DCTL Antenna
> uses the shorted stub and open stub as loading capacitors. It's not
> as small as the magnetic loop antennas (4-foot wide square for 40m
> instead of 3-foot wide loop), but that allows the DCTL to have more
> radiation resistance (so that welded connections aren't needed).

Er... The dctl IS a magloop. A piece of paper, some elementary formulae
and
a few minutes of thinking might brighetn things up.

The dimensions of the magloop are more or less given out of the pf/m
beteween the twinlead conductors and the dielectricity constant of the
twinlead
material. A "classic" magloop can be any size.

Radiation resistance of the dctl, is, well, smallish to say the least.

>
>
> Has anyone here constructed and used a DCTL Antenna? Some questions:
> 1. How seriously is it affected by nearby metal? I know any antenna
> is affected, but some are affected less than others. For example,
> monopoles are affected less by nearby metal. This is why apartment
> dwellers using a
> balcony with metal railings are generally advised to use a monopole
> antenna and use the metal railing as the antenna ground. Mobile
> antennas are always monopoles instead of dipoles.

The DCTL is not only a magloop, but a magnetical dipole. Magnetic
materials (such as iron) should be kept away! Non-magnetic materials
of course affects, but are not a disaster (given the poor performannce to
start with!).

>
> 2. How do you insulate and reinforce the wires at the feedpoint? I
> think this could be a mechanical weak spot. Would coax sealer help?
> Epoxy glue? Perhaps a non-metallic box with holes drilled in for the
> wires?

Self-wulcanizing rubber tape (bicycle repair kit!).

>
> 3. Could the length of the open stub LC be adjustable to modify the
> resonant frequency? Perhaps one could put in a connector (Molex,
> PowerPole, etc.) and then add in a small open stub. Perhaps something
> similar could be done with the shorted end as well. Perhaps one could
> add ferrite chokes to electrically (but not mechanically) terminate
> the stub, as the RF would be mostly on the outer surface of the wires.
> With these adjustments, it may even be possible to make the antenna
> multiband. Of course, this would require deviating from the provided
> formulas.

The stubs can (and SHOULD, IMHO) be trimmed to get the resonance at
favourable frequency. The dctl is very narrow-band. If You have got a
wide-band SVF dip, the antenna Q is bad!

>
> 4. How much feedpoint resistance can one expect from the DCTL? The
> author suggests using a 6:1 balun. So it sounds like the DCTL Antenna
> should be about 300 ohms. 300 ohms is about the characteristic
> impedance of twin lead. But I thought that smaller antennas normally
> have feedpoint resistances WELL BELOW 50 ohms, which is an even
> farther cry from 300 ohms. Or do those stubs work as a matching
> network as well?

Feedpoint resistance does not equal radiation resistance. From a matching
point of wiev, what interest us is feedpoint impedance. As we use the
dctl also when there is no resonance, I propose it is feed by a balanced
output transmatch (same principle as a "zepp").

The feed impedance is a function of the twinlead feeder length, and the
stubs
(which are used to match the thingamajig). The conclusion is that feed
impedance
is individual and adjustable!

Radiation resistance is LOW, and remember that 300 ohm twinlead is lossy.

A.N. Onym

>
>

> Jason Hsu, AG4DG
> personal AAAATTTT jasonhsu.com
> http://www.jasonhsu.com/ee.html
> http://groups.yahoo.com/group/eeham/
> http://groups.yahoo.com/group/resume_hyperinflation_fighters/
> http://groups.yahoo.com/group/gmu-ece-control

1506. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 13:02:28 UTC
From: Tuuk <bangkokbob@yahoo.com>
Message-ID: <OYsjc.3375$_12.188@read1.cgocable.net>
Source record: 95956

Ok, Lets look at what you said,,,,

"""""Actually your ignorance is showing again. I supported Bush until Iraq. Daddy Bush looked like a fool after Hussein got done with him. Little boy Bush didn't like Daddy Bush getting threatened by assassination from Hussein.""'''

I did not claim to be an expert on Iraq, so I guess I am ignorant in that subject. But your hatred for Bush is what I pointed out, painfully obvious and it is distorting your view of the world. And your knowledge of history is also limited as to its accuracy.

"''''''If there is one thing good you could say about Hussein is he knew how to keep his little area of his world Al-Quida free. Little Boy Bush fucked everything up. Has the whole arab world hating us."'''''

Saddam paid the families of suicide bombers handsomely. There are also other connections to terrorism and like I said earlier, but I will repeat in case you missed it, since he has been in captivity, the net lives saved is approximately 35,000 per year. And the Arabs and extreme muslims hate the U.S. for religious reasons and because you are the power, hyperpower and arrogant about it. They are far behind and will never catch up, so they are disgruntled about this. Remember, their objective is to kill all Americans and Christians. I think you would have criticized Bush had he done nothing. Just curious here now, and for entertainment purposes, what would your plan have been? You haven't offered a better plan which you should have done when you criticize some else's plan. Remember, Bush's plan already has a net lives saved recognized of approx 35,000 per year.

'"''Little Boy Bush's approach
to international diplomacy is to pick up a basenball bat and pound the hell out of the hornet's
nest."''''"'

Again, what would your approach be? How would you rid the world of terrorism, stop the targeting and killing of Christians and Americans? He is your leader, he has to do something to make America more safer, peaceful, etc. How would you do it? For example, right after someone flies two planes into buildings killing 3000 innocent people, so how would you satisfy the U.S. citizens requirements, you forgot to mention.

''"'''Started an unnecessary war to divert attention from his failure
in Iraq, revenge for the assassination threat. But its understandable, boy Bush
has no soul or heart. I'd like to see boy Bush send his 2 daughters over there

to get shot at."'''''''

Wow, your hatred for Bush is really showing, you even want harm to happen to his family members. Your hatred for Bush is clogging your ability to see things in a more responsible fashion.

""'''Come back and I'll give you some more learnen.'""'''

No thanks, but what I would like to understand, since you brought it up, is how you would have handled things differently? How would you assure the American people that they can be safe globally? What is your plan? You seem to criticize your leader's plan but you do not have one of your own. You have a better plan?

"jopl" <hl@vn.com> wrote in message news:c6jds707k9@enews3.newsguy.com...
> Tuuk wrote:
>
> >"''' Bush is a murderer. He started an
> >unnecessary war that
> >has resulted in the deaths of 711 Americans and nearly 4000 seriously
> >injured. And counting.
> >Bush has no heart or soul."'"'''
> >
> >
> >If you knew what you were talking about you might be able to hide your
> >hatred for Bush. It is obvious that your hatred for Bush has seriously
> >distorted your knowledge of the world. I though Hams were more
knowledgeable
> >of the world.
> >O, by the way, did you know that because of Bush's campaign in Iraq, the
net
> >lives saved is approximately 35,000 each year since Saddam's fall? I
would
> >hope that you do value each ethnic or nationality lives the same....
> >
> >
> >
> >
> >
> >
> >
> >
> >"jopl" <hl@vn.com> wrote in message news:c6hurt0dja@enews2.newsguy.com...
> >
> >
> >>No Way wrote:
> >>
> >>
> >>
> >>>MondayMornin <Monday@aol.com> wrote in
> >>>Who the fuck wants to listen to a bunch of crying liberals?

> >>>
> >>>Hell you can hear the same shit on NBC, CBS, ABC, CNN, MSNBC, PBS, CNBC
> >>>and any of the other liberal owned radio and TV stations.
> >>>
> >>>I find it fucking funny that the liberals don't feel represended on the
> >>>airwaves and think that opening up a radio station specifically for
> >>>liberals will stand a chance against the very few Conservative
stations.
> >>>
> >>>The problem is, you can go anywhere for liberal views, but only a few
> >>>places for conservative ones. That is why the conservative stations
have
> >>>become so successful.
> >>>
> >>>Air America is already showing signs of a early death. Hell they can't
> >>>even pay their bills (probably don't think they have to since liberals
> >>>usually live off of the money earned by others).
> >>>
> >>>Oh well, PT. Barnum said it best when he said "There's a sucker born
> >>>every minute" and I bet that he was talking about liberals.
> >>>
> >>>LOL.
> >>>
> >>>
> >>>news:2004040710201111272%Monday@aolcom:
> >>>
> >>>
> >>>
> >>>
> >>>
> >>>
> >>>If you want to listen to Air America, check out
> >>>alt.binaries.sounds.radio.misc
> >>>Lots of posts there.
> >>>>
> >>>In case you are in one of these cities, here are the Air America
> >>>frequencies:
> >>>>
> >>>New York: WLIB 1190 AM
> >>>Los Angeles: KBLA 1580 AM
> >>>Chicago: WNTD 950 AM
> >>>Portland: KPOJ 620 AM
> >>>Inland Empire, CA: KCAA 1050 AM
> >>>>
> >>>XM Satellite radio
> >>>Live Internet stream at http://www.airamericaradio.com/
> >>>>
> >>>Many more coming soon.
> >>>>
> >>>Drug addict Lush Limbaugh and other servants of Dingbat Bush & Co.
> >>>are the past.

> >>>>Air America is the future- get used to it!
> >>>>
> >>>>
> >>>>
> >>>>
> >>>>
> >>>>
> >>>>
> >>>
> >>>
> >>>
> >>You just like saying the word liberal. You don't really know what it
> >>means but
> >>you hear fruitcakes like Mr. Oxycotin, O'Really and that freak Hannity
> >>use it.
> >>You hear them throw the liberal word around in their name calling and
you
> >>think its cool to come here and do the same.
> >>Bush is the dumbest president we have had in a long long time. He hasn't
a
> >>clue on what is going on. Chenney has his hand up dumb Bush's ass like a
> >>sock puppet
> >>getting George to say and do anything. Bush is a murderer. He started an
> >>unnecessary war that
> >>has resulted in the deaths of 711 Americans and nearly 4000 seriously
> >>injured. And counting.
> >>Bush has no heart or soul. I can hardly wait until the debates as Kerry
> >>rips him to shreads and
> >>makes Bush look like a fool in front of the whole world. He has so much
> >>material to work with.
> >>He is going back to Teeeeexas. God that accent makes him sound so
stupid.
> >>
> >>
> >
> >
> >
> >
> Actually your ignorance is showing again. I supported Bush until Iraq.
> Daddy Bush looked like a fool after Hussein got done with him. Little
> boy Bush didn't like Daddy Bush getting threatened by assassination from
> Hussein.
> If there is one thing good you could say about Hussein is he knew how
> to keep his little area of his world Al-Quida free. Little Boy Bush fucked
> everything up. Has the whole arab world hating us. Arab world is like a
> hornet's
> nest. Little Boy Bush's approach
> to international diplomacy is to pick up a basenball bat and pound the
> hell out of the hornet's
> nest. Started an unnecessary war to divert attention from his failure

> in Iraq, revenge for the assassination threat. But its understandable,
> boy Bush
> has no soul or heart. I'd like to see boy Bush send his 2 daughters over
> there
> to get shot at.
> Come back and I'll give you some more learnen.

1507. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 13:29:45 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <dftjc.29947$0u6.5189779@attbi_s03>
Source record: 95957

Bob wrote:

> If the best counterexample is a 'frozen' mass of Hg, it would be a wee
> letdown.
>

That's kind of chilly!! About -37F if my old reference books are still
accurate.

1508. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 13:44:25 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <Pstjc.42168$GR.5861686@attbi_s01>
Source record: 95958

jopl wrote:

> Tuuk wrote:
>
>> "''' Bush is a murderer. He started an
>> unnecessary war that
>> has resulted in the deaths of 711 Americans and nearly 4000 seriously
>> injured. And counting.
>> Bush has no heart or soul."'"'''
>>

If I recall correctly war was declared against the USA in the early 1990s. American embassies bombed, USS Cole bombed, World Trade center car bombed, World Trade Center and 9-11 bombed.

All the President did was effectively to say "OK, you started it we'll finish it!!"

Remember who started the shooting!!

1509. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 13:47:26 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <Ovtjc.67969$yv.2101203@twister.southeast.rr.com>
Source record: 95959

And these incidents had what to do with Iraq?

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:Pstjc.42168$GR.5861686@attbi_s01...
> jopl wrote:
>
> > Tuuk wrote:
> >
> >> "''' Bush is a murderer. He started an
> >> unnecessary war that
> >> has resulted in the deaths of 711 Americans and nearly 4000 seriously
> >> injured. And counting.
> >> Bush has no heart or soul."'"'''
> >>
>
> If I recall correctly war was declared against the USA in the early
> 1990s. American embassies bombed, USS Cole bombed, World Trade center
> car bombed, World Trade Center and 9-11 bombed.
>
> All the President did was effectively to say "OK, you started it we'll
> finish it!!"
>
> Remember who started the shooting!!
>

1510. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 13:54:57 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <408e55ad.908268406@news.galilei.com>
Source record: 95960

Hi Bill

>That is some vivid and colorful experience you describe there.
>
>I haven't ever heard anything like that gounded copper "face" plate at
>the entry point to the house. What is the theory there? If it wants to
>arc it goes to ground?

In my case, it was more of a matter of what I could get at the time I started doing this. Copper was the only thing I knew of that I could easily braze to using copper phosphorus bronze rods and a simple low cost propane torch. Short bolts with semi U shaped washers were used through grounding cables because lightning could melt the brazing just as easily as solder.

Also, my house had vertical aluminum siding and I didn't want stray RF heating it up or causing my house to act like an antenna or someone get burned while I was on the air by touching the house. I was a worry wart!

>I am glad to hear that, since I do have a few neighbors here.

It wasn't so much the TV's as those cheap arse cordless telephones. When using antenna's fed with ladder line, I never messed them up.

>What kind of insulators did you install in that copper plate for the
>wires to go through?

NONE!
But here is the order in which I progressed over the years.
At first, I drilled hole in the copper plate, passed the coax through the hole, cut the covering down to the shield, wrapped a copper wire around the shield, brazed it to the copper plate, soldered to the shield, coated with tar wrap and sprayed over all with trumpet lacquer

Later, I used a connector, don't remember the order number, like a double SO239 and brazed all the way around it. There is about a 1db loss using two PL259s and a joining connector.

My final setup used gas bottle lightning arrestors, one end was stuck through the hole in the copper plate, the other end through the drywall inside. They were just the right length for this!
The ground braid from the gas bottles went to the lower edge of the copper plate. Silicone was coated over the outside connections.

>I am not sure what this gas bottle arrester is. Are you talking about a
>homebrew made from some recycled material of some kind?

No, they are store bought, the gas bottle is inside of a metal
housing. Transi-Trap is one brand name.

>your use of the pvc tubes is not that different my intended use of those
>old ceramic tubes, It just happen to have saved a bunch here at the farm
>and have a bucket full of them. They were used to run the ac wires
>through wooden chicken house walls, you know they left those lights on so
>the chickens would lay more eggs....there were an awful lot of these
>lights running along to 100' long chicken houses. I have spent many years
>dismantling and remodelling these old buildings. Now we only have a half
>dozen chickens and that is even too many..hi hi...what were we talking
>about,,,,oh yes....ladder line....

Yep, I'm very familiar with the old Knob & Tube wiring!
I spent about 25 years remodeling older homes.
You might like to see how I get a 5 foot bathtub into a 4 foot wide
bathroom after making the tub area only 3-1/2 feet wide by covering up
the exposed vent stack. If so, check out my hidden web page at
http://archimedes.galilei.com/raiar this is my index page, it has no
link to the hidden pages, but there is a picture of this old man on
there somewhere, plus some other junk you might be interested in as
well. To get to the bathtub, behind the URL type /BATH and look for
the .html page and open it, it will bring up all the .jpg's in
storyline fashion.

>I am in K6 here, not much lightning, however, I think I will put a big
>old knife switch in

A lot of hams disconnect their antenna's and leave the cable laying
open. This is VERY DANGEROUS as lightning, if it does come in through
the feedline will arc to the nearest ground and sometimes to many
ground points in the room. NEVER leave an unconnected feedline laying
loose in the shack. Run it to ground or toss it back outside.

>Are you saying that you made your ladderline out of monster cable
>(braided #12 or so) by separating the two stands and keeping the
>insulation on it and using spacers? Or are you saying you used monster
>speaker cable "as is" for ladder line (those two strands would be kind of
>close that way, maybe that gave you a favorable impedance in that
>situation. I am trying to get the picture. I do have a bunch of that
>cable on hand as well and never even gave it a thought as applying to ham
>radio....it fits into my audio and speaker building hobby.....

No, I split the wires apart and spaced them slightly less than 6
inches apart. The plastic I beams I purchased were 12 inches long, I
cut these in half and drilled holes about 1/16 inch in from the ends.
So my wire spacing was more like 5-1/2 inches.
I have never seen much difference in spacing over 2 inches as far as
operation. I figure once you get over 500 ohms it doesn't really
matter too much after that if you are at 2000 or 10,000 ohms

>yes, the search for good spacers.....I am thinking of using those small
>dia. uv/pvc tubes (4") that are used as ferrules for rain gutter spikes.
>The company is sending me a bad of 250 without the spikes for a nominal
>price....samples you know.....

There you go!
I used doubled soda straws for temporary antenna's and later replaced
the straws with 3/8 PVC.

>I don't why I am so fixed on this ladder line idea...maybe because I want
>to design one of those old fashioned qsl cards with a cartoon of a
>chicken house ham shack up on a hill with a cartoon latter line going up
>to a wire antenna with old fashioned glass strain insulators etc.....dah,
>di dah, di dah dah dah being pounded out on a log drum.......with sparks
>flying out to all points in the ionosphere.....

I hear ya!

Neighbors called the fire department on me a few times and I wasn't
even on the air. But I was home all three times!

At one time I had a nice tower, a couple of large beams and a yagi all
riding aloft. I got a frantic phone call from a neighbor saying that
my antennas were on fire, just blazing away. I ran out into the
backyard and looked up, saw nothing unusual. About that time I heard
sirens blaring and they were stopping at my house. They did not see
anything amiss either.

A year later I had just pulled in the driveway, arriving home from
work, before I reached the door a fire truck came screaming down the
street and again stopped at my house. A neighbor had called them,
saying my roof was on fire. The inspected everything, including the
attic, could not find anything amiss.

About three years later, I finally saw with my own eyes what the
ruckus was about. It was heavily overcast, a mean storm was brewing.
I had just gotten off the highway and was coming down the main road
getting ready to turn onto my street. From this vantage point I could
see my antenna's and the top of my house with ease.
What I saw almost gave me a heart attack.
It was like fire was bellowing in all directions from the top of my
house. I stopped the truck on the hill down to my house and just
watched. I could discern that the fire was eminating from the tips of
each of the elements on my antenna's.
It wasn't but a few minutes that I was sitting there watching and it
was fading down and only the largest beam was still putting out a few
flashes when I heard those darn sirens. The fire truck went whizzing
right past me and pulled up at my house.
I pulled up behind them and grabbed one of the firemen and pulled him
back out to the street so he could see the last couple of flashes of
fire and then there were no more.

About two months later I get a telephone call from the fire
department, they had finally figured out what the sparks were caused

by. A phenomenon known as St. Elmo's Fire was the culprit.

I didn't have to worry about another call, because that season a direct lightning hit to the tower caused the tower to explode and it all came down in a heap.
Lightning hitting the tower should not have hurt anything at all, but the legs of the tower had filled with rainwater over the years and the lightning hit apparently turned the water to steam and blew the tower apart. Leastwise, that was the professional inspectors assessment of what had happened.

It turns out that in the area where I lived at the time, this was a common occurance, especially on older homes and barns that had lightning rods on the roofs. Not as pronounced as mine, because they are only one point, where between my two beams, the yagi and several tower mounted verticals, I had quite a few open ends (points) up there. And everything was grounded to the max.

What is funny is I had lived in that same area all of my life and had never seen anything like it before. My house was on the high side of a long valley, just about 3 miles south of an area we call Tornado Alley. If a thunderstorm was coming, it would run up or down the valley and cross right over my house every single time. If it was going to rain within a 50 mile radius, I would get wet, even if it didn't rain on the other side of the street.
There were several times that it rained in my back yard and the front yard never saw a drop of rain in a whole week or two.
My wife used to say it was because of all that metal I buried under the ground in the backyard. I don't think so, but there must be some explanation for it! I think it's simply that the front yard is on the higher side and the backyard the lower side, where the clouds slide down the valley.

TTUL - 73+ de Gary - KG&#65533;ZP

1511. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 14:12:08 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <ibOdnX0djMur9xPdRVn-hw@comcast.com>
Source record: 95962

Jerry,
You need to learn how to use transmission lines in EZNEC. It will analyze
the whole thing. Post your configuratio: dipole length, height, and
orientation, and how and what kind of transmission line you use for phasing.
I might get a chance to do that, but not in the next 3 - 4 days.

Tam
"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:jzmjc.46665$G_.40309@nwrddc02.gnilink.net...
>
> Tam
>
> I have the two dipoles fed in phase and spaced 1/4 wave apart The
anrenna
> really works well. I'd like to try to improve it but first need to know
> more about what I'm getting now.
>
> Jerry
>
>
>
>
> "Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> news:So-dnfrIYKdOXxDdRVn-sw@comcast.com...
> >
> > "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> > news:4ahjc.40373$Aq.4673@nwrddc03.gnilink.net...
> > > I would like to estimate the radiation pattern from a pair of
dipoles.
> > > I've been told that there are computer programs available for drawing
> > > antenna patterns. I's like to try drawing the pattern from my antenna
> > > concept, but would sure like to get some help with learning how to do
it
> > > with EZNEC. Is there anyone on this news froup who has time and
> patience
> > > and who might be willing to E-mail help to me??
> > >
> > > Jerry
> > >
> > Jerry,
> >
> > I have a dumb question (maybe). Do you mean two interconnected dipoles,
at
> > the same time, or one dipole at a time?

> >
> > Tam/WB2TT
> >
> >
>
>

1512. Re: vertical dipole array

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 14:22:20 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <rOednTPVCs4H8RPd4p2dnA@comcast.com>
Source record: 95963

"Angela & Gary" <gmbelcas@charter.net> wrote in message
news:gmbelcas-D44313.22072426042004@comcast.ash.giganews.com...
> In article <25eb70d7.0404262032.1cd7be59@posting.google.com>,
> nm5k@wt.net (Mark Keith) wrote:
>
> > Angela & Gary <gmbelcas@charter.net> wrote in message
> > news:<gmbelcas-104E6F.00233526042004@comcast.ash.giganews.com>...
> > > I would like to consider this for 20m dxing. Anyone done this/seen it
> > > published anywhere or otherwise have suggestions?? Thanks.
> > >
> > > Gary
> >
> > Sure, it's quite common. How many do you have in mind? Two? More? You
> > can feed as broadside or endfire arrays. Sometimes both, for a
> > multiband setup. In general, the maximum gain with a broadside array
> > is with the spacing at appx 5/8 wave. In general, an endfire array
> > will have maximum gain with about an 1/8 wave spacing. But you can use
> > other spacings with good results. Of course, if you have a way to
> > change phasing, IE: adjusting feedline lengths, L/C phasing box, etc,
> > you can steer the pattern. You can get many details in the ARRL
> > antenna handbook. Also plots of the various patterns with changes in
> > phasing. I've paired up verticals and ran them as broadside arrays on
> > the higher bands, but as endfire arrays on lower bands. Once ran a
> > pair of elevated 5/8 ground planes on 10m, and crudely steered by
> > changing coax lengths. Worked quite well for what I needed. I used
> > them as a broadside array on 10m, but I used them as an endfire array
> > on 30m. The "maximum" gain you can get from a pair of verticals is as
> > a broadside array. It's peak is slightly more than the peak maximum
> > gain of an endfire array. But the endfire gets fairly close, and can
> > be handy sometimes being the spacing is less. 1/4 wave is a common
> > spacing. Two verticals 1/4 wave apart, and fed 90 degrees out of phase
> > gives a nice fat unidirectional pattern, and can easily be reversed.
> > As I said, the possibilities of spacing/feed combinations could fill
> > three pages of text I bet...:/ The ARRL antenna book covers it in good
> > detail, and also the best ways to feed. There are other useful books
> > also of course, but just that one will do the trick, and covers most
> > other ant related topics. MK
>
> Mark, thanks for the info. I was thinking of perhaps placing 3 vertical
> dipoles at the apices of an equilateral triangle. What I need to
> research is optimum spacing in such an arrangement (quarter perhaps?)
> and details on putting together a nifty steering circuit. I must admit
> that I forgot 'bout the venerable ARRL antenna book. I perused the
> handbook last nite and came up dry. I will try to hit our local lib

> this wkend to ferret out the details. Thanks again.
>
> Gary

Gary,
The Antenna book has 3 verticals in a row. That turns out to be simple. The thing you run into is that many configurations of more than 2 radiators require feeding unequal power to the various radiators.

I think all the stuff in the Handbook uses 1/4 wave antennas over ground. If you use dipoles, all the impedances get doubled. Depending on configuration, that may not be a big deal; in a 50 Ohm system, 70 Ohms is no worse than 35 Ohms.

Tam/WB2TT

1513. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 16:04:58 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408e851b$1_3@corp.newsgroups.com>
Source record: 95964

Jerry Martes wrote:
> I have the two dipoles fed in phase and spaced 1/4 wave apart The anrenna
> really works well. I'd like to try to improve it but first need to know
> more about what I'm getting now.

According to EZNEC, what you are getting now is slightly less
gain than a dipole with a slightly higher take off angle. To
get very good performance out of that configuration, you are
going to have to learn how to phase the inputs different
from in-phase. That means the two elements will have different
feedpoint impedances thus making it difficult to balance the
currents into the elements.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1514. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 16:47:38 UTC
From: les <gm4jnw@nospamhotmail.com>
Message-ID: <108t3n7s25ra2c6@corp.supernews.com>
Source record: 95965

Bill that suprised me about the 756 pro not tuning up a windom.
I use an old FT990 and it tunes the windom without problems.

Les
GM4JNW

"Bill Grimwood" <bill@grimwood.net> wrote in message
news:108sq8tp7q5ot56@corp.supernews.com...
> I have a Carolina Windom 160 up 50 feet and am using an Icom 756 Pro. The
> ATU in the pro will not quite tune the antenna so I added an MFJ tuner and
> am able to tune it up fine.
>
> 73 Bill W4WEG
>
>
> "Pat Myers" <captain-death@to-spammers-texas.net> wrote in message
> news:nsudnbVB1pvGlBHdRVn-hw@texas.net...
> > I have posted this on eHam.com, but thought I'd try here as well.
> >
> > Sorry if this story is rather convoluted, but I'm in a bit of a quandary
> and
> > any help would be appreciated.
> >
> > I am getting back into ham radio after a ten year absence, and HF
> operating
> > has always been my favorite. In the past I lived in a rural area, and
> could
> > put up whatever sort of antennas I wanted, and was even pretty good at
> > making my own dipoles for various bands.
> >
> > However, I now live in a subdivision that, while antennas are not
> forbidden
> > outright, the civic association is vicious and not to be trifled with,
> hence
> > I wanted to go with something at once stealthy but versatile.
> >
> > At first I thought to try the old stand-by, the G5RV, but in doing my
> > Internet research on the issue, I came across this "Carolina Windom"
> > multiband antenna, which seemed to give more bangs for the buck. I ended
> up
> > purchasing one from an outfit that will remain nameless here, to the
> tune
> of
> > around $150, when you include shipping, rope and other incidentals.
> >

> > It was a bear of a job to put up, since I had to threat it through tree
> > branches and whatnot (which is why I got the one with the insulated
wire),
> > but I got it up. Suspended from trees, the "matching transformer" (looks
> > like a balun to me) and the long segment of wire was up about 35', more
or
> > less horizontal. The shorter end sloped down, with the end about 10' up
(I
> > had no alternative in this).
> >
> > After making up the 100 or so foot feed line (RG-8X) and grounding the
rig
> > (8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
> > through the roof on all bands.
> >
> > Anything more than a few watts, on 80 through 10m, made the radio shut
> down.
> > I checked continuity all the way back to the antenna, and everything
seems
> > OK, except the balun shows a dead short on my VOM. However, the antenna
> > maker says their balun is supposed to show a dead short, and when I took
> the
> > antenna back down I could find nothing else wrong with it (no damaged
> > insulation, all connections weatherproofed to the max, not that it had
> been
> > up long enough to get wet, etc).
> >
> > Except for power and phone lines running along the back property line
(and
> > the slinky antenna I put up later is no further away from those than the
> > Windom was, and I am having no problems with it), there was nothing
> metallic
> > nearby to detune the antenna, and even if there was, I can't imagine
even
> > that would create the high SWR I am seeing.
> >
> > I called the manufacturer up and after telling me there was nothing
wrong
> > with the antenna based on what I told them, they just said to send the
> > antenna back to them and they would "check it out".
> >
> > We finally get to my question. I have been working on getting an antenna
> for
> > weeks, and am tired of fooling with assorted vendors (have dealt with
> > several during this process, and none have impressed me).
> >
> > Given how much I will pay out further on shipping the antenna both ways
> and
> > the like, I am wondering if I would be better off simply buying a decent
> 4:1

> > balun, replace the existing "matching transformer" with it, and use the
> rest
> > of the antenna components (wire, coax, RF choke), and if so, is this
more
> > likely to work? Based on my research, the original Windom antenna design
> > used a 4:1 balun, and the wire lengths of the antenna I bought look to
be
> > pretty close to specs per that design, which is why I suggest this
option.
> >
> > Unfortunately I am no antenna guru, and even with all the information
I've
> > found on the Windom, the data is a bit ambiguous on this point. So,
before
> I
> > throw any more good money after bad, I would appreciate any help you all
> > could give me in this matter. Thanks and 73.
> >
> > PS What to take out of my email address to make it work is pretty
> > obvious...:)
> >
> >
> >
>
>

1515. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 17:04:37 UTC
From: richardharrison@webtv.net
Message-ID: <14599-408E92A5-570@storefull-3256.bay.webtv.net>
Source record: 95966

John wrote:
"To achieve resonance, non-folded dipoles/monopoles must be cut slightly less than 1/2 or 1/4 wave due to "end effect", so I`ve read. EZNEC agrees.

Is this true for the folded dipole/monopole?"

My ARRL Antenna Book (19th edition, page 8) says:

"Since the antenna section (of 300-ohm twin-lead) does not operate as a transmission line, but simply as two wires in parallel, the velocity factor of twin-lead can be ignored in computing the antenna length."

I wish the author had said:

"---the transmission line velocity factor of twin-lead can be ignored---."

Wave velocity on the antenna wire is very important.

End effect is sometimes defined as the capacitive effect at the ends of a 1/2-wave antenna.

Length in free-space wavelengths is reduced in an antenna by a "fat" radiator. The 1/2-wave resonance point (first resonance in an ordinary open-circuit dipole), for a thin radiator, produces a drivepoint resistance of 72 ohms. This can be cut in half by using conductors with a very large periphery. Radiators of large periphery slow the wave velocity along the surface. This reduces the physical length required for electrical resonance.

Feedpoint resistance of the center-fed 1/2-wave dipole results from far-end reflections.In the open-circuit dipole, the high impedance at the ends of the radiators is transformed by the 1/4-wave return to the feedpoint into a low impedance. The short-circuit at the far ends of a 1/2-wave folded dirole is reflected to the drivepoint as a high impedance.

Constructed of the same size wire, a folded dipole has 2 wires effectively in parallel as radiators and their size is enhanced by spacing so that wave velocity is reduced more than in the open-circuit dipole.

The slower the antenna wave velocity, the shorter the length to produce resonance. I would expect more "end effect" in the usual folded dipole / monopole.

Best regards, Richard Harrison, KB5WZI

1516. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 17:50:04 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <408E9D4C.F86C39EE@uci.edu>
Source record: 95967

kashe@sonic.net wrote:
>
> On Mon, 26 Apr 2004 09:57:59 -0700, Jim Kelley <jwkelley@uci.edu>
> wrote:
> >> >
> >> >How so?
> >>
> >> Pascal's law.
> >
> >Are you implying that any and every column of mercury must obey Pascal's
> >law?
>
> Any column of any liquid should. Would you care to cite a
> counter example?

You already cited one. (You can't apply pressure to a confined fluid if
it's sealed in an incompressible container.)

73, ac6xg

1517. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 18:17:08 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408ea417_1@corp.newsgroups.com>
Source record: 95968

Richard Harrison wrote:
> My ARRL Antenna Book (19th edition, page 8) says:
>
> "Since the antenna section (of 300-ohm twin-lead) does not operate as a
> transmission line, but simply as two wires in parallel, the velocity
> factor of twin-lead can be ignored in computing the antenna length."
>
> I wish the author had said:
>
> "---the transmission line velocity factor of twin-lead can be
> ignored---."

The phase of the currents in the adjacent sections of twinlead is what is important. If the phase of the adjacent currents is 180 degrees, the twinlead is acting like a transmission line and T-line VF must be taken into account. If the phase of the adjacent currents is zero degrees, the twinlead is acting like an antenna and the VF is considerably higher, essentially equal to insulated wire. If the phase of the adjacent currents is zero degrees, all the current is "common-mode current", something not desirable for transmission lines but something most desirable for antennas since common-mode currents do not inhibit radiation.

Bottom line: The currents flowing in a folded dipole antenna are common-mode currents which radiate, not transmission line currents which do not radiate (much), and that's a very good thing for an antenna.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1518. Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 19:25:49 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408EB3BB.6DB24AD@sonic.net>
Source record: 95869

Thinking about getting through walls with ladder line:

1. Would it be better to have the wires proceed continuously to the tuner, without having to make connections at feed through insulators? My understanding, generally, is that the fewer connections the better. This means feeding the ladder line, without break, through the wall(s), something which I can do easily here, but I want to anticipate any arcing etc. and the inevitable moisture in the air during rainy season etc.

2. How should I be conceptualizing the type of RF energy in these lines? I assume that these wires will carry something more like "high voltage" than the usual type of electrical energy in domestic AC lines. How far away should these ladder line wires actually be away from everything as they go through the wall?

3. Fishing through a bucket of old ceramic tube insulators out in the barn I notice most are 3" long, but there are also ones 4", 6", and even 8" long. Seems like using a long one would keep the bare wire of the ladder line insulated pretty well away from the walls which are just wood in this case. Might look odd, having an 8" tube going through a 4" wall, but it would keep the wire of the feed line many more inches away from the wood.

4. Is the issue RF in the ladder line wire arcing to nearby conductivity (eg. moisture on wood)? other than that there is no conductive (metal) material in the vacinity, just wood. I am trying to understand how to be thinking of this RF and how best to insulate going through the wall. Mostly I will run barefoot but might eventually have a 1 KW with a 30L-1.

Bill K6TAJ

1519. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 19:38:27 UTC
From: KC1DI <kc1di@arrl.net>
Message-ID: <u7dt801847insuujmb2r7ctgi5f3r0f1vh@4ax.com>
Source record: 95870

Hi Pat,
Just want to add my 2Cents worth to the discussion.. I use a homebrew Off Center Fed Dipole (Windom is a misnomer , Since a true windham is fed with a single wire line but that's another topic) It works very well But you must use an antenna tuner.. I Use and LDG Z100 with mine and it tunes all bands very well 80--10M. My verison uses a 4:1 balun at the feed point and a Homebrew Choke-- 26 turns 6" diamater just below the balun then another one just before the feedline comes into the shack. the things works very well for me.. without the tuner though the swr on most original ham bands is about 2:1 some less some a little more.
P.S. if you decide to make a homebrew Choke Balun becareful that the Rg8x you use does not have foam insulation.. This type coax will not last long in that application.. because the foam allows the center conductor to migrate to the sheild. eventuall it may even sort out.

hope this is of help.. 73 Dave

On Sun, 25 Apr 2004 13:54:28 -0500, "Pat Myers"
<captain-death@to-spammers-texas.net> wrote:

>I have posted this on eHam.com, but thought I'd try here as well.
>
>Sorry if this story is rather convoluted, but I'm in a bit of a quandary and
>any help would be appreciated.
>
>I am getting back into ham radio after a ten year absence, and HF operating
>has always been my favorite. In the past I lived in a rural area, and could
>put up whatever sort of antennas I wanted, and was even pretty good at
>making my own dipoles for various bands.
>
>However, I now live in a subdivision that, while antennas are not forbidden
>outright, the civic association is vicious and not to be trifled with, hence
>I wanted to go with something at once stealthy but versatile.
>
>At first I thought to try the old stand-by, the G5RV, but in doing my
>Internet research on the issue, I came across this "Carolina Windom"
>multiband antenna, which seemed to give more bangs for the buck. I ended up
>purchasing one from an outfit that will remain nameless here, to the tune of
>around $150, when you include shipping, rope and other incidentals.
>
>It was a bear of a job to put up, since I had to threat it through tree
>branches and whatnot (which is why I got the one with the insulated wire),
>but I got it up. Suspended from trees, the "matching transformer" (looks
>like a balun to me) and the long segment of wire was up about 35', more or

>less horizontal. The shorter end sloped down, with the end about 10' up (I
>had no alternative in this).
>
>After making up the 100 or so foot feed line (RG-8X) and grounding the rig
>(8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
>through the roof on all bands.
>
>Anything more than a few watts, on 80 through 10m, made the radio shut down.
>I checked continuity all the way back to the antenna, and everything seems
>OK, except the balun shows a dead short on my VOM. However, the antenna
>maker says their balun is supposed to show a dead short, and when I took the
>antenna back down I could find nothing else wrong with it (no damaged
>insulation, all connections weatherproofed to the max, not that it had been
>up long enough to get wet, etc).
>
>Except for power and phone lines running along the back property line (and
>the slinky antenna I put up later is no further away from those than the
>Windom was, and I am having no problems with it), there was nothing metallic
>nearby to detune the antenna, and even if there was, I can't imagine even
>that would create the high SWR I am seeing.
>
>I called the manufacturer up and after telling me there was nothing wrong
>with the antenna based on what I told them, they just said to send the
>antenna back to them and they would "check it out".
>
>We finally get to my question. I have been working on getting an antenna for
>weeks, and am tired of fooling with assorted vendors (have dealt with
>several during this process, and none have impressed me).
>
>Given how much I will pay out further on shipping the antenna both ways and
>the like, I am wondering if I would be better off simply buying a decent 4:1
>balun, replace the existing "matching transformer" with it, and use the rest
>of the antenna components (wire, coax, RF choke), and if so, is this more
>likely to work? Based on my research, the original Windom antenna design
>used a 4:1 balun, and the wire lengths of the antenna I bought look to be
>pretty close to specs per that design, which is why I suggest this option.
>
>Unfortunately I am no antenna guru, and even with all the information I've
>found on the Windom, the data is a bit ambiguous on this point. So, before I
>throw any more good money after bad, I would appreciate any help you all
>could give me in this matter. Thanks and 73.
>
>PS What to take out of my email address to make it work is pretty
>obvious...:)
>
>

1520. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 20:15:04 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408EBF47.45EB4A08@sonic.net>
Source record: 95871

I just noticed that these old ceramic tubes fit nicely into 1/2" UV/PVC electrical conduit. I can make this PVC any length I want through the wall and then also fix a ceramic tube into it at both ends for double insulation. That ought to do it.

Bill K6TAJ

zeno wrote:

> Thinking about getting through walls with ladder line:
>
> 1. Would it be better to have the wires proceed continuously
> to the tuner, without having to make connections at feed
> through insulators? My understanding, generally, is that the
> fewer connections the better. This means feeding the ladder
> line, without break, through the wall(s), something which I
> can do easily here, but I want to anticipate any arcing etc.
> and the inevitable moisture in the air during rainy season
> etc.
>
> 2. How should I be conceptualizing the type of RF energy in
> these lines? I assume that these wires will carry something
> more like "high voltage" than the usual type of electrical
> energy in domestic AC lines. How far away should these ladder
> line wires actually be away from everything as they go
> through the wall?
>
> 3. Fishing through a bucket of old ceramic tube insulators
> out in the barn I notice most are 3" long, but there are
> also ones 4", 6", and even 8" long. Seems like using a long
> one would keep the bare wire of the ladder line insulated
> pretty well away from the walls which are just wood in this
> case. Might look odd, having an 8" tube going through a 4"
> wall, but it would keep the wire of the feed line many more
> inches away from the wood.
>
> 4. Is the issue RF in the ladder line wire arcing to nearby
> conductivity (eg. moisture on wood)? other than that there
> is no conductive (metal) material in the vacinity, just wood.
> I am trying to understand how to be thinking of this RF and
> how best to insulate going through the wall. Mostly I will
> run barefoot but might eventually have a 1 KW with a 30L-1.
>
> Bill K6TAJ

1521. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 20:57:10 UTC
From: kashe@sonic.net
Message-ID: <19it809gfmsda3resjq0f2mt6085mndjim@4ax.com>
Source record: 95872

On Tue, 27 Apr 2004 10:50:04 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>
>
>kashe@sonic.net wrote:
>>
>> On Mon, 26 Apr 2004 09:57:59 -0700, Jim Kelley <jwkelley@uci.edu>
>> wrote:
>> >> >
>> >> >How so?
>> >>
>> >> Pascal's law.
>> >
>> >Are you implying that any and every column of mercury must obey Pascal's
>> >law?
>>
>> Any column of any liquid should. Would you care to cite a
>> counter example?
>
>You already cited one. (You can't apply pressure to a confined fluid if
>it's sealed in an incompressible container.)
>
>73, ac6xg

OK, nice specious argument. You can't have read this far in
the thread without understanding the intended parameters. And since
you seem to be referring to the thermometer, pressure could indeed be
applied. In absolute terms, any container can be compressed, however
slightly. In addition, pressure can be applied without compression by
application of heat or of cold, depending on relative coefficients of
thermal expansion.

Old science class demonstration -- completely fill a heavy
pipe, capping both ends, with a substance; heat the pipe with a torch
and it explodes; toss the pipe into a container of dry ice and it
explodes. What is the mystery substance? It turns out to be water at 4
degrees Centigrade.

Finally, I strongly suspect the "column" of mercury in a
thermometer does indeed obey Pascal's law, but it's effect is
overshadowed by the much stronger effects of temperature and
capillarity.

1522. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 21:11:06 UTC
From: kashe@sonic.net
Message-ID: <irit801mb0jrd0dgbkmik7u5se1ab40phd@4ax.com>
Source record: 95873

On Tue, 27 Apr 2004 09:02:28 -0400, " Tuuk" <bangkokbob@yahoo.com>
wrote:

>>'''''Started an unnecessary war to divert attention from his failure
>>in Iraq, revenge for the assassination threat. But its understandable,
>>boy Bush
>>has no soul or heart. I'd like to see boy Bush send his 2 daughters over
>>there
>>to get shot at."'''''''
>>
>Wow, your hatred for Bush is really showing, you even want harm to happen to
>his family members. Your hatred for Bush is clogging your ability to see
>things in a more responsible fashion.

But we know, from past performance, that no harm would come to
them.

When his underage daughter was found drunk in public, she
suffered no consequences of the law signed by her own father to punish
such behavior in the children of others. In this matter, as in many
others, he and his family and associates are well beyond the reach of
the law.

1523. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 21:39:09 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <408ED2FD.6D65A750@uci.edu>
Source record: 95874

kashe@sonic.net wrote:
> OK, nice specious argument. You can't have read this far in
> the thread without understanding the intended parameters.

And I'll assume the same is true for you.

> And since
> you seem to be referring to the thermometer, pressure could indeed be
> applied. In absolute terms, any container can be compressed, however
> slightly.

(Speaking of specious)

> In addition, pressure can be applied without compression by
> application of heat or of cold, depending on relative coefficients of
> thermal expansion.

Is your claim that the height of the column of liquid in a thermometer
determined by the angle of inclination of the column? You were partially
correct in that the barometer is illustrative of Pascals law.

> Old science class demonstration -- completely fill a heavy
> pipe, capping both ends, with a substance; heat the pipe with a torch
> and it explodes; toss the pipe into a container of dry ice and it
> explodes. What is the mystery substance? It turns out to be water at 4
> degrees Centigrade.

True, but not a demonstration of Pascals law.

> Finally, I strongly suspect the "column" of mercury in a
> thermometer does indeed obey Pascal's law, but it's effect is
> overshadowed by the much stronger effects of temperature and
> capillarity.

True, particularly in light of the fact that a good thermometer is
specifically designed to prevent it from demonstrating Pascals law - or
more to the point, from having its measurement dependent upon its
orientation.

73, ac6xg

1524. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 22:44:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5jmt8097grm6booidba9q3pk94p4af3p4d@4ax.com>
Source record: 95875

On Tue, 27 Apr 2004 19:25:49 GMT, zeno <zeno@sonic.net> wrote:

>Thinking about getting through walls with ladder line:

Hi Bill,

This is bordering on too much thinking. ;-)

>1. Would it be better to have the wires proceed continuously
>to the tuner, without having to make connections at feed
>through insulators?

As a generalization, sure. As an instance, it will probably never matter. The real question is how can you goof to make it matter?

Obviously by making poor connections [You don't plan to do that do you? You aren't typically shoddy are you? Let's put that nightmare to one side.] There will no doubt be fifteen postings pointing out how lightning "may" melt the connections (and this, of course, presumes many improbabilities equal in likelihood to lightning striking).

>but I want to anticipate any arcing etc.
>and the inevitable moisture in the air during rainy season
>etc.
which introduces:
>
>2. How should I be conceptualizing the type of RF energy in
>these lines? I assume that these wires will carry something
>more like "high voltage" than the usual type of electrical
>energy in domestic AC lines. How far away should these ladder
>line wires actually be away from everything as they go
>through the wall?

Far enough. Flash-over, arcing, and such all derive from the geometry of the gap, barometric pressure, humidity, and such. However, just dredge up a common circumstance of the ordinary Spark Plug and observe the several KV it takes to leap maybe an inch?

You have to work very hard to make it happen - why would it be easier through chance?

However, this doesn't answer the question so much as offer perspective. Keep the ladder line as far away from anything (fill in the blank) as it is wide. If you want, double that value for a safety factor of two. If it won't arc across the lines, it sure won't jump to the wall out of caprice.

SWR is a manifestation of literal Standing Waves that in turn exhibit voltage peaks and current peaks distributed along the line between the line leads. If you are so lucky as to have a balanced load (which thus offers a minimum of common mode potentials), it stands to reason you've confined your risk. Bringing nearby conductive elements into the scheme introduces both an unbalance with a corresponding rise of common modality. Would you hold a nail between the conductors?
Recent suggestions that little matters over the short haul mock your sensibility to this question. Sparks occur at site dislocalities and drawing down wide spaced, paired lines to fit through a small hole are classic spark generators (anyone every see a jacob's ladder?). Same thing goes for the impedance bump of a dielectric (your wall) introduced between them coming through separate holes. In short, jeopardy either way.

Which scenario offers more path resistance? There is no better determiner of success. Your ceramics were made to answer that. Basically, (and on the basis of what you have written thus far) trust your instincts and then test.

The question is simply: how much potential resides between the two leads at any site dislocality? Change the frequency and you have to answer that question again. Are those holes bridging (AKA shorting) a voltage maxima, or voltage minima of the Standing Wave? If you know that answer, then apply that knowledge to every half wave interval along the line all the way to (and including) the antenna and ask: is there something nearby each or any of those points that will catch a spark and render a flame?

73's
Richard Clark, KB7QHC

1525. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-27 22:51:35 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408EE3F5.D099C9C1@sonic.net>
Source record: 95876

"Gary V. Deutschmann, Sr." wrote:

> One of the best ladder lines I ever constructed was using some of my
> sons Monster Cable that he had used with his stereo speaker system.
> This heavy cable for some reason made a noticable difference in how my
> 80 meter loop skywire functioned. Bandwidth was definately greater,
> and many received station signals were stronger. Logical NO, but they
> were.

Gary,

How did that transparent plastic insulation on the monster cable wire hold up in the sunshine over the years? I am thinking that if it decays and cracks it might have an effect on the way the wire is fastened to the spacers and thus come loose from the spacers.

I do have quite of bit of this #12 monster cable left over on a spool from a speaker project I did last year. Also this monster cable is relatively expensive compared to other alternatives and I would almost hate to use it for feedline if it would only hold up a couple of years in the weather and sun. I wonder just how much this monster cable braided copper differs from regular #12 braided copper for AC wiring? Seems like maybe the individual strands in the monster cable are finer than the ones comprising regular AC braided wire of the same guage.

Bill K6TAJ

1526. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 00:12:26 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <RECjc.68459$iX1.988670@news20.bellglobal.com>
Source record: 95877

Dave Shrader wrote:
> Bob wrote:
>
>> If the best counterexample is a 'frozen' mass of Hg, it would be a wee
>> letdown.
>>
>
> That's kind of chilly!! About -37F if my old reference books are still
> accurate.
>
Rumor has it, despite recent budgetary cutbacks, the freezing points of
Mercury, Water, and even good old Carbon Dioxide will remain unchanged
for the next fiscal year...

;-)

Now, enough humor. Who's tried any experiments yet?
Not entire mercury columns, but just a small quantity at each end of a
collinear or dipole.

1527. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 00:51:30 UTC
From: richardharrison@webtv.net
Message-ID: <18346-408F0012-614@storefull-3258.bay.webtv.net>
Source record: 95879

Cecil, W6DXP wrote:
"Bottom line: The currents flowing in a folded dipole are common-mode currents which radiate, not transmission line currents which do not radiate (much), and that`s a very good thing for an antenna."

Nicely said! Agreed that it is the common-mode currents which radiate, but differential-mode currents exist too. At the tips of the folded dipole, some current turns the corner and flows in the opposite direction after its U-turn. This creates a situation much like the reflection from the open circuit ends of the common dipole. At the center of the continuous wire which ties the tips of the driven side of the folded dipole together, the colliding currents have traveled the same distance at the same velocity so they are still 180-degrees out-of-phase. This amounts to a short-circuit, and in fact this amounts to a zero voltage point which may be grounded without consequences in most cases.

In the folded monopole (unipole), the currents into the input terminals flow nearly as they would flow into any 1/4-wave short-circuit stub. The difference seems to be that the grounded side of the transmission line feeds both its side of the folded unipole and the ground plane, creating an opportunity for imbalance and radiation. And, radiate it does with very nearly the same characteristics as an open-circuit ground plane antenna.

Best regards, Richard Harrison, KB5WZI

1528. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 00:52:42 UTC
From: Stephen Cowell <scowell@sbcglobal.net>
Message-ID: <ufDjc.22326$Fg5.3710@newssvr22.news.prodigy.com>
Source record: 95878

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:5jmt8097grm6booidba9q3pk94p4af3p4d@4ax.com...
> On Tue, 27 Apr 2004 19:25:49 GMT, zeno <zeno@sonic.net> wrote:

...

> >2. How should I be conceptualizing the type of RF energy in
> >these lines? I assume that these wires will carry something
> >more like "high voltage" than the usual type of electrical
> >energy in domestic AC lines. How far away should these ladder
> >line wires actually be away from everything as they go
> >through the wall?
>
> Far enough. Flash-over, arcing, and such all derive from the geometry
> of the gap, barometric pressure, humidity, and such. However, just
> dredge up a common circumstance of the ordinary Spark Plug and observe
> the several KV it takes to leap maybe an inch?

Ouch, Richard, that's a pretty wild shot from the hip. Spark plugs
use gaps on the order of hundredths of an inch and voltages
on the order of dozens of KV.

And for Zeno, just bring the tube out to the surface of
the wall, don't extend it... you don't want those things
breaking off!

--
Steve
KI5YG
.

1529. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 01:41:49 UTC
From: richardharrison@webtv.net
Message-ID: <18348-408F0BDD-71@storefull-3258.bay.webtv.net>
Source record: 95880

Now that it`s posted, I see I moved Cecil back to 6-land. That would be unfortunate and I apologize. Happily, Cecil is now back in Texas where he can comingle with the Sidewalk Cattlemen, I believe.
Cecil`s call: W5DXP

Best regards, Richard Harrison, KB5WZI

1530. Re: DJ4VM Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 01:56:37 UTC
From: David L Thompson <thompson@mindspring.com>
Message-ID: <pbEjc.5143$g31.635@newsread2.news.atl.earthlink.net>
Source record: 95881

There is some info in the Moxon antenna book.
Dave K4JRB

Bill <lbj@congress.com> wrote in message
news:HbDic.76779$UC4.68927@bignews2.bellsouth.net...
> I am looking for information (any) on the DJ4VM loop antenna.
> Any direction would be appreciated.
>
> Bill N4WC
>

1531. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 02:49:28 UTC
From: richardharrison@webtv.net
Message-ID: <14600-408F1BB8-255@storefull-3256.bay.webtv.net>
Source record: 95882

Bill, K6TAJ wrote:
"Thinking about getting through walls with ladder line."

I`ve brought open wire lines through walls by Pyrex bowl insulators mounted on a sheet of plywood framed into the wall as if it were a window. The plywood between the conductors seemed not to hurt. Glass or Plexiglas would be better and might obviate the bowl insulators.

You also could cut the plywood, Plexiglas, or glass sheet to fit under a window sash. Then, just lower the sash on the sheet.

You want innocuous materials between the wires and surrounding the line by at least several times the spacing between the wires.

Best regards, Richard Harrison, KB5WZI

1532. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 03:00:32 UTC
From: zeno <zeno@sonic.net>
Message-ID: <408F1E4E.63080583@sonic.net>
Source record: 95883

Tnx to all for your thoughts. I think I am ready to go. My intuition and gathered knowledge from this process here seems to have inspired, finally, some confident action. I will let you know what the results are. Now with the good weather it is time for the work.

73 Bill K6TAJ

Stephen Cowell wrote:

> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:5jmt8097grm6booidba9q3pk94p4af3p4d@4ax.com...
> > On Tue, 27 Apr 2004 19:25:49 GMT, zeno <zeno@sonic.net> wrote:
>
> ...
>
> > >2. How should I be conceptualizing the type of RF energy in
> > >these lines? I assume that these wires will carry something
> > >more like "high voltage" than the usual type of electrical
> > >energy in domestic AC lines. How far away should these ladder
> > >line wires actually be away from everything as they go
> > >through the wall?
> >
> > Far enough. Flash-over, arcing, and such all derive from the geometry
> > of the gap, barometric pressure, humidity, and such. However, just
> > dredge up a common circumstance of the ordinary Spark Plug and observe
> > the several KV it takes to leap maybe an inch?
>
> Ouch, Richard, that's a pretty wild shot from the hip. Spark plugs
> use gaps on the order of hundredths of an inch and voltages
> on the order of dozens of KV.
>
> And for Zeno, just bring the tube out to the surface of
> the wall, don't extend it... you don't want those things
> breaking off!
> --
> Steve
> KI5YG
> .

1533. Re: Need Kansas City Tracker software / KC Tracker driver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 03:21:59 UTC
From: James Nipper <jnipper@nospam.fdn.com>
Message-ID: <BOednTgktZzzvhLdRVn-gw@comcast.com>
Source record: 95884
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.amateur.antenna

A Google search of

Kansas City Tracker software drivers

yielded a number of hits, but this one seems that it might be the one that you need.

http://users.pandora.be/on1dqd/index2.html

Please let me know if this helps.

73 de Jim K4PYT

1534. really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 03:52:17 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c6n9re$dmc70$1@ID-225834.news.uni-berlin.de>
Source record: 95885

I'm using a KJ7U,www.kj7u.com, screwdriver antenna and its "control cable", for lack of a better term, is around 60 feet long. At this length it seems to be causing tuneing problems.

It appears that the cable is trying to radiate and thus it causes the SWR to rise above what it should be. The best way I can validate this is to tune it the best I can then go unplug the cable from the antenna. When I do this the SWR drops down to around 1.1 or so. Otherwise on some bands it is as high as 3 - 4

I put some toriod? cores on the line which helped out the problem on 80m to some extent. It did help bring the swr back down to a more acceptable level, but it still isn't as low as it is when the cable is unplugged.

When I had this antenna mounted in a different location and the cable was considerable shorter, none of this seemed to happen.

Anyone have any ideas or experiences with something like this ?

--
Registered Linux User #346565
http://www.tblx.net
WA5K

1535. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 05:21:34 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <ybHjc.1297$kR3.476@nwrddc03.gnilink.net>
Source record: 95886

I have absolutely no experience with analyzing a folded dipole. I would like to take advantage of this thread to ask for some information.
I had thought of a folded dipole as an antenna with a pair of 1/4 wave shorted stubs across its feed point. I thought the antenna length for a 1/2 wave dipole would be the same if it was fed as a 72 ohm dipole or fed as a 300 ohm folded dipole. But, if there was some dielectric loading in the twin lead it would make it necessary to account for the VP of the twin lead used for the *folded dipole" so the impedance of the stubs would be accounted for.

Specifically -- If a 1/2 wave folded dipole an antenna is constructed with a twin lead with a VP of 0.9, and the total antenna length is close to 1/2 wave, the shorted stubs will impose a capacitive reactance shunting the feed point impedance.
But, when I take my thinking to extreme configurations, my ideas seem to fail.

I'd sure like to get some "real life" data. I'm sure some of you guys know if the real life folded dipole gets measurably effected by VPs of 0.8 or 0.9.

Jerry

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:408ea417_1@corp.newsgroups.com...
> Richard Harrison wrote:
> > My ARRL Antenna Book (19th edition, page 8) says:
> >
> > "Since the antenna section (of 300-ohm twin-lead) does not operate as a
> > transmission line, but simply as two wires in parallel, the velocity
> > factor of twin-lead can be ignored in computing the antenna length."
> >
> > I wish the author had said:
> >
> > "---the transmission line velocity factor of twin-lead can be
> > ignored---."
>
> The phase of the currents in the adjacent sections of twinlead is what
> is important. If the phase of the adjacent currents is 180 degrees, the
> twinlead is acting like a transmission line and T-line VF must be taken
> into account. If the phase of the adjacent currents is zero degrees, the
> twinlead is acting like an antenna and the VF is considerably higher,
> essentially equal to insulated wire. If the phase of the adjacent currents
> is zero degrees, all the current is "common-mode current", something not
> desirable for transmission lines but something most desirable for antennas

> since common-mode currents do not inhibit radiation.
>
> Bottom line: The currents flowing in a folded dipole antenna are common-
> mode currents which radiate, not transmission line currents which do not
> radiate (much), and that's a very good thing for an antenna.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1536. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 06:14:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <umiu805lmv6innnp371ag0q924tuhjfj25@4ax.com>
Source record: 95887

On Wed, 28 Apr 2004 00:52:42 GMT, " Stephen Cowell"
<scowell@sbcglobal.net> wrote:
>> dredge up a common circumstance of the ordinary Spark Plug and observe
>> the several KV it takes to leap maybe an inch?
>
>Ouch, Richard, that's a pretty wild shot from the hip. Spark plugs
>use gaps on the order of hundredths of an inch and voltages
>on the order of dozens of KV.

Sorry you got bit there, Stephen,

It's called understatement. Besides, RF potentials have the capacity
to excite conduction above and beyond ignition spark conditions.
However, all things considered, the general breakdown tabulations
illustrate it remains fairly difficult to accomplish.

73's
Richard Clark, KB7QHC

1537. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 06:50:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <a4ju80ln18b0lkj3doahg9er9gp9g7qf9m@4ax.com>
Source record: 95888

On Tue, 27 Apr 2004 05:53:19 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:
> I have the two dipoles fed in phase and spaced 1/4 wave apart The anrenna
>really works well. I'd like to try to improve it but first need to know
>more about what I'm getting now.

Hi Jerry,

Well, I presume you've corresponded here enough to recognize the
answers to questions fit what the respondent chooses.

Open EZNEC;
Select the "Open" button that is at the top left of the application;
Select the W8JK.EZ design offered;
From the string of ">" selections, choose "Plot Type";
then select "3 Dimensional" - "OK" (and respond "OK" again to prompt);
Finally select the "FF Plot" button at the bottom left.

This will generate an X-Y-Z plot of the radiation lobes of this
particular antenna design. Clicking and scrolling your mouse over the
image will roll and rotate it to allow you to shift perspective. The
antenna element spacing is closer than your quarter wave (0.1 in
fact), but it gives you a basis to change things and see what happens.

This means you can introduce your self to the Wires table (select the
">" which is labeled "Wires"). Change something and then look at the
antenna (select the Button labeled "View Ant"). To see how your
change impacts transmission lobes, select that same button "FF Plot."
The Wires table is based on simple XYZ co-ordinates for each end of a
wire (segments is an artifice of necessity for the computation engine,
once you've laid out the basic form, we can come back to that later).

Instead of worrying about clunky transmission lines, you simply
replace them with "Sources" that take their place (this antenna has
two of them to represent the split feed). You can be anal and build
them out of virtual transmission lines, but give yourself a break and
ignore that; it is hardly instructive for the first pass.

Welcome to the world of modeling. Press more buttons and appreciate
the scope of data available for analysis. Return to the "Open"
button, and appreciate the variety of simple designs that offer a
fairly broad selection of styles. The free version allows quite a
latitude of variation, enough to educate you in all the fundamentals
of both design and the application.

73's
Richard Clark, KB7QHC

1538. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 07:43:05 UTC
From: richardharrison@webtv.net
Message-ID: <17056-408F6089-2@storefull-3251.bay.webtv.net>
Source record: 95890

Jerry Martes wrote:
"I`d sure like to get some "real life" data."

Personal experience testimonials are often unreliable. Modeling data are often more complete, skillfully designed, well executed, and less colored by the operator`s opinion, by the right modeler.

One highly educated, experienced, and competent source is L.B. Cebik, W4RNL. The plain folded dipole is just one of the many antenna types he has modeled and enriched his web pages with. He compares it with the common open-circuit single wire dipole in his analysis.

Just search on "folded dipole". Cebik`s web pages will appear near the top of your list of options. Click on the most likely of your options and you are there.

Best regards, Richard Harrison, KB5WZI

1539. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 07:49:26 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <amJjc.94801$L31.88096@nwrddc01.gnilink.net>
Source record: 95889

Thanks Richard

I printed your post. I'll try to learn how to use that antenna modeling program. I am amazed at how engineers have gotten so smart these past few years. It seems impossible that anyone could get smart enough to do something this complex that it models antenna patterns almost immediately.

It will sure be satisfying to become able to use this program.

Jerry

"Richard Clark" <kb7qhc@comcast.net> wrote in message news:a4ju80ln18b0lkj3doahg9er9gp9g7qf9m@4ax.com...
> On Tue, 27 Apr 2004 05:53:19 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
> > I have the two dipoles fed in phase and spaced 1/4 wave apart The anrenna
> >really works well. I'd like to try to improve it but first need to know
> >more about what I'm getting now.
>
> Hi Jerry,
>
> Well, I presume you've corresponded here enough to recognize the
> answers to questions fit what the respondent chooses.
>
> Open EZNEC;
> Select the "Open" button that is at the top left of the application;
> Select the W8JK.EZ design offered;
> From the string of ">" selections, choose "Plot Type";
> then select "3 Dimensional" - "OK" (and respond "OK" again to prompt);
> Finally select the "FF Plot" button at the bottom left.
>
> This will generate an X-Y-Z plot of the radiation lobes of this
> particular antenna design. Clicking and scrolling your mouse over the
> image will roll and rotate it to allow you to shift perspective. The
> antenna element spacing is closer than your quarter wave (0.1 in
> fact), but it gives you a basis to change things and see what happens.
>
> This means you can introduce your self to the Wires table (select the
> ">" which is labeled "Wires"). Change something and then look at the
> antenna (select the Button labeled "View Ant"). To see how your
> change impacts transmission lobes, select that same button "FF Plot."
> The Wires table is based on simple XYZ co-ordinates for each end of a
> wire (segments is an artifice of necessity for the computation engine,
> once you've laid out the basic form, we can come back to that later).

>
> Instead of worrying about clunky transmission lines, you simply
> replace them with "Sources" that take their place (this antenna has
> two of them to represent the split feed). You can be anal and build
> them out of virtual transmission lines, but give yourself a break and
> ignore that; it is hardly instructive for the first pass.
>
> Welcome to the world of modeling. Press more buttons and appreciate
> the scope of data available for analysis. Return to the "Open"
> button, and appreciate the variety of simple designs that offer a
> fairly broad selection of styles. The free version allows quite a
> latitude of variation, enough to educate you in all the fundamentals
> of both design and the application.
>
> 73's
> Richard Clark, KB7QHC

1540. Re: DJ4VM Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 09:28:22 UTC
From: Bill <lbj@congress.com>
Message-ID: <kDKjc.87701$UC4.30821@bignews2.bellsouth.net>
Source record: 95891

David L Thompson wrote:
> There is some info in the Moxon antenna book.
> Dave K4JRB
>
> Bill <lbj@congress.com> wrote in message
> news:HbDic.76779$UC4.68927@bignews2.bellsouth.net...
>
>>I am looking for information (any) on the DJ4VM loop antenna.
>>Any direction would be appreciated.
>>
>>Bill N4WC
>>
>
>
>
I believe I have that book; antennas for all locationsor something.
It's stored somewhere.

Thanks

Bill N4WC

1541. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 09:37:57 UTC
From: kashe@sonic.net
Message-ID: <jjuu80dg2sq9ibrslvd29pnuvccu1bm2b5@4ax.com>
Source record: 95892

On Tue, 27 Apr 2004 14:39:09 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>kashe@sonic.net wrote:
>> OK, nice specious argument. You can't have read this far in
>> the thread without understanding the intended parameters.
>
>And I'll assume the same is true for you.

I didn't drift off into the wild blue.

>
>> And since
>> you seem to be referring to the thermometer, pressure could indeed be
>> applied. In absolute terms, any container can be compressed, however
>> slightly.
>
>(Speaking of specious)

Just following your lead.

>
>> In addition, pressure can be applied without compression by
>> application of heat or of cold, depending on relative coefficients of
>> thermal expansion.
>
>Is your claim that the height of the column of liquid in a thermometer
>determined by the angle of inclination of the column? You were partially
>correct in that the barometer is illustrative of Pascals law.

Thanks for the table scraps.

I believe Pascal's law remains in effect in a thermometer, but
is overshadowed by other factors, including the design you mention,
the details of which I don't know.

>> Old science class demonstration -- completely fill a heavy
>> pipe, capping both ends, with a substance; heat the pipe with a torch
>> and it explodes; toss the pipe into a container of dry ice and it
>> explodes. What is the mystery substance? It turns out to be water at 4
>> degrees Centigrade.
>
>True, but not a demonstration of Pascals law.

Nor intended as such. It was in reference to your
incompressibility red herring.

>
>> Finally, I strongly suspect the "column" of mercury in a
>> thermometer does indeed obey Pascal's law, but it's effect is
>> overshadowed by the much stronger effects of temperature and
>> capillarity.
>
>True, particularly in light of the fact that a good thermometer is
>specifically designed to prevent it from demonstrating Pascals law - or
>more to the point, from having its measurement dependent upon its
>orientation.
>
>73, ac6xg

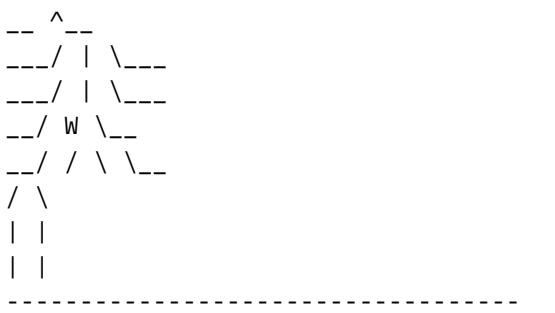
1542. How to model the house

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 11:04:09 UTC
From: Jon Kåre Hellan <dev@null.com>
Message-ID: <ter7u88ity.fsf@persaunet.uninett.no>
Source record: 95893

I've read a lot about modeling antennas and ground. But what about the house? Dipole configurations might look like this.

Or this

Or even this



(ASCII art looks better in a monospace font)

The house probably makes a lot of difference to gain and pattern, and also for other antenna types.

Modeling the house as part of ground might make sense, but there will be lots of differences. Metal roof and sidings would turn the house into a faraday cage. A wood frame house with no wiring and plumbing may be almost like air.

Has anybody included buildings in their models, and have they checked
if this made the model more realistic. Any rule of thumb parameters?

Jon Kï¿½re - LA4RT

1543. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 12:08:16 UTC
From: Stef <vee_ee_too_oh_doubleyou_ell@rac.ca>
Message-ID: <ag7v8095nk5a31tvur1gbnrkqu5gop1ptp@4ax.com>
Source record: 95894

Don't forget to check your coax and connectors.

1544. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 12:33:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <408FA4B4.366A21A2@cwis.net>
Source record: 95895

Jeremy,
Hmm, sounds 'reasonable' to me. A 60' control cable
is about 1/4 wave on 80 meters, and if you're using the
antenna on 80 meters, well...?
'Doc

PS - Sort'a suprised it hasn't singed your mustache, LOL.

1545. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 13:02:29 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <408FAB65.AA658B82@cwis.net>
Source record: 95896

Bill,
If you have the insulators and want to use them, why
not? Even if you have the insulators and you don't want
to use them, no problem there either. The 'dislocality',
'discontinuity', impedance 'speed bump' where the ladder
line goes through the wall just isn't going to make a lot
of difference. It would just make sense to use some kind
of nonconductive material imediately around the feed line,
but going way out of your way to do so seems a bit
excessive (all things considered). I've seen ladder line
fed through an under-eave vent, routed through an attic,
laying on 'stuff', and then through a sheet rock ceiling
via a 'slit' cut with a knife. No problems with matching
or high voltage arcing even at legal limit power levels.
As for 'connections'. Make them even 'close' to right
and there should be no problems with arcing. If you're
really worried about it, stagger the connections. I've
seen some really 'fubar' installations, but never any
arcing of the ladder line, yet... Metal backed insulation
would be my biggest 'worry, but even that wouldn't cause
any loss of sleep...
'Doc

1546. Re: How to model the house

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 13:06:57 UTC
From: Thierry <"Use http">
Message-ID: <408fac79@news.vo.lu>
Source record: 95897

Hi,

I do not know nobody who has included the building in the formula. It should be interesting to get a report about it and I should be curious to get the opinion of a telecom engineer or to see any radiation pattern with/without building included.

Possible configurations are of course infinite. You can always replace any object, car, house, etc, by a special configuration of selfs and caps. Harder is to find the correct values... The only solution is to experiment in the field with a meter as two house are never built the same way.

All depend first of the working frequency and then of the height of the antenna above the object.
Over 1/6 lambda or so over/away from the house I am not sure that the object will much influence your radiation pattern. Theoretically it does, in practice this is another affair : could you hear this difference ?...
Then there is the problem of radiations transmitted by your home devices too, from TV to boilder, TL and other old remote controller that could surely more bothering that your "house" seen as a whole as they can transmit RFI at some frequencies in ham bands.

Even with a dipole placed in inverted V the high point on top of the chimney, the wire tilted at 45 deg like this,

```
!chimney
/ !
wire/ ! house wall
```

I know many OM that get excellent results, even in pile-ups (with patience) as the antenna is somewhat directive and help a bit. They do not care about the pattern, they practice, and they see that their "small antenna" perform well. All the more when we know that this is the first third of the antenna (close to the center feed point and thus from the chimney) that radiates and much less the ends.

On the other side I know some OM that have erected their beam over apple/cherry trees, they have never complained about any loss of power or difficulties to work any entity.

If the problem exists well, its influence must be relativised.

Thierry, ON4SKY
http://www.astrosurf.com/lombry/menu-qsl.htm

"Jon K re Hellan" <dev@null.com> wrote in message
news:ter7u88ity.fsf@persaunet.uninett.no...

> I've read a lot about modeling antennas and ground. But what about the
> house? Dipole configurations might look like this.
>
> ----------------------------------+
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> \ W
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>
> Or this
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> -------------------------------------
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> Or even this
>
> __ ^__
> ___/ | ___
> ___/ | ___
> __/ W __
> __/ / \ __
> / \
> | |
> | |
> ------------------------------------
>
> (ASCII art looks better in a monospace font)
>
> The house probably makes a lot of difference to gain and pattern, and
> also for other antenna types.
>
> Modeling the house as part of ground might make sense, but there will
> be lots of differences. Metal roof and sidings would turn the house
> into a faraday cage. A wood frame house with no wiring and plumbing
> may be almost like air.
>
> Has anybody included buildings in their models, and have they checked

> if this made the model more realistic. Any rule of thumb parameters?
>
> Jon K�re - LA4RT

1547. Re: Vertical Antenna suggestions?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 13:11:54 UTC
From: Thierry <"Use http">
Message-ID: <408fada2@news.vo.lu>
Source record: 95898

Hi,

As usual the longer the best... I experimented a 6, 8, and a bit long vertical with a maximum of 2 traps (for the smallest), the longer, a Cushcraft, get the best result in DXing.

I think that there is no secret:
- you need either a good ground if placed at ground level
- some counterpoise if it is placed in elevation (the highest the best)
- a good length (lamda/4, 5/8 or 1/2) compatible with your working frequency.

In fact you need to apply the law of physics never the ones of marketing...

Thierry, ON4SKY
http://www.astrosurf.com/lombry/menu-qsl.htm

"No Way" <YourName@home.com> wrote in message
news:Xns94D6B0E31CC5AYourNamehomecom@204.127.199.17...
> I srongly suggest the Hustler 4-BTV antenna or the 5-BTV. Depending on
> the bands you want to use the 4-BTV does 10, 15, 20 and 40 very well. I
> have one and have reached Spain, Russia, South America, the Galopigos
> Is., and many other places far away from my Iowa shack.
>
> It works very well.
>
> The 5-BTV gives you 80 meter on top of the 4 offered by the 4-BTV.
>
> 73s.
>
> "Old Ed" <eseniorsR-E-M-O-V-E@earthlink.net> wrote in
> news:8oUcc.107$k05.47@newsread2.news.pas.earthlink.net:
>
> > Hi Paul -
> >
> > The Hy-Gain AV620 and AV640 models have good reputations for this
> > type of antenna.
> >
> > If you have a little bigger budget, can put in a full radial system,
> > and don't mind running a control cable, the SteppIR verticals should
> > perform extremely well.
> >
> > I have a Sommer T-25, which is OK on 40, 20, 17, and 12, excellent
> > on 30 and 10, but poor on 15. I normally use my dipoles on all bands
> > except 10, where the Sommer performs best.
> >

> > I suggest you check the eHam.net Reviews on antennas. It also
> > provides links to manufacturers sites, where you can (sometimes) get
> > additional information.
> >
> > 73, Ed, W6LOL
> >
> > "Paul Logan" <paul.logan4@btinternet.com> wrote in message
> > news:c4srkedae1@sparta.btinternet.com...
> >>
> >> Hi all,
> >>
> >> just wondering can anyone suggest some good verticals (available in
> >> the
> > UK)
> >> for HF- say 40- 10m and also a tribander or dual bander covering 6
> >> and 2m.
> >>
> >> regards and thanks for any help-
> >>
> >>
> >> --
> >> Paul Logan,
> >> Lisnaskea, N. Ireland.
> >>
> >>
> >>
> >
> >
> >
> >
>

1548. Re: How to model the house

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 13:12:05 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040428091205.07672.00000435@mb-m07.aol.com>
Source record: 95899

>
>The house probably makes a lot of difference to gain and pattern, and
>also for other antenna types.
>
>Modeling the house as part of ground might make sense, but there will
>be lots of differences. Metal roof and sidings would turn the house
>into a faraday cage. A wood frame house with no wiring and plumbing
>may be almost like air.
>

Not that simple, like siding, is it RF connection tight or insulated slabs? Millions of other questions, like you AC wiring, plumbing, coathangers, etc. If you manage to model it, what are you going to do about it? Level it? :-)

We know houses are bad for antennas, sources of distortion and interference from and to. If you are serious about serious antennas, you keep them away from the houses. If you worry about dipole over the house, don't. Just put it up and enjoy it. Modeling it won't help anything.

Modeling mobile antenna over particular type of vehicle can give us clues about efficiency and pattern, but measuring it will be more accurate, consider the current distribution in the loading coil and other effects in a real life time.

So if you worry about Inv Vee or dipole, just keep the ends as far away from your appliances to minimize the RFI TVI. On HF don't worry about stupid silly and irrelevant "RF Exposure Guidlines" on HF with typical ham setup.

73 Yuri, www.K3BU.us
www.computeradio.us - budding home of "Dream Radio One"

1549. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 13:13:02 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <x5Ojc.48198$GR.6876108@attbi_s01>
Source record: 95900

Remember the President's words after 9-11.

His definition of 'terrorist' is VERY V E R Y large. It includes the terrorists themselves, the people who finance them, the governments who finance them, those who shelter them, those who train them, those who provide logistics for them, those who provide sanctuary for them, those governments that are not actively working to eliminate them, etc. It is so broad that it can be understood as: "If you're not actively working against terrorist/terrorism, then YOU are a TERRORIST." [Saddam allegedly paid $25,000 to the families of Palestinian suicide bombers.] Today's terrorists operate in a supranational environment, above the normal understanding of national government. In our terms they are a NGIO, a Non-Governmental International Organization.

If you believe that there are no terrorists in Fallujah then no argument or statement of facts will convince you.

Remember, approximately 1000 years ago militant Islam and militant Christianity engaged in a 200 year war to contain militant Islam. Militant Islam is not dead. It has been dormant for many years.

In the modern context, it seems that today's terrorists are, in the majority, militants from an Islamic background. Having said that, it is not to be understood that the vast majority of those who claim Islam as their faith are terrorists. Likewise, those who claim Christianity as their faith are not war-mongers, although many Christians are in the military.

W1MCE

Alan wrote:
> And these incidents had what to do with Iraq?
>
> Alan
> WN4HOG
>

1550. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 13:14:13 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040428091413.07672.00000436@mb-m07.aol.com>
Source record: 95901

>
>I put some toriod? cores on the line which helped out the problem on 80m
>to some extent. It did help bring the swr back down to a more acceptable
>level, but it still isn't as low as it is when the cable is unplugged.

Keep adding some more and at different distance too. Also balun at the
feedpoint would help and if possible rerouting the cables.

Yuri, K3BU.us

1551. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 13:54:28 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <oIOjc.128245$04.2277016@twister.southeast.rr.com>
Source record: 95902

There was no leader more secular in the Middle East than Saddam. I'm not saying he was a good guy, but he had nothing to gain by assisting Al Qaida, who, broad as you might want the terrorist definition to be, were the people directly responsible for the events you referenced. Don't blur the goal. Even Bush said there was no connection between Iraq and Al Qaida. On the list of priorities, as far as battling terrorism, Iraq should've been at the bottom. It would've made more sense to bomb Mexico. Saudi Arabia has financed, and still finances, more extreme fanatics than any other country yet is considered a staunch ally.

Ms. Karin Hughes, one of Bush's primary advisors, referred to the pro-choice rallying people this weekend as "terrorists". Should we give them a little shock and awe too?

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:x5Ojc.48198$GR.6876108@attbi_s01...
> Remember the President's words after 9-11.
>
> His definition of 'terrorist' is VERY V E R Y large. It includes the
> terrorists themselves, the people who finance them, the governments who
> finance them, those who shelter them, those who train them, those who
> provide logistics for them, those who provide sanctuary for them, those
> governments that are not actively working to eliminate them, etc. It is
> so broad that it can be understood as: "If you're not actively working
> against terrorist/terrorism, then YOU are a TERRORIST." [Saddam
> allegedly paid $25,000 to the families of Palestinian suicide bombers.]
> Today's terrorists operate in a supranational environment, above the
> normal understanding of national government. In our terms they are a
> NGIO, a Non-Governmental International Organization.
>
> If you believe that there are no terrorists in Fallujah then no argument
> or statement of facts will convince you.
>
> Remember, approximately 1000 years ago militant Islam and militant
> Christianity engaged in a 200 year war to contain militant Islam.
> Militant Islam is not dead. It has been dormant for many years.
>
> In the modern context, it seems that today's terrorists are, in the
> majority, militants from an Islamic background. Having said that, it is

> not to be understood that the vast majority of those who claim Islam as
> their faith are terrorists. Likewise, those who claim Christianity as
> their faith are not war-mongers, although many Christians are in the
> military.
>
> W1MCE
>
> Alan wrote:
> > And these incidents had what to do with Iraq?
> >
> > Alan
> > WN4HOG
> >
>

1552. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 14:54:27 UTC
From: Tuuk <bangkokbob@yahoo.com>
Message-ID: <pAPjc.2917$_o1.324081@read2.cgocable.net>
Source record: 95904

Alan

Re-read what was asked, what was said, then make comment. Your missing some
things.

"Alan" <alannc44@{nospam}ix.netcom.com> wrote in message
news:oIOjc.128245$04.2277016@twister.southeast.rr.com...
> There was no leader more secular in the Middle East than Saddam. I'm not
> saying he was a good guy, but he had nothing to gain by assisting Al
Qaida,
> who, broad as you might want the terrorist definition to be, were the
people
> directly responsible for the events you referenced. Don't blur the goal.
> Even Bush said there was no connection between Iraq and Al Qaida. On the
> list of priorities, as far as battling terrorism, Iraq should've been at
the
> bottom. It would've made more sense to bomb Mexico. Saudi Arabia has
> financed, and still finances, more extreme fanatics than any other country
> yet is considered a staunch ally.
>
> Ms. Karin Hughes, one of Bush's primary advisors, referred to the
pro-choice
> rallying people this weekend as "terrorists". Should we give them a little
> shock and awe too?
>
> Alan
> WN4HOG
>
> --
> Windsurfing Club: http://www.ibscc.org
>
>
> "Dave Shrader" <david.shrader@comcast.net> wrote in message
> news:x5Ojc.48198$GR.6876108@attbi_s01...
> > Remember the President's words after 9-11.
> >
> > His definition of 'terrorist' is VERY V E R Y large. It includes the
> > terrorists themselves, the people who finance them, the governments who
> > finance them, those who shelter them, those who train them, those who
> > provide logistics for them, those who provide sanctuary for them, those
> > governments that are not actively working to eliminate them, etc. It is
> > so broad that it can be understood as: "If you're not actively working
> > against terrorist/terrorism, then YOU are a TERRORIST." [Saddam
> > allegedly paid $25,000 to the families of Palestinian suicide bombers.]
> > Today's terrorists operate in a supranational environment, above the

> > normal understanding of national government. In our terms they are a
> > NGIO, a Non-Governmental International Organization.
> >
> > If you believe that there are no terrorists in Fallujah then no argument
> > or statement of facts will convince you.
> >
> > Remember, approximately 1000 years ago militant Islam and militant
> > Christianity engaged in a 200 year war to contain militant Islam.
> > Militant Islam is not dead. It has been dormant for many years.
> >
> > In the modern context, it seems that today's terrorists are, in the
> > majority, militants from an Islamic background. Having said that, it is
> > not to be understood that the vast majority of those who claim Islam as
> > their faith are terrorists. Likewise, those who claim Christianity as
> > their faith are not war-mongers, although many Christians are in the
> > military.
> >
> > W1MCE
> >
> > Alan wrote:
> > > And these incidents had what to do with Iraq?
> > >
> > > Alan
> > > WN4HOG
> > >
> >
>
>

1553. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 15:16:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <01iv8095f95gdaf3cgcrhs2b42sm5kv4uc@4ax.com>
Source record: 95903

On Wed, 28 Apr 2004 13:13:02 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Remember the President's words after 9-11.
>
>His definition of 'terrorist' is VERY V E R Y large. It includes ...

>In the modern context, it seems that today's terrorists are, in the
>majority,...

Called a self-fulfilling prophesy.

6,000,000 Cambodians weren't suffering terrorism by our definition
when they were massacred. No Christians to speak of, nor oil in
Cambodia.

1,000,000 Tutsis and Hutus weren't suffering terrorism by our
definition when they were massacred. No Christians to speak of, nor
oil in Rawanda.

Tribal warlords in Afghanistan (our allies) practice rape and force
women into prostitution, they support 90% of the world's Heroin trade,
but at least they are not terrorists by our definition (not nearly the
satan of Noriega in Panama who knew to many deals cut by Bush elder).

We nearly bought into the European definition of no terrorism in the
Balkans. No Christians to speak of (mostly Moslem), nor oil there,
but Gen. Clark didn't use that as an arbiter of morality.

I went to hear Ariana Huffington speak last night here in town.
Someone offered her a profound observation:
"Don't believe everything you think."

73's
Richard Clark, KB7QHC

1554. Re: How to model the house

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 15:26:40 UTC
From: Larry Gagnon <lagagnon@fakeuniserve.com>
Message-ID: <37jv80dma3cfirvm08f84f7ktde9bi59ud@4ax.com>
Source record: 95905

On Wed, 28 Apr 2004 13:04:09 +0200, Jon Kï¿½re Hellan <dev@null.com>
wrote:

>I've read a lot about modeling antennas and ground. But what about the
>house?

Most people use an interior decorator to model their house ;-)

Larry VE7EA
****
remove "fake" from email address

1555. Re: How to model the house

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 15:31:24 UTC
From: richardharrison@webtv.net
Message-ID: <17056-408FCE4C-32@storefull-3251.bay.webtv.net>
Source record: 95906

Yuri, K3BU wrote:
"---consider the current distribution in the loading coil and other effects in a real life time (and place)."

"Yuri previously said:
"I ordered the 19th edition of ARRL Antenna Book and followed chain of references that led to information on page 16-7 and Fig. 9 and 10."

These are current distribution diagrams. Formulas exist for these. Can you write a formula to describe your house? If so, would it also describe my house?

Best regards, Richard Harrison, KB5WZI

1556. Re: Vertical Antenna suggestions?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 16:15:29 UTC
From: richardharrison@webtv.net
Message-ID: <29233-408FD8A1-63@storefull-3256.bay.webtv.net>
Source record: 95907

Thierry, ON4SKY wrote:
"In fact you need to apply the law of physics never the ones of marketing."

Sage advice.

One of the best guides to vertical antennas for the ham is chapter 9 of ON4UN`s "Low-Band DXing", published by the ARRL.

ON4UN lists equipment used by some of the best known DXers, but antennas are listed only by types, not brand names.

ON4UN`s book is probably available in most countries.

Best regards, Richard Harrison, KB5WZI

1557. Re: Any real fans of ladderline?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 16:42:57 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <408fdd5a.1008537656@news.galilei.com>
Source record: 95908

Hi Bill

The monster cable I had was ultra fine stranded to about size #8 copper, very thick.
It was only 8 years that it was up before I moved, and in that time it did not get brittle although it did change from clear to amber over that timespan.
I was able to roll it up and bring it with me and saw no signs of cracking. But even if the insulation came off completely, it wouldn't affect it as far as ladder line goes. I was even thinking of stripping the insulation before using it for ladder line, but it was somehow molded onto the wire braid which would make stripping it quite hard. So I used it as is.

FWIW: My son who is a Hi Fi buff, is now using something similar in appearance to our RG8U but in a twin housing, like some twin Cable TV cable. I have no idea of the impedance or actually what it is he is using. But he seems to like it better than the Monster Cable.

TTUL
Gary

1558. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 16:49:35 UTC
From: richardharrison@webtv.net
Message-ID: <29233-408FE09F-68@storefull-3256.bay.webtv.net>
Source record: 95909

Richard Clark, KB7QHC wrote:
"Don`t believe everything you think."(a riposte to Ariana Huffington)

What the U.S. needs now is a no-CARB diet.

No Cheney

No Ashcroft

No Rumsfeld

No Bush

Wait till next year, if you can.

Best regards, Richard Harrison, KB5WZI

1559. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 16:57:13 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <JnRjc.248$sK3.245@nwrddc03.gnilink.net>
Source record: 95910

Richard

I have a severly limited capacity for understanding alot of theoritical presentations. I did read some of Cebik's information, and I still wonder if the velocity of propagation of the "twin lead" used for the folded dipole can be ignored. I wonder if the VP of the twin lead is an important consideration when designing a folded dipole.
If the resonant frequency of a folded dipole is identified as that frequency where the input (feed point) impedance is R+/-j0, it seems that the 1/4 wave stubs that shunt the feed point might strongly effect the input impedance.
I recognize that there is a good chance that my reasoning is wrong. It may be that the "stubs" that I consider to be shunting the fed point, are not acting the same as a 'non disipative' stub. But, this is where my mind could benefit from having some "lab data" which is what I refer to as "real life" data.

Jerry

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:17056-408F6089-2@storefull-3251.bay.webtv.net...
> Jerry Martes wrote:
> "I`d sure like to get some "real life" data."
>
> Personal experience testimonials are often unreliable. Modeling data are
> often more complete, skillfully designed, well executed, and less
> colored by the operator`s opinion, by the right modeler.
>
> One highly educated, experienced, and competent source is L.B. Cebik,
> W4RNL. The plain folded dipole is just one of the many antenna types he
> has modeled and enriched his web pages with. He compares it with the
> common open-circuit single wire dipole in his analysis.
>
> Just search on "folded dipole". Cebik`s web pages will appear near the
> top of your list of options. Click on the most likely of your options
> and you are there.
>
> Best regards, Richard Harrison, KB5WZI
>

1560. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 17:12:18 UTC
From: richardharrison@webtv.net
Message-ID: <29233-408FE5F2-69@storefull-3256.bay.webtv.net>
Source record: 95913

Richard Clark wrote:
"Don`t believe everything you think."

Follow these instructions before someone forces Google to fix its site:

1) Go to www.Google.com

2) Type in--weapoms of mass destruction--
(Don`t hit return)

3) Hit the "I`m feeling lucky" button,
(Not the Google search)

4) Read the "error message" carefully--
(The whole page)

Someone at Google really has a sense of humor.

Best regards, Richard Harrison, KB5WZI

1561. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 17:17:20 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <AGRjc.44877$6m4.3684959@twister.southeast.rr.com>
Source record: 95911

I MUST be missing something. The only question I can find is the original post in which someone asked, "Who the fuck wants to listen to a bunch of crying liberals?

What question do you see?

Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org

" Tuuk" <bangkokbob@yahoo.com> wrote in message
news:pAPjc.2917$_o1.324081@read2.cgocable.net...
> Alan
>
> Re-read what was asked, what was said, then make comment. Your missing some
> things.
>
>
>
>
>
>
>
> "Alan" <alannc44@{nospam}ix.netcom.com> wrote in message
> news:oIOjc.128245$04.2277016@twister.southeast.rr.com...
> > There was no leader more secular in the Middle East than Saddam. I'm not
> > saying he was a good guy, but he had nothing to gain by assisting Al
> Qaida,
> > who, broad as you might want the terrorist definition to be, were the
> people
> > directly responsible for the events you referenced. Don't blur the goal.
> > Even Bush said there was no connection between Iraq and Al Qaida. On the
> > list of priorities, as far as battling terrorism, Iraq should've been at
> the
> > bottom. It would've made more sense to bomb Mexico. Saudi Arabia has
> > financed, and still finances, more extreme fanatics than any other country
> > yet is considered a staunch ally.
> >
> > Ms. Karin Hughes, one of Bush's primary advisors, referred to the
> pro-choice
> > rallying people this weekend as "terrorists". Should we give them a

little
> > shock and awe too?
> >
> > Alan
> > WN4HOG
> >
> > --
> > Windsurfing Club: http://www.ibscc.org
> >
> >
> > "Dave Shrader" <david.shrader@comcast.net> wrote in message
> > news:x5Ojc.48198$GR.6876108@attbi_s01...
> > > Remember the President's words after 9-11.
> > >
> > > His definition of 'terrorist' is VERY V E R Y large. It includes the
> > > terrorists themselves, the people who finance them, the governments
who
> > > finance them, those who shelter them, those who train them, those who
> > > provide logistics for them, those who provide sanctuary for them,
those
> > > governments that are not actively working to eliminate them, etc. It
is
> > > so broad that it can be understood as: "If you're not actively working
> > > against terrorist/terrorism, then YOU are a TERRORIST." [Saddam
> > > allegedly paid $25,000 to the families of Palestinian suicide
bombers.]
> > > Today's terrorists operate in a supranational environment, above the
> > > normal understanding of national government. In our terms they are a
> > > NGIO, a Non-Governmental International Organization.
> > >
> > > If you believe that there are no terrorists in Fallujah then no
argument
> > > or statement of facts will convince you.
> > >
> > > Remember, approximately 1000 years ago militant Islam and militant
> > > Christianity engaged in a 200 year war to contain militant Islam.
> > > Militant Islam is not dead. It has been dormant for many years.
> > >
> > > In the modern context, it seems that today's terrorists are, in the
> > > majority, militants from an Islamic background. Having said that, it
is
> > > not to be understood that the vast majority of those who claim Islam
as
> > > their faith are terrorists. Likewise, those who claim Christianity as
> > > their faith are not war-mongers, although many Christians are in the
> > > military.
> > >
> > > W1MCE
> > >
> > > Alan wrote:

> > > > And these incidents had what to do with Iraq?
> > > >
> > > > Alan
> > > > WN4HOG
> > > >
> > >
> >
> >
>
>

1562. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 17:18:45 UTC
From: Allan Butler <ka0ies@hotmail.com>
Message-ID: <VHRjc.6241$RE1.759990@attbi_s54>
Source record: 95912

Maybe use some capacitors from the control wires to ground to short out the rf right to ground before it gets to the toroids. The toroids then won't have so much rf to work with and they may not be as likely to saturate.

Be careful with the capacitors that you get transmitting style that can handle a good amount of rf current.

1563. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 18:03:55 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c6oro9$ejotd$1@ID-225834.news.uni-berlin.de>
Source record: 95914

Yuri Blanarovich wrote:

>>
>>I put some toriod? cores on the line which helped out the problem on 80m
>>to some extent. It did help bring the swr back down to a more
acceptable
>>level, but it still isn't as low as it is when the cable is unplugged.
>
> Keep adding some more and at different distance too. Also balun at the
> feedpoint would help and if possible rerouting the cables.
>
> Yuri, K3BU.us

I'll try putting them at different locations along the cable. I have 4 that
are designed to clip onto wire the size of rg-8u so I coiled up the
control cable and cliped the cores over the coil of wire, and i put all 4
on that coil. I'll try making several smaller coils and putting them at
different places along the cable

--
Registered Linux User #346565
http://www.tblx.net
WA5K

1564. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 18:05:57 UTC
From: richardharrison@webtv.net
Message-ID: <26087-408FF285-89@storefull-3258.bay.webtv.net>
Source record: 95916

Jerry Martes wrote:
"It seems that the 1/4 wave stubs that shunt the feed point might strongly affect the input impedance."

Not at the resonant frequency.

Don`t sweat twin lead VF in an antenna as radiation is from common-mode current.

The marvelous 19th edition of the ARRL Antenna Book has Fig 17 on page 24-14. It`s "Lumped-constant circuit equivalents of open and short-circuited transmission lines". Note (A), the top figure, which is a short-circuited stub of any length less than 1/4 wavelength. It is an inductance! Also note (C). It is a short-circuited stub of exactly 1/4-wave:

Equal to a parallel resonant circuit, a "very high" impedance. So high in fact that many in parallel would not be noticed.

Best regards, Richard Harrison, KB5WZI

1565. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 18:06:59 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c6oru1$ejotd$2@ID-225834.news.uni-berlin.de>
Source record: 95915

Allan Butler wrote:

> Maybe use some capacitors from the control wires to ground to short out
the
> rf right to ground before it gets to the toroids. The toroids then won't
> have so much rf to work with and they may not be as likely to saturate.
>
> Be careful with the capacitors that you get transmitting style that can
> handle a good amount of rf current.

I've heard of doing this before, with the capacitors, so would this be the
ceramic type? and how would i distinguish between "transmitting" style and
regular capacitors?

--
Registered Linux User #346565
http://www.tblx.net
WA5K

1566. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 18:42:10 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408ffb79_6@corp.newsgroups.com>
Source record: 95917

Jerry Martes wrote:
> I have a severly limited capacity for understanding alot of theoritical
> presentations. I did read some of Cebik's information, and I still wonder
> if the velocity of propagation of the "twin lead" used for the folded dipole
> can be ignored. I wonder if the VP of the twin lead is an important
> consideration when designing a folded dipole.

The VF of twin-lead used for a folded dipole is approximately the same
as the VF of insulated wire used for a dipole. I'm just not sure how
much "end effect" actually exists in a folded dipole since there is,
technically, no end.

> If the resonant frequency of a folded dipole is identified as that
> frequency where the input (feed point) impedance is R+/-j0, it seems that
> the 1/4 wave stubs that shunt the feed point might strongly effect the input
> impedance.

There seems to be some confusion about exactly how the feedline connects
to the folded dipole. Here is the correct way:

```
+-----------------------------------------------------------------+
| |
+-------------------------------+ +-------------------------------+
| |
| |
```

Here is the incorrect way:

```
|
|
+-------------------------------+-------------------------------+
| |
+-------------------------------+-------------------------------+
|
|
```

For the incorrect way, the feedline is indeed seeing two shorted 1/4WL
stubs in parallel. The currents for the incorrect way would be 180 deg
out of phase and defeat the purpose of the antenna.

However, for the correct way, the currents in the adjacent wires are
in phase and there is a current phase reversal (current minimum point) at
each end of the antenna. After all, a folded dipole is just a one-wavelength
loop with the conductors brought close together. When Mr. Moore invented
the Quad beam, he envisioned a folded dipole with its conductors being
separated incrementally by a distance until it came out to be a square.

The key to understanding the folded dipole is that there is an electrical
phase reversal at the same point as a physical 180 degree reversal.
180 + 180 = 360 degrees, i.e. in phase.

> I recognize that there is a good chance that my reasoning is wrong. It
> may be that the "stubs" that I consider to be shunting the fed point, are
> not acting the same as a 'non disipative' stub. But, this is where my mind
> could benefit from having some "lab data" which is what I refer to as "real
> life" data.

A classic stub is a current-balanced device with the currents 180 degrees out
of phase. That is not true for a folded dipole antenna. Therefore, a folded
dipole antenna is not composed of true stubs. Semantics strikes again. A series
"stub" is different enough from a parallel "stub" that we probably should not
use the same word for the two of them.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1567. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 18:44:53 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408ffc1a$1_6@corp.newsgroups.com>
Source record: 95918

Jeremy Salch wrote:
> I've heard of doing this before, with the capacitors, so would this be the
> ceramic type? and how would i distinguish between "transmitting" style and
> regular capacitors?

Doorknobs are excellent but expensive.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1568. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 18:46:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <108vv0g4u9mcha7@corp.supernews.com>
Source record: 95819

The currents in the wires of a folded dipole or monopole are neither in phase nor 180 degrees out of phase, as you can easily see from EZNEC. Because they obey superposition, you can, for convenience, consider them as two separate sets of currents, common mode (or "antenna" current) and one differential mode (or "transmission line" current). Neither one is zero. The phase of the antenna current is a function of the velocity factor of the two wires excited in parallel. For TV twinlead, for example, this would be something like 3 percent slower than for bare wire -- about the same as any other typical insulated wire. In contrast, the phase of the transmission line current is dictated by the velocity factor of the two wires excited out of phase as a transmission line. In this mode, there's an intense field between the conductors, so the dielectric between the conductors has much more impact. The velocity factor for this mode is more like 0.8, so the transmission line will be electrically considerably longer than a quarter wavelength.

The TV twinlead "antenna" will be resonant, then, at a length about 3% shorter than if it were made from two parallel bare wires -- not because the currents in the two wires are in phase, but because the common mode part of the currents are in phase -- by definition, in fact. But the effect of the transmission line stub also affects the feedpoint impedance, and its velocity factor has to be accounted for in the calculation of its contribution. I've seen a recommendation that the conductors of a twinlead folded dipole be shorted about 80% of the way from the center. What this does is to make the transmission line nearly a quarter wavelength long, so its contribution to the feedpoint impedance is negligible. Then you don't need to make any adjustment of the length to compensate for the transmission line. Alternatively, you can short circuit the wires at the ends in the normal fashion, and slightly adjust the length to compensate for the impedance change caused by the transmission line.

Roy Lewallen, W7EL

Cecil Moore wrote:
> Richard Harrison wrote:
>
>> My ARRL Antenna Book (19th edition, page 8) says:
>>
>> "Since the antenna section (of 300-ohm twin-lead) does not operate as a
>> transmission line, but simply as two wires in parallel, the velocity
>> factor of twin-lead can be ignored in computing the antenna length."
>>
>> I wish the author had said:
>>

>> "---the transmission line velocity factor of twin-lead can be
>> ignored---."
>
>
> The phase of the currents in the adjacent sections of twinlead is what
> is important. If the phase of the adjacent currents is 180 degrees, the
> twinlead is acting like a transmission line and T-line VF must be taken
> into account. If the phase of the adjacent currents is zero degrees, the
> twinlead is acting like an antenna and the VF is considerably higher,
> essentially equal to insulated wire. If the phase of the adjacent currents
> is zero degrees, all the current is "common-mode current", something not
> desirable for transmission lines but something most desirable for antennas
> since common-mode currents do not inhibit radiation.
>
> Bottom line: The currents flowing in a folded dipole antenna are common-
> mode currents which radiate, not transmission line currents which do not
> radiate (much), and that's a very good thing for an antenna.
> --
> 73, Cecil http://www.qsl.net/w5dxp

1569. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 18:50:50 UTC
From: Larry <nospam@REMOVEME.com>
Message-ID: <e2Tjc.16334$e4.1061@newsread2.news.pas.earthlink.net>
Source record: 95820

My experience with a Radio Works Carolina Windom 160 special with 75' of RG-8x lead is as follows. The antenna is mounted 50' off of the ground. The "special" antenna is the same as the Windom 80 (133' long) but the balun and isolator are wideband to cover 160. I bought it with the insulated #12, 259 strand option.

The supplier states that you need to be able to tune for VSWR up to 10:1. Most built-in tuners will not handle that range. My Ten-Tec Jupiter w/autotuner does.
Measured average VSWR per band w/o tuner is below:
160 9.3:1
75 4.3:1
60 5.8:1
40 4.3:1
20 2.4:1
17 3.1:1
15 2.6:1
12 1.3:1
10 2.6:1

Except for 160, the VSWR variation across a band is less than +/- 0.5. The high end of 160 is about 7:1 and the low end about 12:1. Except for 160, the tuner brings it to 1.0:0. The beauty is, once I tune a frequency in a band, I do not tune again while I'm in the band.

As far as azimuth pattern goes, the density of contacts pretty much tracks where I expect the stations to be most dense. So, I would guess the pattern is somewhat close to omni as the supplier claims. It appears to have good low angle radiation since I have made numerous contacts at 4000+ miles with my 100 W PEP SSB. I have only had the antenna (and my ticket) for less than a month. I have made no contacts on 160 (only tried twice) 15 to 10 have been dead and I really haven't tried. 75 through 17 have been rewarding.

73
Larry
"Pat Myers" <captain-death@to-spammers-texas.net> wrote in message news:nsudnbVB1pvGlBHdRVn-hw@texas.net...
> I have posted this on eHam.com, but thought I'd try here as well.
>
> Sorry if this story is rather convoluted, but I'm in a bit of a quandary and
> any help would be appreciated.
>
> I am getting back into ham radio after a ten year absence, and HF operating

> has always been my favorite. In the past I lived in a rural area, and
could
> put up whatever sort of antennas I wanted, and was even pretty good at
> making my own dipoles for various bands.
>
> However, I now live in a subdivision that, while antennas are not
forbidden
> outright, the civic association is vicious and not to be trifled with,
hence
> I wanted to go with something at once stealthy but versatile.
>
> At first I thought to try the old stand-by, the G5RV, but in doing my
> Internet research on the issue, I came across this "Carolina Windom"
> multiband antenna, which seemed to give more bangs for the buck. I ended
up
> purchasing one from an outfit that will remain nameless here, to the tune
of
> around $150, when you include shipping, rope and other incidentals.
>
> It was a bear of a job to put up, since I had to threat it through tree
> branches and whatnot (which is why I got the one with the insulated wire),
> but I got it up. Suspended from trees, the "matching transformer" (looks
> like a balun to me) and the long segment of wire was up about 35', more or
> less horizontal. The shorter end sloped down, with the end about 10' up (I
> had no alternative in this).
>
> After making up the 100 or so foot feed line (RG-8X) and grounding the rig
> (8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
> through the roof on all bands.
>
> Anything more than a few watts, on 80 through 10m, made the radio shut
down.
> I checked continuity all the way back to the antenna, and everything seems
> OK, except the balun shows a dead short on my VOM. However, the antenna
> maker says their balun is supposed to show a dead short, and when I took
the
> antenna back down I could find nothing else wrong with it (no damaged
> insulation, all connections weatherproofed to the max, not that it had
been
> up long enough to get wet, etc).
>
> Except for power and phone lines running along the back property line (and
> the slinky antenna I put up later is no further away from those than the
> Windom was, and I am having no problems with it), there was nothing
metallic
> nearby to detune the antenna, and even if there was, I can't imagine even
> that would create the high SWR I am seeing.
>
> I called the manufacturer up and after telling me there was nothing wrong
> with the antenna based on what I told them, they just said to send the

> antenna back to them and they would "check it out".
>
> We finally get to my question. I have been working on getting an antenna
for
> weeks, and am tired of fooling with assorted vendors (have dealt with
> several during this process, and none have impressed me).
>
> Given how much I will pay out further on shipping the antenna both ways
and
> the like, I am wondering if I would be better off simply buying a decent
4:1
> balun, replace the existing "matching transformer" with it, and use the
rest
> of the antenna components (wire, coax, RF choke), and if so, is this more
> likely to work? Based on my research, the original Windom antenna design
> used a 4:1 balun, and the wire lengths of the antenna I bought look to be
> pretty close to specs per that design, which is why I suggest this option.
>
> Unfortunately I am no antenna guru, and even with all the information I've
> found on the Windom, the data is a bit ambiguous on this point. So, before
I
> throw any more good money after bad, I would appreciate any help you all
> could give me in this matter. Thanks and 73.
>
> PS What to take out of my email address to make it work is pretty
> obvious...:)
>
>
>

1570. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 18:54:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <kruv80d21g58n1votdtg8dph4666cvrooa@4ax.com>
Source record: 95821

On Wed, 28 Apr 2004 13:06:59 -0500, Jeremy Salch
<salchNOSPAM@tblx.net> wrote:

>Allan Butler wrote:
>
>> Maybe use some capacitors from the control wires to ground to short out
>the
>> rf right to ground before it gets to the toroids. The toroids then won't
>> have so much rf to work with and they may not be as likely to saturate.
>>
>> Be careful with the capacitors that you get transmitting style that can
>> handle a good amount of rf current.
>
>I've heard of doing this before, with the capacitors, so would this be the
>ceramic type? and how would i distinguish between "transmitting" style and
>regular capacitors?

Hi Jeremy,

There should be no distinction between caps for this job - almost
anything will work as the control voltages are so low that even
dielectric breakdown is unlikely.

On the other hand, the package style may be more carefully considered.
The high end designs use what are called "feed-thru" button styles
that are designed for bulkhead connections with a pig-tail on either
side and the cap looks like a threaded stud with a collar. These are
specifically designed to decouple rf off of dc lines. They provide
the shortest lowest inductance path to ground (essentially zero lead
length).

These would be a must for UHF, but at HF you are just as well off with
simple, leaded Micas, Ceramics, Paper-oil, polystyrene, tantalum, or
any of a host of others. You don't really want massive capacitance
(which is to say perhaps tantalums and like are unnecessary overkill)
because 10,000pF is more than enough but 0.22mF works just as well.
If you assist the cap with a small choke (on the noisy side of the
current) you gain that much more isolation. Again, any value is
better than none (but it hardly begs 1H audio chokes).

73's
Richard Clark, KB7QHC

1571. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 18:55:10 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <408ffe85_6@corp.newsgroups.com>
Source record: 95822

Jerry Martes wrote:
> I had thought of a folded dipole as an antenna with a pair of 1/4 wave
> shorted stubs across its feed point.

"Stub" has more than one meaning and therefore, more than one response.

Your definition of "stub" seems to assume the currents are 180 degrees
out of phase. Therefore, you should not use the word "stub" on a folded
dipole antenna where the currents are in phase.

It's a semantics problem. If you revise your definition of "stub" to
include stubs with in phase currents, you must give up on your present
definition of stubs with only out of phase currents.

Most of us have a feel for the difference between a parallel stub
fed from a line with balanced currents and a series stub where the
currents can have any phase relationship. "Series stubs" is a very
confusing topic and could support a technical article of some kind.
I don't remember it ever being explained in detail before, at least
in the amateur literature.
--
73, Cecil http://www.qsl.net/w5dxp

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1572. Re: How to model the house

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 19:04:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bkvv8094oa739g0vf9sshcuphsr6tags9a@4ax.com>
Source record: 95823

On Wed, 28 Apr 2004 13:04:09 +0200, Jon Kï¿½re Hellan <dev@null.com>
wrote:
>I've read a lot about modeling antennas and ground. But what about the
>house? Dipole configurations might look like this.

Hi Jon,

This is actually far simpler than others would have us believe.

Model the antenna you have above/near the house. Model it in the
conventional way (no house) while taking care to include the usual
loss (copper loss, ground loss).

Now measure your antenna's characteristics.

Subtract Measured results from Modeled results = House effects

There's your model for the future. And it's accurate. This beats all
the tea leaf reading and gazing into Xtal Balls to achieve a mystic
answer.

73's
Richard Clark, KB7QHC

1573. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 19:08:48 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40900140.5ED0955A@uci.edu>
Source record: 95824

kashe@sonic.net wrote:
> I believe Pascal's law remains in effect in a thermometer, but
> is overshadowed by other factors, including the design you mention,
> the details of which I don't know.

Pascals law, just as any other natural law, always remains in effect. The point is simply that a sealed column of liquid will NOT change length by a factor of the square root of two at an inclination of 45 degrees. That was initially my issue with Cecil.

A barometer on the other hand is obviously not sealed. The weight of the column of mercury is balanced against the weight of the atmosphere acting on an open reservoir of mercury at the bottom of the column. The reservoir will act to maintain the column at a constant vertical height by adjusting the length of the column as a funtion of tilt angle. A sealed column does not act that way.

I disagree that it's specious to point out that rather significant and fundamental difference.

73, ac6xg

1574. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 19:19:23 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c6p05p$ejotd$3@ID-225834.news.uni-berlin.de>
Source record: 95825

Cecil Moore wrote:

> Jeremy Salch wrote:
>> I've heard of doing this before, with the capacitors, so would this be
the
>> ceramic type? and how would i distinguish between "transmitting" style
and
>> regular capacitors?
>
> Doorknobs are excellent but expensive.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
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> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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is that a kind of capacitor, or are you making fun of my not knowing the
different kids of capacitors

--
Registered Linux User #346565
http://www.tblx.net
WA5K

1575. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 19:21:38 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <6vTjc.38970$cF6.1701534@attbi_s04>
Source record: 95826

Alan wrote:

> Ms. Karin Hughes, one of Bush's primary advisors, referred to the pro-choice
> rallying people this weekend as "terrorists". Should we give them a little
> shock and awe too?
>
> Alan
> WN4HOG

I agree with Ms. Hughes!

I don't agree with you.

1576. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 19:33:35 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <jGTjc.44887$6m4.3719252@twister.southeast.rr.com>
Source record: 95827

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:6vTjc.38970$cF6.1701534@attbi_s04...
> Alan wrote:
>
> > Ms. Karin Hughes, one of Bush's primary advisors, referred to the
pro-choice
> > rallying people this weekend as "terrorists". Should we give them a
little
> > shock and awe too?
> >
> > Alan
> > WN4HOG
>
> I agree with Ms. Hughes!
>
> I don't agree with you.
>

Does that make me a terrorist?

Alan

1577. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 19:41:05 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <409008D1.CC42660B@uci.edu>
Source record: 95829

Richard Harrison wrote:
>
> Richard Clark wrote:
> "Don`t believe everything you think."
>
> Follow these instructions before someone forces Google to fix its site:
>
> 1) Go to www.Google.com
>
> 2) Type in--weapoms of mass destruction--
> (Don`t hit return)
>
> 3) Hit the "I`m feeling lucky" button,
> (Not the Google search)
>
> 4) Read the "error message" carefully--
> (The whole page)
>
> Someone at Google really has a sense of humor.

Somebody at www.coxar.pwp.blueyonder.co.uk probably deserves the "credit". What Feeling Lucky does is automatically link you to the first hit on the search results list. I saw the Google guy on CNBC a couple months ago and he was asked about it.

73, ac6xg

1578. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 19:45:50 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <ORTjc.102314$L31.51381@nwrddc01.gnilink.net>
Source record: 95828

Roy

Thanks for the clear and meaningfull response to my post. I'm not qualified to enter this discussion. I'm in the learning mode. I did wonder if the dielectricly loaded "shorted stub" transmission line (1/2 the folded dipole) wuld have a shortning capability for determining antenna length. As I read it, the VP of the twin lead does effect the folded dipole's length to aceive resonance. And, the amount of "shortning effect" is somewhere between 20 percent and 3 percent in your example of twin lead with VP=0.8 .Please correct me if I'm wrong, but, I'd expect the "shortning effect" to be much closer to the 3 percent end of the scale for reasons that would be too confusing for me to try to explain. (besides, I'm probably wrong in my thinking)

Jerry

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:108vv0g4u9mcha7@corp.supernews.com...
> The currents in the wires of a folded dipole or monopole are neither in
> phase nor 180 degrees out of phase, as you can easily see from EZNEC.
> Because they obey superposition, you can, for convenience, consider them
> as two separate sets of currents, common mode (or "antenna" current) and
> one differential mode (or "transmission line" current). Neither one is
> zero. The phase of the antenna current is a function of the velocity
> factor of the two wires excited in parallel. For TV twinlead, for
> example, this would be something like 3 percent slower than for bare
> wire -- about the same as any other typical insulated wire. In contrast,
> the phase of the transmission line current is dictated by the velocity
> factor of the two wires excited out of phase as a transmission line. In
> this mode, there's an intense field between the conductors, so the
> dielectric between the conductors has much more impact. The velocity
> factor for this mode is more like 0.8, so the transmission line will be
> electrically considerably longer than a quarter wavelength.
>
> The TV twinlead "antenna" will be resonant, then, at a length about 3%
> shorter than if it were made from two parallel bare wires -- not
> because the currents in the two wires are in phase, but because the
> common mode part of the currents are in phase -- by definition, in fact.
> But the effect of the transmission line stub also affects the feedpoint
> impedance, and its velocity factor has to be accounted for in the
> calculation of its contribution. I've seen a recommendation that the
> conductors of a twinlead folded dipole be shorted about 80% of the way
> from the center. What this does is to make the transmission line nearly
> a quarter wavelength long, so its contribution to the feedpoint
> impedance is negligible. Then you don't need to make any adjustment of

> the length to compensate for the transmission line. Alternatively, you
> can short circuit the wires at the ends in the normal fashion, and
> slightly adjust the length to compensate for the impedance change caused
> by the transmission line.
>
> Roy Lewallen, W7EL
>
> Cecil Moore wrote:
> > Richard Harrison wrote:
> >
> >> My ARRL Antenna Book (19th edition, page 8) says:
> >>
> >> "Since the antenna section (of 300-ohm twin-lead) does not operate as a
> >> transmission line, but simply as two wires in parallel, the velocity
> >> factor of twin-lead can be ignored in computing the antenna length."
> >>
> >> I wish the author had said:
> >>
> >> "---the transmission line velocity factor of twin-lead can be
> >> ignored---."
> >
> >
> > The phase of the currents in the adjacent sections of twinlead is what
> > is important. If the phase of the adjacent currents is 180 degrees, the
> > twinlead is acting like a transmission line and T-line VF must be taken
> > into account. If the phase of the adjacent currents is zero degrees, the
> > twinlead is acting like an antenna and the VF is considerably higher,
> > essentially equal to insulated wire. If the phase of the adjacent
currents
> > is zero degrees, all the current is "common-mode current", something not
> > desirable for transmission lines but something most desirable for
antennas
> > since common-mode currents do not inhibit radiation.
> >
> > Bottom line: The currents flowing in a folded dipole antenna are common-
> > mode currents which radiate, not transmission line currents which do not
> > radiate (much), and that's a very good thing for an antenna.
> > --
> > 73, Cecil http://www.qsl.net/w5dxp
>

1579. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 21:26:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10908bqte635j6a@corp.supernews.com>
Source record: 95830

When the transmission line portion is nearly a quarter wavelength long, it has very little effect on the feedpoint impedance, so the resonant length will be about the same as it would be if the transmission line didn't exist. In the case of TV twinlead, though, if shorted at the ends, the transmission line can make a noticeable impact on the feedpoint impedance. It would take only a few minutes with EZNEC, using the method I described earlier of modeling a folded dipole or monopole as an unfolded dipole or monopole with a transmission line stub in parallel with the source, to see how great the impact is. With this model, you can give the transmission line whatever velocity factor or length you choose, independently of the "antenna" portion of the model. If you use the same twinlead to make antennas for different bands, the impact of the transmission line will be different on each band because the transmission line isn't being scaled with frequency. Therefore, any conclusion you reach about the impact of the transmission line on the antenna length will be quantitatively correct only at one frequency (and, of course, only the assumed type of twinlead).

I don't have the time right now to do the modeling, but if you're truly interested, you won't mind taking the time to do it yourself.

Roy Lewallen, W7EL

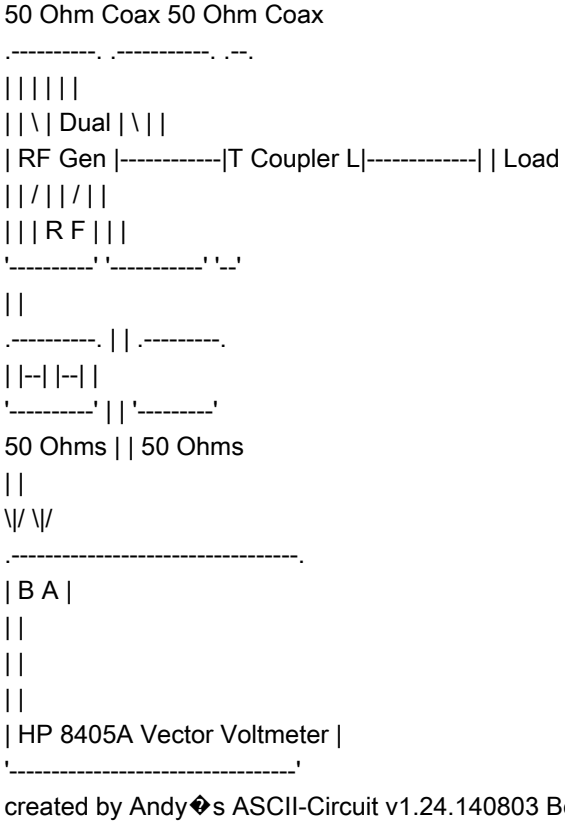
Jerry Martes wrote:

> Roy
>
> Thanks for the clear and meaningfull response to my post. I'm not
> qualified to enter this discussion. I'm in the learning mode. I did wonder
> if the dielectricly loaded "shorted stub" transmission line (1/2 the folded
> dipole) wuld have a shortning capability for determining antenna length. As
> I read it, the VP of the twin lead does effect the folded dipole's length to
> aceive resonance. And, the amount of "shortning effect" is somewhere
> between 20 percent and 3 percent in your example of twin lead with VP=0.8
> .Please correct me if I'm wrong, but, I'd expect the "shortning effect" to
> be much closer to the 3 percent end of the scale for reasons that would be
> too confusing for me to try to explain. (besides, I'm probably wrong in my
> thinking)
>
> Jerry

1580. Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 22:18:19 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <L4Wjc.13394$eZ5.4583@newsread1.news.pas.earthlink.net>
Source record: 95831

I now have an HP 8405A Vector Voltmeter. I also have a Narda dual directional coupler. Here is how I plan to set up and measure things at about 440 MHz (antennas, etc) so I can determine their impedance (view in fixed-width font):



T is the transmitter port, L is the load port, F is the -30 dB forward coupled port, and R is the -30 dB reverse coupled port.

The HP voltmeter is able to zero out the phase angle between channels A and B. So, I'll put a 50 Ohm dummy load out there for the Load and set the phase angle offset to zero.

Then I'll put the actual load out there for the Load and read the channel A voltage, the channel B voltage, and the phase angle between them.

Then I'll calculate the impedance with:

Z = 50(1+Er/Ef)/(1-Er/Ef)

where Ef is the forward voltage and Er is the reflected voltage.

For my tests, I will assume the coax really is 50 Ohms and non-reactive. Since A is the reference, it will appear to be a real number. Ef will be a complex number.

I'm not looking extreme accuracy. About plus or minus 10 to 15 percent will be acceptable. Will this work? Your thoughts and advice will be appreciated.

Thanks,
John

1581. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 22:18:24 UTC
From: jopl <hl@vn.com>
Message-ID: <c6pbl40r7l@enews3.newsguy.com>
Source record: 95835

Tuuk wrote:

>Ok, Lets look at what you said,,,,
>
>"""""Actually your ignorance is showing again. I supported Bush until Iraq.
>Daddy Bush looked like a fool after Hussein got done with him. Little
>boy Bush didn't like Daddy Bush getting threatened by assassination from
>Hussein.""''''
>
>
>I did not claim to be an expert on Iraq, so I guess I am ignorant in that
>subject. But your hatred for Bush is what I pointed out, painfully obvious
>and it is distorting your view of the world. And your knowledge of history
>is also limited as to its accuracy.
>
>
>"''''''If there is one thing good you could say about Hussein is he knew how
>to keep his little area of his world Al-Quida free. Little Boy Bush fucked
>everything up. Has the whole arab world hating us."'''''
>
>
>Saddam paid the families of suicide bombers handsomely. There are also other
>connections to terrorism and like I said earlier, but I will repeat in case
>you missed it, since he has been in captivity, the net lives saved is
>approximately 35,000 per year. And the Arabs and extreme muslims hate the
>U.S. for religious reasons and because you are the power, hyperpower and
>arrogant about it. They are far behind and will never catch up, so they are
>disgruntled about this. Remember, their objective is to kill all Americans
>and Christians. I think you would have criticized Bush had he done nothing.
>Just curious here now, and for entertainment purposes, what would your plan
>have been? You haven't offered a better plan which you should have done when
>you criticize some else's plan. Remember, Bush's plan already has a net
>lives saved recognized of approx 35,000 per year.
>
>
>'"''Little Boy Bush's approach
>to international diplomacy is to pick up a basenball bat and pound the
>hell out of the hornet's
>nest."''''"'
>
>Again, what would your approach be? How would you rid the world of
>terrorism, stop the targeting and killing of Christians and Americans? He is
>your leader, he has to do something to make America more safer, peaceful,
>etc. How would you do it? For example, right after someone flies two planes

>into buildings killing 3000 innocent people, so how would you satisfy the
>U.S. citizens requirements, you forgot to mention.
>
>
>
>''''''Started an unnecessary war to divert attention from his failure
>in Iraq, revenge for the assassination threat. But its understandable,
>boy Bush
>has no soul or heart. I'd like to see boy Bush send his 2 daughters over
>there
>to get shot at."'''''''
>
>Wow, your hatred for Bush is really showing, you even want harm to happen to
>his family members. Your hatred for Bush is clogging your ability to see
>things in a more responsible fashion.
>
>
>""''''Come back and I'll give you some more learnen.'""'''
>
>
>No thanks, but what I would like to understand, since you brought it up, is
>how you would have handled things differently? How would you assure the
>American people that they can be safe globally? What is your plan? You seem
>to criticize your leader's plan but you do not have one of your own. You
>have a better plan?
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>
>"jopl" <hl@vn.com> wrote in message news:c6jds707k9@enews3.newsguy.com...
>
>
>>Tuuk wrote:
>>
>>
>>
>>>"''' Bush is a murderer. He started an
>>>unnecessary war that
>>>has resulted in the deaths of 711 Americans and nearly 4000 seriously
>>>injured. And counting.

>>>Bush has no heart or soul."'"''
>>>
>>>
>>>If you knew what you were talking about you might be able to hide your
>>>hatred for Bush. It is obvious that your hatred for Bush has seriously
>>>distorted your knowledge of the world. I though Hams were more
>>>
>>>
>knowledgeable
>
>
>>>of the world.
>>>O, by the way, did you know that because of Bush's campaign in Iraq, the
>>>
>>>
>net
>
>
>>>lives saved is approximately 35,000 each year since Saddam's fall? I
>>>
>>>
>would
>
>
>>>hope that you do value each ethnic or nationality lives the same....
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>
>>>"jopl" <hl@vn.com> wrote in message news:c6hurt0dja@enews2.newsguy.com...
>>>
>>>
>>>
>>>
>>>>No Way wrote:
>>>>
>>>>
>>>>
>>>>
>>>>
>>>>>MondayMornin <Monday@aol.com> wrote in
>>>>>Who the fuck wants to listen to a bunch of crying liberals?
>>>>>
>>>>>Hell you can hear the same shit on NBC, CBS, ABC, CNN, MSNBC, PBS, CNBC
>>>>>and any of the other liberal owned radio and TV stations.
>>>>>

>>>>>I find it fucking funny that the liberals don't feel represended on the
>>>>>airwaves and think that opening up a radio station specifically for
>>>>>liberals will stand a chance against the very few Conservative
>>>>>
>>>>>
>stations.
>
>
>>>>>The problem is, you can go anywhere for liberal views, but only a few
>>>>>places for conservative ones. That is why the conservative stations
>>>>>
>>>>>
>have
>
>
>>>>>become so successful.
>>>>>
>>>>>Air America is already showing signs of a early death. Hell they can't
>>>>>even pay their bills (probably don't think they have to since liberals
>>>>>usually live off of the money earned by others).
>>>>>
>>>>>Oh well, PT. Barnum said it best when he said "There's a sucker born
>>>>>every minute" and I bet that he was talking about liberals.
>>>>>
>>>>>LOL.
>>>>>
>>>>>
>>>>>news:200404071020111272%Monday@aolcom:
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>
>>>>>If you want to listen to Air America, check out
>>>>>alt.binaries.sounds.radio.misc
>>>>>Lots of posts there.
>>>>>
>>>>>In case you are in one of these cities, here are the Air America
>>>>>frequencies:
>>>>>
>>>>>New York: WLIB 1190 AM
>>>>>Los Angeles: KBLA 1580 AM
>>>>>Chicago: WNTD 950 AM
>>>>>Portland: KPOJ 620 AM
>>>>>Inland Empire, CA: KCAA 1050 AM
>>>>>
>>>>>XM Satellite radio
>>>>>Live Internet stream at http://www.airamericaradio.com/

>>>>>>
>>>>>>Many more coming soon.
>>>>>>
>>>>>>Drug addict Lush Limbaugh and other servants of Dingbat Bush & Co.
>>>>>>are the past.
>>>>>>Air America is the future- get used to it!
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>>>>
>>>>>
>>>>>
>>>>>
>>>>You just like saying the word liberal. You don't really know what it
>>>>means but
>>>>you hear fruitcakes like Mr. Oxycotin, O'Really and that freak Hannity
>>>>use it.
>>>>You hear them throw the liberal word around in their name calling and
>>>>
>>>>
>you
>
>
>>>>think its cool to come here and do the same.
>>>>Bush is the dumbest president we have had in a long long time. He hasn't
>>>>
>>>>
>a
>
>
>>>>clue on what is going on. Chenney has his hand up dumb Bush's ass like a
>>>>sock puppet
>>>>getting George to say and do anything. Bush is a murderer. He started an
>>>>unnecessary war that
>>>>has resulted in the deaths of 711 Americans and nearly 4000 seriously
>>>>injured. And counting.
>>>>Bush has no heart or soul. I can hardly wait until the debates as Kerry
>>>>rips him to shreads and
>>>>makes Bush look like a fool in front of the whole world. He has so much
>>>>material to work with.
>>>>He is going back to Teeeeexas. God that accent makes him sound so
>>>>
>>>>
>stupid.
>

>
>>>>
>>>>
>>>
>>>
>>>
>>>
>>Actually your ignorance is showing again. I supported Bush until Iraq.
>>Daddy Bush looked like a fool after Hussein got done with him. Little
>>boy Bush didn't like Daddy Bush getting threatened by assassination from
>>Hussein.
>>If there is one thing good you could say about Hussein is he knew how
>>to keep his little area of his world Al-Quida free. Little Boy Bush fucked
>>everything up. Has the whole arab world hating us. Arab world is like a
>>hornet's
>>nest. Little Boy Bush's approach
>>to international diplomacy is to pick up a basenball bat and pound the
>>hell out of the hornet's
>>nest. Started an unnecessary war to divert attention from his failure
>>in Iraq, revenge for the assassination threat. But its understandable,
>>boy Bush
>>has no soul or heart. I'd like to see boy Bush send his 2 daughters over
>>there
>>to get shot at.
>>Come back and I'll give you some more learnen.
>>
>>
>
>
>
>
35,000 lives saved huh. That is one person's opinion....not mine.
Actually 711 Americans and counting are dead because of Bush's
careless decision to go to war with Iraq. I COULDN'T CARE LESS
how many more arabs are dead.... I care about Americans. The arabs
are going to have to figure things out on their own.
Bush attacked the wrong enemy. He has created a problem where none
existed before. Al Q. was not in Iraq before Bush toppled Hussein. But
they are sure there not and recruitment is up sharply. Its too easy to send
other American's kids to fight a war. Bet none of your kids are over there.
I'd LOVE to send Bush's priviledged daughters over there.
Actually my knowledge on current events is good..... better than yours
I'd be
willing to bet.

1582. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 22:19:14 UTC
From: jopl <hl@vn.com>
Message-ID: <c6pbmj1r7l@enews3.newsguy.com>
Source record: 95834

Dave Shrader wrote:

> jopl wrote:
>
>> Tuuk wrote:
>>
>>> "''' Bush is a murderer. He started an
>>> unnecessary war that
>>> has resulted in the deaths of 711 Americans and nearly 4000 seriously
>>> injured. And counting.
>>> Bush has no heart or soul."'"'''
>>>
>
> If I recall correctly war was declared against the USA in the early
> 1990s. American embassies bombed, USS Cole bombed, World Trade center
> car bombed, World Trade Center and 9-11 bombed.
>
> All the President did was effectively to say "OK, you started it we'll
> finish it!!"
>
> Remember who started the shooting!!
>
The war in IRAQ doesn't not address these incidents.

1583. PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 22:29:08 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0404281429.520bc68b@posting.google.com>
Source record: 95832

Hello,

I am working on a PCB-based antenna, with copper on both sides. Believe it or not, the hardest part is figuring out how much the PCB material would cost. Does anyone have any PCB costing numbers for FR4, FR408, Nelco 40013, Rogers 4003, any other material? I understand that thickness plays a major part in the cost so if possible please include the board thickness with the cost number (I am currently thinking of using 20mils thick PCB). It would probably be easiest if the cost was in units of US$ per sq. inch or sq. cm. Many thanks.

1584. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 22:51:56 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <gAWjc.50020$G_.2562@nwrddc02.gnilink.net>
Source record: 95833

Roy

I'm honored that you take time to post this information for my education. It is almost an unbeleivable coincidence that _you_ mention EZNEC. I had that program recommended to me by a friend who told me about it this past week end. I want to try to understand (see) what kind of pattern I'm getting from an antenna I made for Weather Sattelite (137 MHz) reception. I have downloaded the EZNEC and only my other projects have kept me from starting to learn how to use it.

Thanks
Jerry

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:10908bqte635j6a@corp.supernews.com...
> When the transmission line portion is nearly a quarter wavelength long,
> it has very little effect on the feedpoint impedance, so the resonant
> length will be about the same as it would be if the transmission line
> didn't exist. In the case of TV twinlead, though, if shorted at the
> ends, the transmission line can make a noticeable impact on the
> feedpoint impedance. It would take only a few minutes with EZNEC, using
> the method I described earlier of modeling a folded dipole or monopole
> as an unfolded dipole or monopole with a transmission line stub in
> parallel with the source, to see how great the impact is. With this
> model, you can give the transmission line whatever velocity factor or
> length you choose, independently of the "antenna" portion of the model.
> If you use the same twinlead to make antennas for different bands, the
> impact of the transmission line will be different on each band because
> the transmission line isn't being scaled with frequency. Therefore, any
> conclusion you reach about the impact of the transmission line on the
> antenna length will be quantitatively correct only at one frequency
> (and, of course, only the assumed type of twinlead).
>
> I don't have the time right now to do the modeling, but if you're truly
> interested, you won't mind taking the time to do it yourself.
>
> Roy Lewallen, W7EL
>
> Jerry Martes wrote:
>
> > Roy
> >
> > Thanks for the clear and meaningfull response to my post. I'm not
> > qualified to enter this discussion. I'm in the learning mode. I did
wonder

> > if the dielectricly loaded "shorted stub" transmission line (1/2 the
folded
> > dipole) wuld have a shortning capability for determining antenna length.
As
> > I read it, the VP of the twin lead does effect the folded dipole's
length to
> > aceive resonance. And, the amount of "shortning effect" is somewhere
> > between 20 percent and 3 percent in your example of twin lead with
VP=0.8
> > .Please correct me if I'm wrong, but, I'd expect the "shortning effect"
to
> > be much closer to the 3 percent end of the scale for reasons that would
be
> > too confusing for me to try to explain. (besides, I'm probably wrong
in my
> > thinking)
> >
> > Jerry

1585. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 23:25:49 UTC
From: Allan Butler <ka0ies@hotmail.com>
Message-ID: <14Xjc.9327$lz5.916691@attbi_s53>
Source record: 95836

Jeremy Salch wrote:

> Cecil Moore wrote:
>
>> Jeremy Salch wrote:
>>> I've heard of doing this before, with the capacitors, so would this be
> the
>>> ceramic type? and how would i distinguish between "transmitting" style
> and
>>> regular capacitors?
>>
>> Doorknobs are excellent but expensive.
>> --
>> 73, Cecil http://www.qsl.net/w5dxp
>>
>>
>>
>> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----
> is that a kind of capacitor, or are you making fun of my not knowing the
> different kids of capacitors
>
>

No he is not making fun of you. There is a style of capacitor that is called a door knob for the shape that it is made in.

To start out with go ahead and try some good high voltage ceramic capacitors from the control lines to ground. A fairly high value of 0.47 uF might do good in parallel with a .01 uF cap.

For the toroids in the line they have to be fairly hefty as there could be some significant currents running on the lines at the different frequencies. If the toroids saturate they won't work as intended and can cause some real interesting things to happen.

1586. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-28 23:37:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1qe0905vo96splrfbmvlcofb92bjniuv3r@4ax.com>
Source record: 95837

On Wed, 28 Apr 2004 22:18:19 GMT, "The other John Smith"
<jocjo-john@yooha.com> wrote:

>Will this work? Your thoughts and advice will be appreciated.
>
>Thanks,
>John

Hi John,

The topology is good, however there is work to do to justify your confidence in the numbers (even if you are willing to discount them to 10 to 15%; which, by the way, is quite optimistic).

I presume you have three 50 Ohm loads, or so I am lead to believe by the nature of your description. If so, it would do well to rotate them all through each port and confirm NOTHING changes. This is no simple expectation. It also pays immensely to have calibrated mismatch loads on hand to confirm your measurements of an unknown (the system may fail unbeknownst to you otherwise).

Further, you should also swap the dual coupler input/output and the side arm ports to confirm it is in fact operating at fixed ratio (this says nothing of the presumed ratio, but is still a necessary step). Then repeat the paragraph above concerning the 50 Ohm load rotation. You can then proceed to confirming the coupling coefficient which may surprise you (you haven't given the pedigree of this particular beastie).

I presume you have undamaged leads for your meter (I won't even presume they are calibrated, but for these purposes, testing should reveal problems if they are not sufficient to the task).

I presume your source is powerful enough to present at least 1mV of RF to the meter. I know the meter is more sensitive, but you need head room to simple measure the return loss (or Z or SWR or any derived characteristic).

I presume your source is free of spurs and harmonics at that power. It hardly is worth the effort to measure out of band products.

I presume your source will not pull when presented with a large mismatch.

I presume your source offers a 50 Ohm output Z. There is nothing like a mismatched source looking at a mismatched load to increase confusion by the square.

So, sure, it'll be a snap. ;-)

73's
Richard Clark, KB7QHC

1587. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 00:01:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40904653$1_1@corp.newsgroups.com>
Source record: 95838

Jim Kelley wrote:
> Pascals law, just as any other natural law, always remains in effect.
> The point is simply that a sealed column of liquid will NOT change
> length by a factor of the square root of two at an inclination of 45
> degrees. That was initially my issue with Cecil.

I was talking about sealed at the top but not at the bottom.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1588. Re: really long control cable on a screwdriver

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 00:06:23 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40904775$1_1@corp.newsgroups.com>
Source record: 95839

Jeremy Salch wrote:
> is that a kind of capacitor, or are you making fun of my not knowing the
> different kids of capacitors

I only make fun of gurus. :-) The doorknob is my favorite kind of capacitor.
I have a couple of hundred of them. Here are some pictures of capacitors,
including door knobs.

http://www.surplussales.com/CapacitorsAll.html
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

1589. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 00:44:32 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1090jvlhdgvef1@corp.supernews.com>
Source record: 95840

No, it's no coincidence that I mention EZNEC. It's my ticket out of the cube farm, and my means of escape from the Dilbert cartoon.

Roy Lewallen, W7EL

Jerry Martes wrote:

> Roy
>
> I'm honored that you take time to post this information for my education.
> It is almost an unbeleivable coincidence that _you_ mention EZNEC. I had
> that program recommended to me by a friend who told me about it this past
> week end. I want to try to understand (see) what kind of pattern I'm
> getting from an antenna I made for Weather Sattelite (137 MHz) reception.
> I have downloaded the EZNEC and only my other projects have kept me from
> starting to learn how to use it.
>
> Thanks
> Jerry
>

1590. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 01:06:36 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40905507$0$438$5cbedd26@news.real-time.com>
Source record: 95841

Nice. Best response I've seen on a modeling question since I started
watching this group.

tom
K0TAR

Richard Clark wrote:

> Hi Jerry,
>
> Well, I presume you've corresponded here enough to recognize the
> answers to questions fit what the respondent chooses.
>
> Open EZNEC;
> Select the "Open" button that is at the top left of the application;
> Select the W8JK.EZ design offered;
> From the string of ">" selections, choose "Plot Type";
> then select "3 Dimensional" - "OK" (and respond "OK" again to prompt);
> Finally select the "FF Plot" button at the bottom left.

<snip>

> 73's
> Richard Clark, KB7QHC

1591. Re: Air America

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 01:10:43 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40905608$0$430$5cbedd26@news.real-time.com>
Source record: 95842

Bush!

Kerry!

Bush!

Kerry!

Evil!

Eviler!

Bad!

Badder!

Uh, excuse me? I'd like to speak to you all about Ralph Nader?

WHAM!

SMASH!

WHUMP!

CRUUSHSHSHSH!

Ok, Where were we? Oh yes.

BUSH!

KERRY!

WAR!

PEACE!

.
.
.
.
.
.

1592. Re: Carolina Windom Problem...any suggestions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 01:59:48 UTC
From: Al - VA3KAI <niittyma@sympatico.ca>
Message-ID: <nkZjc.6837$k%.204747@news20.bellglobal.com>
Source record: 95844

Hi Pat,

I was originally looking at a Carolina Windom and one of the vendor's comments to me on a phone call was that the vertical section had to be at least 15 feet from any metal (i.e. a tower or metal support mast). This was not practical for me so I dropped the plan - could this be the issue with your setup? Maybe the MFJ has more tolerance!

Just a thought..... Al, VA3KAI

"Bill Grimwood" <bill@grimwood.net> wrote in message news:108sq8tp7q5ot56@corp.supernews.com...
> I have a Carolina Windom 160 up 50 feet and am using an Icom 756 Pro. The
> ATU in the pro will not quite tune the antenna so I added an MFJ tuner and
> am able to tune it up fine.
>
> 73 Bill W4WEG
>
>
> "Pat Myers" <captain-death@to-spammers-texas.net> wrote in message
> news:nsudnbVB1pvGlBHdRVn-hw@texas.net...
> > I have posted this on eHam.com, but thought I'd try here as well.
> >
> > Sorry if this story is rather convoluted, but I'm in a bit of a quandary
> and
> > any help would be appreciated.
> >
> > I am getting back into ham radio after a ten year absence, and HF
> operating
> > has always been my favorite. In the past I lived in a rural area, and
> could
> > put up whatever sort of antennas I wanted, and was even pretty good at
> > making my own dipoles for various bands.
> >
> > However, I now live in a subdivision that, while antennas are not
> forbidden
> > outright, the civic association is vicious and not to be trifled with,
> hence
> > I wanted to go with something at once stealthy but versatile.
> >
> > At first I thought to try the old stand-by, the G5RV, but in doing my
> > Internet research on the issue, I came across this "Carolina Windom"
> > multiband antenna, which seemed to give more bangs for the buck. I ended
> up
> > purchasing one from an outfit that will remain nameless here, to the

tune
> of
> > around $150, when you include shipping, rope and other incidentals.
> >
> > It was a bear of a job to put up, since I had to threat it through tree
> > branches and whatnot (which is why I got the one with the insulated
wire),
> > but I got it up. Suspended from trees, the "matching transformer" (looks
> > like a balun to me) and the long segment of wire was up about 35', more
or
> > less horizontal. The shorter end sloped down, with the end about 10' up
(I
> > had no alternative in this).
> >
> > After making up the 100 or so foot feed line (RG-8X) and grounding the
rig
> > (8' copper ground rod), I hooked up my Yaesu FT-890...and the SWR was
> > through the roof on all bands.
> >
> > Anything more than a few watts, on 80 through 10m, made the radio shut
> down.
> > I checked continuity all the way back to the antenna, and everything
seems
> > OK, except the balun shows a dead short on my VOM. However, the antenna
> > maker says their balun is supposed to show a dead short, and when I took
> the
> > antenna back down I could find nothing else wrong with it (no damaged
> > insulation, all connections weatherproofed to the max, not that it had
> been
> > up long enough to get wet, etc).
> >
> > Except for power and phone lines running along the back property line
(and
> > the slinky antenna I put up later is no further away from those than the
> > Windom was, and I am having no problems with it), there was nothing
> metallic
> > nearby to detune the antenna, and even if there was, I can't imagine
even
> > that would create the high SWR I am seeing.
> >
> > I called the manufacturer up and after telling me there was nothing
wrong
> > with the antenna based on what I told them, they just said to send the
> > antenna back to them and they would "check it out".
> >
> > We finally get to my question. I have been working on getting an antenna
> for
> > weeks, and am tired of fooling with assorted vendors (have dealt with
> > several during this process, and none have impressed me).
> >

> > Given how much I will pay out further on shipping the antenna both ways
> and
> > the like, I am wondering if I would be better off simply buying a decent

> 4:1
> > balun, replace the existing "matching transformer" with it, and use the
> rest
> > of the antenna components (wire, coax, RF choke), and if so, is this
more
> > likely to work? Based on my research, the original Windom antenna design
> > used a 4:1 balun, and the wire lengths of the antenna I bought look to
be
> > pretty close to specs per that design, which is why I suggest this
option.
> >
> > Unfortunately I am no antenna guru, and even with all the information
I've
> > found on the Windom, the data is a bit ambiguous on this point. So,
before
> I
> > throw any more good money after bad, I would appreciate any help you all
> > could give me in this matter. Thanks and 73.
> >
> > PS What to take out of my email address to make it work is pretty
> > obvious...:)
> >
> >
> >
>
>

1593. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 02:14:04 UTC
From: kashe@sonic.net
Message-ID: <97p090l743ekumgjdh6kkl44aum504s5fe@4ax.com>
Source record: 95843

On Wed, 28 Apr 2004 12:08:48 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>kashe@sonic.net wrote:
>> I believe Pascal's law remains in effect in a thermometer, but
>> is overshadowed by other factors, including the design you mention,
>> the details of which I don't know.
>
>Pascals law, just as any other natural law, always remains in effect.
>The point is simply that a sealed column of liquid will NOT change
>length by a factor of the square root of two at an inclination of 45
>degrees. That was initially my issue with Cecil.
>
>A barometer on the other hand is obviously not sealed. The weight of
>the column of mercury is balanced against the weight of the atmosphere
>acting on an open reservoir of mercury at the bottom of the column. The
>reservoir will act to maintain the column at a constant vertical height
>by adjusting the length of the column as a funtion of tilt angle. A
>sealed column does not act that way.
>
>I disagree that it's specious to point out that rather significant and
>fundamental difference.
>
>73, ac6xg

Would you care to cite where he specified any kind of
thermometer-equivalent? That's a complete red herring you dragged into
a conversation where the parameters were quite clear to all other
participants.

1594. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 02:17:12 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <IAZjc.13622$eZ5.10715@newsread1.news.pas.earthlink.net>
Source record: 95845

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:1qe0905vo96splrfbmvlcofb92bjniuv3r@4ax.com...
> On Wed, 28 Apr 2004 22:18:19 GMT, "The other John Smith"
> <jocjo-john@yooha.com> wrote:
>
> >Will this work? Your thoughts and advice will be appreciated.
> >
> >Thanks,
> >John
>
> Hi John,
>
> The topology is good, however there is work to do to justify your
> confidence in the numbers (even if you are willing to discount them to
> 10 to 15%; which, by the way, is quite optimistic).
>
> I presume you have three 50 Ohm loads, or so I am lead to believe by
> the nature of your description. If so, it would do well to rotate
> them all through each port and confirm NOTHING changes. This is no
> simple expectation. It also pays immensely to have calibrated
> mismatch loads on hand to confirm your measurements of an unknown (the
> system may fail unbeknownst to you otherwise).

A good tip and one I'll adopt. I do have three 50 Ohm loads. I don't have mismatched loads, but I can parallel 50 Ohm loads to make a 25 Ohm load. Come to think of it, 75 and 93 Ohm terminators are available through Mouser. Perhaps I should invest in some.

> Further, you should also swap the dual coupler input/output and the
> side arm ports to confirm it is in fact operating at fixed ratio (this
> says nothing of the presumed ratio, but is still a necessary step).
> Then repeat the paragraph above concerning the 50 Ohm load rotation.
> You can then proceed to confirming the coupling coefficient which may
> surprise you (you haven't given the pedigree of this particular
> beastie).

Yes. I did not mention that I would do that, but my plan was to compare the forward and reverse coupled outputs and record the ratio of the two. I don't think the absolute value of coupling (supposedly -30 dB) is needed for now. The Narda coupler model is not listed at Narda's Web site, so I'm going by the marking on the case.

I have no way of calibrating the Vector Voltmeter.

> I presume you have undamaged leads for your meter (I won't even
> presume they are calibrated, but for these purposes, testing should

> reveal problems if they are not sufficient to the task).

They are undamamged as best as I can tell. Both channels read the same and agree with a homebrew power meter. I realize the power meter is probably less accurate than the voltmeter.

> I presume your source is powerful enough to present at least 1mV of RF
> to the meter. I know the meter is more sensitive, but you need head
> room to simple measure the return loss (or Z or SWR or any derived
> characteristic).

I can use an amateur transceiver with or without attenuators if need be.

> I presume your source is free of spurs and harmonics at that power.
> It hardly is worth the effort to measure out of band products.

The Vector Voltmeter has a 1 kHz bandwidth and a limited-range PLL whose frequency band is manually settable. HP says it will lock to an incoming square wave fundamental without problems. However, I also have the transceiver and an HP signal generator both of which will have fairly clean outputs.

> I presume your source will not pull when presented with a large
> mismatch.

The transceiver will not. I can't testify to the stability of the HP generator at this time. In any case, the voltmeter will track it. My only problem may be that I am unsure of the exact frequency if it gets pulled away from the preset value. I guess I can use the receiver to verify frequency until I gain confidence in the generator's stability.

> I presume your source offers a 50 Ohm output Z. There is nothing like
> a mismatched source looking at a mismatched load to increase confusion
> by the square.

What is the output impedance of an amateur transmitter? I see arguments all the time about this. And even so, what will be the result if it is not matched? If there are reflections from the source, it will show up in the composite forward voltage which will be the reference anyway. Is this not so?

> So, sure, it'll be a snap. ;-)
>
> 73's
> Richard Clark, KB7QHC

Is my equation correct and are the comments associated with it correct?

It appears that you have given this some thought. Thank you.

John KD5YI

1595. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 02:49:24 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <U2_jc.904$sK3.220@nwrddc03.gnilink.net>
Source record: 95846

Richard

I dont know how to thank you. I printed the instructions you give in this thread for me to follow for plotting a pattern from my 137 MH satellite monitoring antenna. I have been overwhelmed with another program thats too dificult for me. But, a few minutes ago I began to try to use EZNEC by following your instructions. Youve presented me with a gift. You have made this 'plotting' fun. I really appreciate what you've done.
I dont know why I didnt start reading this news group long ago.

Thanks

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:a4ju80ln18b0lkj3doahg9er9gp9g7qf9m@4ax.com...
> On Tue, 27 Apr 2004 05:53:19 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
> > I have the two dipoles fed in phase and spaced 1/4 wave apart The
anrenna
> >really works well. I'd like to try to improve it but first need to know
> >more about what I'm getting now.
>
> Hi Jerry,
>
> Well, I presume you've corresponded here enough to recognize the
> answers to questions fit what the respondent chooses.
>
> Open EZNEC;
> Select the "Open" button that is at the top left of the application;
> Select the W8JK.EZ design offered;
> From the string of ">" selections, choose "Plot Type";
> then select "3 Dimensional" - "OK" (and respond "OK" again to prompt);
> Finally select the "FF Plot" button at the bottom left.
>
> This will generate an X-Y-Z plot of the radiation lobes of this
> particular antenna design. Clicking and scrolling your mouse over the
> image will roll and rotate it to allow you to shift perspective. The
> antenna element spacing is closer than your quarter wave (0.1 in
> fact), but it gives you a basis to change things and see what happens.
>
> This means you can introduce your self to the Wires table (select the
> ">" which is labeled "Wires"). Change something and then look at the
> antenna (select the Button labeled "View Ant"). To see how your
> change impacts transmission lobes, select that same button "FF Plot."
> The Wires table is based on simple XYZ co-ordinates for each end of a
> wire (segments is an artifice of necessity for the computation engine,

> once you've laid out the basic form, we can come back to that later).
>
> Instead of worrying about clunky transmission lines, you simply
> replace them with "Sources" that take their place (this antenna has
> two of them to represent the split feed). You can be anal and build
> them out of virtual transmission lines, but give yourself a break and
> ignore that; it is hardly instructive for the first pass.
>
> Welcome to the world of modeling. Press more buttons and appreciate
> the scope of data available for analysis. Return to the "Open"
> button, and appreciate the variety of simple designs that offer a
> fairly broad selection of styles. The free version allows quite a
> latitude of variation, enough to educate you in all the fundamentals
> of both design and the application.
>
> 73's
> Richard Clark, KB7QHC

1596. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 03:18:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jtq090teqp3vqtteha39192lrieobb8sop@4ax.com>
Source record: 95847

On Thu, 29 Apr 2004 02:17:12 GMT, "The other John Smith"
<jocjo-john@yooha.com> wrote:

>"Richard Clark" <kb7qhc@comcast.net> wrote in message
>news:1qe0905vo96splrfbmvlcofb92bjniuv3r@4ax.com...
>> On Wed, 28 Apr 2004 22:18:19 GMT, "The other John Smith"
>> <jocjo-john@yooha.com> wrote:

>A good tip and one I'll adopt. I do have three 50 Ohm loads. I don't have
>mismatched loads, but I can parallel 50 Ohm loads to make a 25 Ohm load.
>Come to think of it, 75 and 93 Ohm terminators are available through Mouser.
>Perhaps I should invest in some.

This does not replace testing however. Care should be taken to not
heat the loads as this will cause them to drift in value. Use them
with 1/10 rated power dissipation capacity.

>> Further, you should also swap the dual coupler input/output and the
>> side arm ports to confirm it is in fact operating at fixed ratio (this
>> says nothing of the presumed ratio, but is still a necessary step).
>> Then repeat the paragraph above concerning the 50 Ohm load rotation.
>> You can then proceed to confirming the coupling coefficient which may
>> surprise you (you haven't given the pedigree of this particular
>> beastie).
>
>Yes. I did not mention that I would do that, but my plan was to compare the
>forward and reverse coupled outputs and record the ratio of the two.

This goes further than that, reverse the input/output ports as well.
ALL ports must be tested against every other port. Along with the
loads, this becomes an increasingly larger matrix of readings - it is
all necessary. This is about Orthogonality because as a bridge this
cannot be taken for granted.

>I don't
>think the absolute value of coupling (supposedly -30 dB) is needed for now.
>The Narda coupler model is not listed at Narda's Web site, so I'm going by
>the marking on the case.

OK, so it is a Narda. They are typically very good from 10% to 90%
over the band of operation (if you also use the correction factors).

>I have no way of calibrating the Vector Voltmeter.

Such is life. As you are only employing it to make relative
measurements, what you DO need to calibrate is the Gain/Attenuator
range control. Construct or obtain a good step attenuator. This, of

course re-introduces the issue of calibrating it, but if you can reduce variables and check its DC and low AC operation, you are fairly down the road ahead of bonehead problems. If you have fixed attenuators that are of quality, you can do the RF side through substitution.

>> I presume you have undamaged leads for your meter (I won't even
>> presume they are calibrated, but for these purposes, testing should
>> reveal problems if they are not sufficient to the task).
>
>They are undamamged as best as I can tell. Both channels read the same and
>agree with a homebrew power meter. I realize the power meter is probably
>less accurate than the voltmeter.

So many mistakenly infer the opposite.

>> I presume your source offers a 50 Ohm output Z. There is nothing like
>> a mismatched source looking at a mismatched load to increase confusion
>> by the square.
>
>What is the output impedance of an amateur transmitter?

50 Ohms at rated output - just like the manufacture specifies. Other useful power settings are not terribly far off (somewhere between 30 and 80 Ohms).

>I see arguments all the time about this.

Nonsense is free of charge, and worth every penny spent.

>And even so, what will be the result if it is not
>matched? If there are reflections from the source, it will show up in the
>composite forward voltage which will be the reference anyway. Is this not
>so?

In SPADES! A source that is 2:1 mismatched feeding a load that is 2:1 mismatched runs the minimum error of your measurement upwards to 20 or 30% [It could be worse, I'm too encumbered to find my reference to quote accurately.] This is why I said your low-ball acceptance of 10-15% error was stardust.

>Is my equation correct and are the comments associated with it correct?

I'm focusing on technique here. I presume you've done your math right. The tougher part is realizing it accurately in a world of error.

>It appears that you have given this some thought. Thank you.

Hi John,

I spent a few years as a Metrologist specializing in RF power measurement. Very, very few know the term (even engineers) - think National Bureau of Standards (or NIST). In practical terms, this

means I have calibrated every item in front of you (and much more).

So, with all the caveats in place, you can easily step right into it by abandoning them all and noting some values. Then you can implement each of these issues and observe how much the data changes. This is the merit of knowing your equipment and your skill. No measurement is right the first time, nor the second, and rarely the third time. Besides, it is more fun to refine your bench and testing and close in on the actual value by hammering out error. The bench artist will even disturb the set up with a known error, and observe how it propagates through to the final determination.

73's
Richard Clark, KB7QHC

1597. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 03:26:32 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bbt090d9oqf9r6f8l4ii1kujcbaouvujs6@4ax.com>
Source record: 95848

On Thu, 29 Apr 2004 02:49:24 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:
> Thanks

Hi Jerry,

You are welcome.

73's
Richard Clark, KB7QHC

1598. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 04:22:35 UTC
From: Alfred Lorona <w6wqc@dslextreme.com>
Message-ID: <c6pvun$eoafh$1@ID-49117.news.uni-berlin.de>
Source record: 95849

I have used open wire feedlines in six houses so far. I drill two 3/4 inch holes in any wall that is most convenient to bring the line inside and over to the tuner. I ram two pieces of plastic pipe in the holes letting about an inch or so protrude from the wall surfaces inside and outside.

When I move, I yank out the pipe, jamb stucco, wood filler and/or drywall goo in the holes, dad paint on the repair and VOILA! Walls as good as new.

The whole thing is so easy. Why make it hard on yourselves?

73, AL

1599. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 06:41:01 UTC
From: Rick Frazier <rick@rickfrazier.com>
Message-ID: <4090A39C.DB117940@rickfrazier.com>
Source record: 95850

From my days in the Silicon Valley in California, the biggest thing I remember about PCB costs weren't related directly to the size or thickness, they were quantity....

I've had quite a number of double sided PCBs fabricated, along with numerous multilayer ones, and the overriding issue with cost was the "non-recurring costs " of generation of the masks, tooling and setup needed to convert the supplied circuit trace films to finished boards. Once the fixed costs are covered, the individual costs of each board weren't usually all that high, if you had enough volume. As a simple example, a small jumper board of about 2.5" square, double sided 60 mil thick and only about 75 holes, with soldermask cost about a buck each at a quantity of 200. At a quantity of 500, the price was something like sixty cents each... Of course, this was the sort of thing that a hundred pieces would be a near lifetime supply, and at a quantity 100, the price was about 1.75 each.... Such is the problem of amortizing the fixed and setup costs over a relatively small quantity.

So, any price that you get quoted on a per square inch basis will have to carry some serious disclaimers or additional explanation of the fixed and setup costs incurred in making the first board, along with price breaks for quantity....

The best thing to do is to contact some places that do engineering prototype quantity work, and see what they say. You can usually get a decent price quote by providing the outside dimensions, basic construction (thickness, number of layers and copper weight (thickness) along with things like number of holes, how many different sizes of holes involved, whether they are plated through, and whether you want a bare board, solder plating on the exposed copper and such things as solder mask and legend (the exact term for legend, the lettering on one or more sides of the board doesn't come to me at this moment,)) and, of course, the quantity of the run you want made. Of course, tolerance is also important.... If you need ultra-precise registration between layers, that will tend to cost more than an alternate board with a looser tolerance...

It seems like a lot of information, but once you get used to it, it's not so bad.

Of course, if the relative amount of circuitry on opposite sides of the board isn't somewhat equal, (called copper-balancing) the board may have a tendency to warp during manufacture, or even warp or curl with changes in temperature, particularly if one side uses a thick (heavy) copper and the other lighter weight copper. This is especially important if you intend to wave solder the PCB during assembly or other manufacturing processes....

Of course, yet another variable in the cost issue is where the PCB manufacturer is and what sort of volume they deal with. If you're looking for quick turn shops, there are (or at least used to be) a lot of them around the Silicon Valley area. However, if you're expecting to find someone in Podunk WA, KS, OH, FL or similar locations away from high-tech development, you may be looking at higher prices unless they are "hungry".

Good Luck
-_Rick AH7H

basketball_jones wrote:

> Hello,
>
> I am working on a PCB-based antenna, with copper on both sides.
> Believe it or not, the hardest part is figuring out how much the PCB
> material would cost. Does anyone have any PCB costing numbers for
> FR4, FR408, Nelco 40013, Rogers 4003, any other material? I
> understand that thickness plays a major part in the cost so if
> possible please include the board thickness with the cost number (I am
> currently thinking of using 20mils thick PCB). It would probably be
> easiest if the cost was in units of US$ per sq. inch or sq. cm. Many
> thanks.

1600. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 07:32:04 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0404282332.17413f50@posting.google.com>
Source record: 95851

Two more things:
Assume very high, production volume so setup, tooling etc. are not a factor.
There is only one hole.

Many thanks.

basketball_jones@hotmail.com (basketball_jones) wrote in message
news:<50cbda94.0404281429.520bc68b@posting.google.com>...
> Hello,
>
> I am working on a PCB-based antenna, with copper on both sides.
> Believe it or not, the hardest part is figuring out how much the PCB
> material would cost. Does anyone have any PCB costing numbers for
> FR4, FR408, Nelco 40013, Rogers 4003, any other material? I
> understand that thickness plays a major part in the cost so if
> possible please include the board thickness with the cost number (I am
> currently thinking of using 20mils thick PCB). It would probably be
> easiest if the cost was in units of US$ per sq. inch or sq. cm. Many
> thanks.

1601. Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 07:34:31 UTC
From: ahkit1021@yahoo.com
Message-ID: <74bb84c0.0404282334.3a38772c@posting.google.com>
Source record: 95852

I'm having a two-way radio. One wide-band antenna was hooked up on a spectrum analyzer. Video BW and RES BW was adjusted to 3khz and 1kHz respectively at spectrum analyzer. Span was 300KHz.

When radio was being keyed up, spurs could be seen at around plus minus 32Khz and 62khz. However, the amplitude were quite low, about -65 to 70dBc. I was wondering what caused the spurs to appear. If radio was connected directly to spectrum analyzer, this problem could not be seen.

When radio was transmitting to different load with different VSWR (up to 8:1), no spurs were seen. Spurs could only be observed while using antenna. Could the VSWR of antenna be worse than 8:1? Just could not figure out the source of the spurs. Please help.

1602. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 11:39:49 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0404290339.7adf87ad@posting.google.com>
Source record: 95853

raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote in message news:<408d2754.830867906@news.galilei.com>...
>
> > Well, from the Tao, we get, "Loss can be a Gain", and in your case
> >it might be that you gained by losing the boss!
>
>
> Even most recently, what appears as a serious tragedy to many, has
> actually been the best blessing of my life.
>
> I won't get into it unless you really want to hear about it.
> Suffice it to say, I dropped out of the 40 hour rat race and 100k a
> year, to a position of no debt and more disposable income and more
> time to enjoy time with my family. And NO I don't get any handouts!
> I work to earn my living! Just not nearly as many hours and for much
> less money. But I disposed of my debts by selling everything I owned
> and paying it all off. What I used to pay in interest charges, I now
> use for entertainment and time off.
>

I worked as an RF engineer for many years, and got laid off about
1.5 years ago. Now i have fallen back on free-lance tattooing, which
is giving me more free time, and allows me to earn much more PER HOUR,
than i ever did in the corporate engineering world.

God, it's nice to be your own boss, ain't it?

:)

Slick

1603. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 12:58:49 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c6qu69$c3o$1@sparta.btinternet.com>
Source record: 95854

Clean gentle rain water hardly affects anything if its well made. And anyway it doesn't rain all the time.

1604. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 13:00:19 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <4090FC63.9A359A6D@cwis.net>
Source record: 95855

All radios produce these "spurs". The 'source' is in the
design of radio circuits. The service a radio is used in has
requirements as to the level of these 'spurs'. As long as that
requirement is met the 'spurs' are acceptible (not necessarily
desirable, but acceptible).
'Doc

1605. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 13:19:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40910172_6@corp.newsgroups.com>
Source record: 95856

Dr. Slick wrote:
> God, it's nice to be your own boss, ain't it?

When Intel stock hit 100, I just couldn't resist selling
those golden handcuffs and riding off into the sunset on
my new Harley. :-)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

1606. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 14:03:18 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <GW7kc.14046$eZ5.312@newsread1.news.pas.earthlink.net>
Source record: 95857

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:jtq090teqp3vqtteha39192lrieobb8sop@4ax.com...
>
> I spent a few years as a Metrologist specializing in RF power
> measurement. Very, very few know the term (even engineers) - think
> National Bureau of Standards (or NIST). In practical terms, this
> means I have calibrated every item in front of you (and much more).
>
> So, with all the caveats in place, you can easily step right into it
> by abandoning them all and noting some values. Then you can implement
> each of these issues and observe how much the data changes. This is
> the merit of knowing your equipment and your skill. No measurement is
> right the first time, nor the second, and rarely the third time.
> Besides, it is more fun to refine your bench and testing and close in
> on the actual value by hammering out error. The bench artist will
> even disturb the set up with a known error, and observe how it
> propagates through to the final determination.
>
> 73's
> Richard Clark, KB7QHC

Thanks for all the good info, Richard.

John

1607. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 14:30:00 UTC
From: fractenna@aol.com
Message-ID: <20040429103000.19729.00000543@mb-m10.aol.com>
Source record: 95858

>Hello,
>
>I am working on a PCB-based antenna, with copper on both sides.
>Believe it or not, the hardest part is figuring out how much the PCB
>material would cost. Does anyone have any PCB costing numbers for
>FR4, FR408, Nelco 40013, Rogers 4003, any other material? I
>understand that thickness plays a major part in the cost so if
>possible please include the board thickness with the cost number (I am
>currently thinking of using 20mils thick PCB). It would probably be
>easiest if the cost was in units of US$ per sq. inch or sq. cm. Many
>thanks.
>

4003 is very good, but there are many less expensive alternatives, depending on the app and freq required. I am puzzled why you haven't priced this with manufacturer's reps or even board fab houses. They are not shrinking violets, and happy to give you info

Also, it would be helpful to know who you are. Basketball and antennas don't often get placed together.

73,
Chip N1IR

1608. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 14:42:16 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c6r4sp$f5k7v$1@ID-225206.news.uni-berlin.de>
Source record: 95859

Your spurs sound very strange, too close in 32 kHz, 62KHz, normally they are
further out several MHz if generated by the RF chain. That is like an audio
part/circuit getting into the transmit RF. Try rearranging or twisting up
the power cables to the radio.
If spurs are low, not much power is there, so little damage to radio
rts. -65dBc sounds good for a CB. The farther you look down the more spurs
there. The antenna could be reradiating RF power back onto circuit
components, which could be a cause too.

"Dummy" <ahkit1021@yahoo.com> wrote in message
news:74bb84c0.0404282334.3a38772c@posting.google.com...
> I'm having a two-way radio. One wide-band antenna was hooked up on a
> spectrum analyzer. Video BW and RES BW was adjusted to 3khz and 1kHz
> respectively at spectrum analyzer. Span was 300KHz.
>
> When radio was being keyed up, spurs could be seen at around plus
> minus 32Khz and 62khz. However, the amplitude were quite low, about
> -65 to 70dBc. I was wondering what caused the spurs to appear. If
> radio was connected directly to spectrum analyzer, this problem could
> not be seen.
>
> When radio was transmitting to different load with different VSWR (up
> to 8:1), no spurs were seen. Spurs could only be observed while using
> antenna. Could the VSWR of antenna be worse than 8:1? Just could not
> figure out the source of the spurs. Please help.

1609. Anyone have an EZNEC Windom Model

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 15:00:44 UTC
From: Larry <nospam@REMOVEME.com>
Message-ID: <wM8kc.17291$e4.12841@newsread2.news.pas.earthlink.net>
Source record: 95860

I would like to model my Carolina Windom antenna and compare it with the
real antenna that I have installed. Does anyone have EZNEC modelling data
for any kind of Windom that they are willing to share?

73
Larry

1610. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 16:04:06 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <4091256f.1092525609@news.galilei.com>
Source record: 95861

Hi Slick

Sure Is!!!!!

I've been self-employed now for about 25 years, trouble is the first 20 of those I only exchanged one predictible boss for about 100 very unpredictable ones, my customers, hi hi.

Then I did away with customers until after the fact. This meant I could basically do it my way, when I wanted to, and when finished then find a customer for it.

I think now I have the best of both worlds. I don't have to deal with customers at all. I have one mfgr. rep. who handles all of the distribution for me. Even had him scheduled to place orders only once per month for awhile, then as he grew I boosted that to ordering only once every other month.

I now run two businesses in similar fashion on alternating months and am working on a third that will be totally out of house, meaning all I will have to do is make a single phone call each time the mfgr. rep. orders or I could have him place the order direct and not bother me at all with it, which is the way I may go with it too.

But it does get boring not having anything to do, so I'm doing hard labor, hi hi. Cleaning out the overgrown woods on a hillside!
Darn chiggers!

TTUL
Gary

1611. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 16:08:26 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <4091281e.1093212484@news.galilei.com>
Source record: 95862

fractenna@aol.com (Fractenna) verbositized:

>
>Also, it would be helpful to know who you are. Basketball and antennas don't
>often get placed together.

Don't know about that Chip!
Every player on my sons team had an earpiece and tranceiver so the
coach could chew them out while playing.

TTUL
Gary

1612. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 16:19:23 UTC
From: Gary Schafer <gaschafer@comcast.net>
Message-ID: <ona290tolo52n6ibbi7t0qdmreaebm78eh@4ax.com>
Source record: 95863

It is probably the way you are coupling the spectrum analyzer to the radio. How are you coupling it to the radio when the antenna is on the radio?

If you are just using the antenna on the spectrum analyzer you could be seeing anything.

You may be overloading the analyzer. It is difficult to see down that far and not overload the analyzer with the wanted signal. Try switching in a 10 db attenuater at the front end of the analyzer. Do the spurs drop 10 db? If they drop more you are overloading the analyzer.

You mentioned connecting the radio directly to the analyzer. If the analyzer is an IFR service monitor or another service monitor then all bets are off as to what you are seeing. They are poor spectrum analyzers.

73
Gary K4FMX

On 29 Apr 2004 00:34:31 -0700, ahkit1021@yahoo.com (Dummy) wrote:

>I'm having a two-way radio. One wide-band antenna was hooked up on a
>spectrum analyzer. Video BW and RES BW was adjusted to 3khz and 1kHz
>respectively at spectrum analyzer. Span was 300KHz.
>
>When radio was being keyed up, spurs could be seen at around plus
>minus 32Khz and 62khz. However, the amplitude were quite low, about
>-65 to 70dBc. I was wondering what caused the spurs to appear. If
>radio was connected directly to spectrum analyzer, this problem could
>not be seen.
>
>When radio was transmitting to different load with different VSWR (up
>to 8:1), no spurs were seen. Spurs could only be observed while using
>antenna. Could the VSWR of antenna be worse than 8:1? Just could not
>figure out the source of the spurs. Please help.

1613. Re: Anyone have an EZNEC Windom Model

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 16:37:31 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <cgb29056bjc3d57dnb7f5mffb7efef8mri@4ax.com>
Source record: 95864

On Thu, 29 Apr 2004 15:00:44 GMT, "Larry" <nospam@REMOVEME.com> wrote:

>I would like to model my Carolina Windom antenna and compare it with the
>real antenna that I have installed. Does anyone have EZNEC modelling data
>for any kind of Windom that they are willing to share?
>
>73
>Larry
>

Try Cebik's antenna pages, and look for his articles on the off-center
fed dipole. He frequently has computer modeling readouts in his
articles.

See http://www.cebik.com/gup/groundup.html

Bob
k5qwg

1614. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 16:46:45 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c6rblh$qo6$1@newshost.mot.com>
Source record: 95866

"The other John Smith" <jocjo-john@yooha.com> wrote in message
news:L4Wjc.13394$eZ5.4583@newsread1.news.pas.earthlink.net...
> I now have an HP 8405A Vector Voltmeter. I also have a Narda dual
> directional coupler.

It's been a long time since I've used a VVM. I see 'em in the "send to scrap" piles around here. Richard points out much more than I could and certainly has a more jaundiced eye than I, but this one thing cought my eye

> The HP voltmeter is able to zero out the phase angle between channels A
and
> B. So, I'll put a 50 Ohm dummy load out there for the Load and set the
phase
> angle offset to zero.

I forget how it offsets the phase reading, but I'd start by making the cable lengths so that the two measurement points are "at the same pointy along the line". (of course I have a line stretcher to make it easier)

It sure seems to me that the Zero angle 50 ohm load must be a bad assumption. The 50 could be anywhere angle-wise and is the hardest to measure since the reflected is so small...Wouldn't it be "better" to use a short (of course I'm looking at a couple of Narda shorts at my operating position every night) for a primary 180 degree reference (the open being "harder" to obtain)? I think you mentioned using several other loads as well (parallel 50s=25, etc). I would use several different loads like this to "measure" to see how the measurements look compared to expected (cal-kit style). I'd measure opens, shorts and several other mismatches to make sure all available "knows" looks close, then proceed.
I'd also pad the Tx output. Long lengths of miniature coax in lew of actual power attenuators.
OOPS! gotta re-boot, 73

--
Steve N, K,9;d, c. i My email has no u's.

1615. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 16:53:38 UTC
From: fractenna@aol.com
Message-ID: <20040429125338.03209.00000465@mb-m28.aol.com>
Source record: 95865

>Don't know about that Chip!
>Every player on my sons team had an earpiece and tranceiver so the
>coach could chew them out while playing.
>
>TTUL
>Gary
>

WIreless basketball. That's a new direction!

;->

73,
Chip N1IR

1616. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 17:40:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1092fge1cdssua2@corp.supernews.com>
Source record: 95867

More thoughts along the lines of John's comments, 32 kHz is about twice the frequency of the horizontal line component of TV video. Do you have any TV transmitters reasonably close by?

I've had problems with detected video on a couple of occasions, getting into audio circuits. After I redesigned the audio circuits to look more like VHF/UHF circuits -- laid out, bypassed, and filtered for VHF/UHF -- the problems disappeared. A working hypothesis is that there's a strong TV transmitter getting into your transmitter via the antenna and/or its transmission line, then getting detected and modulating your transmitter. In the case of my audio problems, the vertical scan component was worse, resulting in a "hum" that varied with the picture of the offending TV station. You might take a close look at the spurs and see if they vary with a local station's picture.

Roy Lewallen, W7EL

John Smith wrote:
> Your spurs sound very strange, too close in 32 kHz, 62KHz, normally they are
> further out several MHz if generated by the RF chain. That is like an audio
> part/circuit getting into the transmit RF. Try rearranging or twisting up
> the power cables to the radio.
> If spurs are low, not much power is there, so little damage to radio
> rts. -65dBc sounds good for a CB. The farther you look down the more spurs
> there. The antenna could be reradiating RF power back onto circuit
> components, which could be a cause too.

1617. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 18:14:01 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0404291014.16072044@posting.google.com>
Source record: 95868

fractenna@aol.com (Fractenna) wrote in message
news:<20040429103000.19729.00000543@mb-m10.aol.com>...
> >Hello,
> >
> >I am working on a PCB-based antenna, with copper on both sides.
> >Believe it or not, the hardest part is figuring out how much the PCB
> >material would cost. Does anyone have any PCB costing numbers for
> >FR4, FR408, Nelco 40013, Rogers 4003, any other material? I
> >understand that thickness plays a major part in the cost so if
> >possible please include the board thickness with the cost number (I am
> >currently thinking of using 20mils thick PCB). It would probably be
> >easiest if the cost was in units of US$ per sq. inch or sq. cm. Many
> >thanks.
> >
>
> 4003 is very good, but there are many less expensive alternatives, depending
> on the app and freq required. I am puzzled why you haven't priced this with
> manufacturer's reps or even board fab houses. They are not shrinking violets,
> and happy to give you info
>
> Also, it would be helpful to know who you are. Basketball and antennas don't
> often get placed together.
>
> 73,
> Chip N1IR

My name is Kevin, Mr. Fractenna. The reason I don't call the reps is
because I am not nearly as interested in the numbers they tell me as I
am in the numbers that folks have already negotiated. In this way
when I eventually call them I have an idea of how much I am getting
ripped off. Last time I called a rep he wanted me to pay 60 cents for
a nickel part. So how much I am overpaying is the answer I am after.

You indicate that you are aware of less expensive alternatives to
4003. Would you kindly let me know what those are. Are we talking
materials other than FR408? BTW the frequency is in the 3-4GHz band,
so loss tangent and other stuff only somewhat matters. There is a
price/efficiency tradeoff in play. I would like to 'see the whole
field' before I decide which way to run.

Thanks.
Kevin Smith

1618. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 18:29:43 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40914997.F800669C@uci.edu>
Source record: 95769

kashe@sonic.net wrote:
>
> Would you care to cite where he specified any kind of
> thermometer-equivalent? That's a complete red herring you dragged into
> a conversation where the parameters were quite clear to all other
> participants.

The parameters? Admittedly, I did miss seeing them posted until later in the thread. I apologize that you found the phenomenological descriptions to be inciteful rather than insightful. I intended only the latter. It is my sincere hope that whoever it is will soon stop urinating in your soup and/or bunching-up your underpants.

73, ac6xg

1619. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 18:44:41 UTC
From: fractenna@aol.com
Message-ID: <20040429144441.28729.00000574@mb-m28.aol.com>
Source record: 95770

>My name is Kevin, Mr. Fractenna. The reason I don't call the reps is
>because I am not nearly as interested in the numbers they tell me as I
>am in the numbers that folks have already negotiated. In this way
>when I eventually call them I have an idea of how much I am getting
>ripped off. Last time I called a rep he wanted me to pay 60 cents for
>a nickel part. So how much I am overpaying is the answer I am after.
>
>You indicate that you are aware of less expensive alternatives to
>4003. Would you kindly let me know what those are. Are we talking
>materials other than FR408? BTW the frequency is in the 3-4GHz band,
>so loss tangent and other stuff only somewhat matters. There is a
>price/efficiency tradeoff in play. I would like to 'see the whole
>field' before I decide which way to run.
>
>Thanks.
>Kevin Smith
>
...and that's exactly why you need the reps in.

We do thousands of square feet of PCB a year, and we never had to use a newsgroup to figure out a good price, or ask anyone in the way you suggest. Call the reps. If you want to play games, then you can invite them over on the same day and ask for their best price.

The substrate houses are eager for business and you owe it to good vendor-customer relationships to play it straight. That's my opinion. But hey, what do I know:-)?

BTW, putting FR4 and 4003 in the same sentence indicates you may really need the vendors to fill you in: No one uses FR4 efficiently at those freqs--lousy loss tangent. OTH, I, personally, do not choose 4003 much due to cost, save for very specific high margin needs. But others, of course, may choose these great product according to their needs.

73,
Chip N1IR

1620. OT: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 19:23:36 UTC
From: Austin Powers <austinpowers@pobox.com>
Message-ID: <YCckc.57803$1e2.1879@newssvr25.news.prodigy.com>
Source record: 95771

Forgive me for asking this here, but I figure you guys are most like to a) know and b) give a helpful answer.

I stereo receiver needs an FM aerial to be able to receive a better quaoity signal (it's VERY 'hissy' at the moment. What can you suggest? All I want to be able to do is listen to the local FM station that carries the BBC World Service.

If I knew more aboitu the technicalities of this then I'd give you more information, but feel free to ask me more questions, if necessary.

Thanks.

1621. Re: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 19:32:32 UTC
From: Paul Bauer <paulb@powerweb.net>
Message-ID: <e701b$40915842$4076204b$16205@powerweb.allthenewsgroups.com>
Source record: 95772

check out http://www.antennaperformance.com/

"Austin Powers" <austinpowers@pobox.com> wrote in message
news:YCckc.57803$1e2.1879@newssvr25.news.prodigy.com...
> Forgive me for asking this here, but I figure you guys are most like to
a)
> know and b) give a helpful answer.
>
> I stereo receiver needs an FM aerial to be able to receive a better
quaoity
> signal (it's VERY 'hissy' at the moment. What can you suggest? All I
want
> to be able to do is listen to the local FM station that carries the BBC
> World Service.
>
> If I knew more aboitu the technicalities of this then I'd give you more
> information, but feel free to ask me more questions, if necessary.
>
> Thanks.
>
>

1622. Re: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 19:46:39 UTC
From: Austin Powers <austinpowers@pobox.com>
Message-ID: <zYckc.57810$3q2.42027@newssvr25.news.prodigy.com>
Source record: 95773

Thanks for such a quick answer...I hadn't realised they were so expensive.
Still, if I want the best...

"Paul Bauer" <paulb@powerweb.net> wrote in message
news:e701b$40915842$4076204b$16205@powerweb.allthenewsgroups.com...
> check out http://www.antennaperformance.com/
>
>
>
> "Austin Powers" <austinpowers@pobox.com> wrote in message
> news:YCckc.57803$1e2.1879@newssvr25.news.prodigy.com...
> > Forgive me for asking this here, but I figure you guys are most like to
> a)
> > know and b) give a helpful answer.
> >
> > I stereo receiver needs an FM aerial to be able to receive a better
> quaoity
> > signal (it's VERY 'hissy' at the moment. What can you suggest? All I
> want
> > to be able to do is listen to the local FM station that carries the BBC
> > World Service.
> >
> > If I knew more aboitu the technicalities of this then I'd give you more
> > information, but feel free to ask me more questions, if necessary.
> >
> > Thanks.
> >
> >
>
>

1623. Re: OT: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 19:53:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uom290phug5b69kqre78cerk7tj0nbq61v@4ax.com>
Source record: 95774

On Thu, 29 Apr 2004 19:23:36 GMT, "Austin Powers"
<austinpowers@pobox.com> wrote:
>What can you suggest?

Hi OM,

If you don't have an external antenna, get one (a cheap one seeing you have some reception already, then follow the next bit of advice).

If you have one, get it up higher (add more feedline to accomplish this if necessary). If it is an indoor antenna, get an outdoor antenna (or simply move the antenna outside AND UP).

If you are short on cash (or just don't want to go there), experiment by moving it around and spending as much for 25 feet of extension line. Don't worry about anything except results. If it works fine nailed to the ceiling upstairs - you are finished and enjoy it. Don't worry about connecting wire:
strip the wire, connect, twist tight, and wrap with a some tape.

If none of this offers a satisfactory solution, you will have to spend a little more. Seek a local vendor that sells/installs them and who knows the stations and your need. Radio Shack comes to mind.

73's
Richard Clark, KB7QHC

1624. Re: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 19:56:09 UTC
From: Paul Bauer <paulb@powerweb.net>
Message-ID: <8cefa$40915dcb$4076204b$16380@powerweb.allthenewsgroups.com>
Source record: 95775

here are some cheaper ones

http://www.winegard.com/offair/prostar1000vhffmyagi.htm#6010

http://www.fanfare.com/drant-all.html

http://www.magnumdynalab.com/home.html

http://www.radioshack.com/product.asp?catalog%5Fname=CTLG&product%5Fid=15-2163

http://www.starkelectronic.com/fmpage.htm

good luck,
paul

"Austin Powers" <austinpowers@pobox.com> wrote in message
news:zYckc.57810$3q2.42027@newssvr25.news.prodigy.com...
> Thanks for such a quick answer...I hadn't realised they were so expensive.
> Still, if I want the best...
>
>
> "Paul Bauer" <paulb@powerweb.net> wrote in message
> news:e701b$40915842$4076204b$16205@powerweb.allthenewsgroups.com...
> > check out http://www.antennaperformance.com/
> >
> >
> >
> > "Austin Powers" <austinpowers@pobox.com> wrote in message
> > news:YCckc.57803$1e2.1879@newssvr25.news.prodigy.com...
> > > Forgive me for asking this here, but I figure you guys are most like
to
> > a)
> > > know and b) give a helpful answer.
> > >
> > > I stereo receiver needs an FM aerial to be able to receive a better
> > quaoity
> > > signal (it's VERY 'hissy' at the moment. What can you suggest? All I
> > want
> > > to be able to do is listen to the local FM station that carries the
BBC
> > > World Service.
> > >
> > > If I knew more aboitu the technicalities of this then I'd give you
more
> > > information, but feel free to ask me more questions, if necessary.
> > >

> > > Thanks.
> > >
> > >
> >
> >
>
>

1625. Re: End Effect on folded dipoles/monopoles?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 20:25:32 UTC
From: richardharrison@webtv.net
Message-ID: <8398-409164BC-269@storefull-3252.bay.webtv.net>
Source record: 95777

Jerry Martes wrote:
"I`d like to get some "real life" data."

End effect on dipoles and monopoles has little do with comparitive performance. See Cebik. It`s more associated with where the antenna is with respect to ground, and how fat or slim the conductors are.

Jerry also wrote:
"I want to understand (see) what kind of pattern I`m getting from an antenna I made for Weather Satellite (137 MHz) reception."

That might be for the NOAA polar orbiters. On page 19-8 of the 19th edition of the ARRL "Antenna Book" is a section on Antennas for Satellite Work. Circular polarization is considered ideal. A couple of NOAA polar orbiting satellites are active and others may be functioning as backups. Active NOAA orbiters may fly high over the horizon a couple of times a day, so you need a program to tell you where, when, and how high above the horizon the flyover will occur. Some are available at no cost, I hear. 15 minutes of visibility, 7 minutes coming and 7 minutes of going may be available on a pass.

On page 19-10 of the "Antenna Book" are shown the patterns of individual dipoles and as used together as an omnidirectional turnstile.

The quadrifilar helix is also considered good as a weather satellite receiving antenna. This antenna is shown on page 292 of J.D. Kraus` third edition of "Antennas for All Applications" in Figure 8-67.

No need for concern about the pattern obtained from folded dipoles if you are OK with the pattern of an ordinary open-circuit dipole. They are exactly the same. The difference is only in the inherent impedance transformation of the folded antenna, dipole or monopole. That`s it. Antenna catalogs list gain as 0 dBd for open-circuit dipole, folded dipole, ground plane, or folded monopole. Patterns shown are the same for open-circuit and folded dipoles. Patterns shown for a folded monopole are identical with those shown for an open-circuit monpole (ground plane).

One catalog lists a thin-wire common dipole as having 34% bandwidth and a 60-ohm feed resistance. The folded dipole has a 45% bandwidth and a 300-ohm feedpoint because it is fatter and folded. The pattern plots are identical.

Enjoy your EZNEC. The resuts it should prduce on ordinary and folded dipoles are already published in many places. Makes it easy to see if you did the EZNEC right.

Best regards, Richard Harrison, KB5WZI

1626. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 20:34:09 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <5Fdkc.17587$e4.10313@newsread2.news.pas.earthlink.net>
Source record: 95776

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:c6rblh$qo6$1@newshost.mot.com...
>
> "The other John Smith" <jocjo-john@yooha.com> wrote in message
> news:L4Wjc.13394$eZ5.4583@newsread1.news.pas.earthlink.net...
> > I now have an HP 8405A Vector Voltmeter. I also have a Narda dual
> > directional coupler.
>
>
> It's been a long time since I've used a VVM. I see 'em in the "send to
> scrap" piles around here. Richard points out much more than I could and
> certainly has a more jaundiced eye than I, but this one thing cought my
eye
>
> > The HP voltmeter is able to zero out the phase angle between channels A
> and
> > B. So, I'll put a 50 Ohm dummy load out there for the Load and set the
> phase
> > angle offset to zero.
>
> I forget how it offsets the phase reading, but I'd start by making the
cable
> lengths so that the two measurement points are "at the same pointy along
the
> line". (of course I have a line stretcher to make it easier)

There are front panel adjustments to provide an offset for just this
purpose. There is a selector switch and a variable adjustment which together
provide plus or minus 180 degrees adjustment.

> It sure seems to me that the Zero angle 50 ohm load must be a bad
> assumption. The 50 could be anywhere angle-wise and is the hardest to
> measure since the reflected is so small...

Channel B (the channel measuring the reflected signal and its angle) is 100
uV full scale at its most sensitive setting. I don't think it is a problem.

> Wouldn't it be "better" to use a
> short (of course I'm looking at a couple of Narda shorts at my operating
> position every night) for a primary 180 degree reference (the open being
> "harder" to obtain)?

I don't know. My assumption is that a purely resistive 50 Ohm load used as a
reference to set the instrument zero is valid. I'm only looking for the
relation of an unknown to the 50 Ohm load.

> I think you mentioned using several other loads as well
> (parallel 50s=25, etc). I would use several different loads like this to
> "measure" to see how the measurements look compared to expected (cal-kit
> style). I'd measure opens, shorts and several other mismatches to make
sure
> all available "knows" looks close, then proceed.

I can and probably will do that. Out of curiosity if nothing else. If it all produces expected results, it will increase my confidence that I am going about this correctly.

> I'd also pad the Tx output. Long lengths of miniature coax in lew of
> actual power attenuators.
> OOPS! gotta re-boot, 73
>
> --
> Steve N, K,9;d, c. i My email has no u's.

I might be inclined to trust an attenuator before the miniature transmission line. The books tell me that the transmission lines can get a little reactive at the higher frequencies because they begin to move from TE1 to another mode. In any case, I think I can adjust my generator to an output sufficiently low so that an attenuator will not be necessary.

Thanks, Steve.

John

1627. Re: OT: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 20:56:31 UTC
From: richardharrison@webtv.net
Message-ID: <26088-40916BFF-98@storefull-3258.bay.webtv.net>
Source record: 95778

Austin Powers wrote:
"What can you suggest?"

Using a portable FM receiver, find a spot receiving an acceptable signal. Usual problem is an obstructed signal path. An almost line-of-sight path is needed between receiving and transmitting antennas.

Place the antenna for connection to your stereo receiver in the "sweet spot" found with the portable and orient it for best signal to noise ratio.

Best regards, Richard Harrison, KB5WZI

1628. Re: OT: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 22:00:06 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40917AF0.8F872643@shaw.ca>
Source record: 95779

Richard Harrison wrote:
>
> Austin Powers wrote:
> "What can you suggest?"
>
> Using a portable FM receiver, find a spot receiving an acceptable
> signal. Usual problem is an obstructed signal path. An almost
> line-of-sight path is needed between receiving and transmitting
> antennas.
>
> Place the antenna for connection to your stereo receiver in the "sweet
> spot" found with the portable and orient it for best signal to noise
> ratio.
>
> Best regards, Richard Harrison, KB5WZI

Excellent suggestion. It could save hours and bucks! You might even
get away with an antenna in the attic or upstairs. If you can receive it
on the portable, a simple set of rabbit ears might suffice.

Irv VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1629. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 22:01:22 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0404291401.4382c18c@posting.google.com>
Source record: 95780

raiar@bbs.galilei.com.nospam (Gary V. Deutschmann, Sr.) wrote in message news:<4091256f.1092525609@news.galilei.com>...
> Hi Slick
>
> Sure Is!!!!!
>
> I've been self-employed now for about 25 years, trouble is the first
> 20 of those I only exchanged one predictible boss for about 100 very
> unpredictable ones, my customers, hi hi.
>

Haha! Too true! Customers ARE the bosses, aren't they! At least for the few hours that they are paying you!

hehe... Yeah, and like a regular boss, you sometimes have to put they in their place, eh? Like educated them of what they really need and should do.

But i'd rather have 100's of unpredictable-but-temporary bosses, than a single predictable-but-arrogant one!

hahaha...Life just doesn't make it too easy, eh?

Slick

1630. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 22:03:21 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0404291403.15e9733b@posting.google.com>
Source record: 95781

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40910172_6@corp.newsgroups.com>...
> Dr. Slick wrote:
> > God, it's nice to be your own boss, ain't it?
>
> When Intel stock hit 100, I just couldn't resist selling
> those golden handcuffs and riding off into the sunset on
> my new Harley. :-)

Ha! Golden handcuffs instead of Golden parachutes?

Great. I've never heard of a job describe like that,
but it's quite appropriate, like a 5-star luxury prison
cell...

Slick

1631. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 22:10:00 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0404291410.6959999c@posting.google.com>
Source record: 95782

fractenna@aol.com (Fractenna) wrote in message
news:<20040429144441.28729.00000574@mb-m28.aol.com>...
> >My name is Kevin, Mr. Fractenna. The reason I don't call the reps is
> >because I am not nearly as interested in the numbers they tell me as I
> >am in the numbers that folks have already negotiated. In this way
> >when I eventually call them I have an idea of how much I am getting
> >ripped off. Last time I called a rep he wanted me to pay 60 cents for
> >a nickel part. So how much I am overpaying is the answer I am after.
> >
> >You indicate that you are aware of less expensive alternatives to
> >4003. Would you kindly let me know what those are. Are we talking
> >materials other than FR408? BTW the frequency is in the 3-4GHz band,
> >so loss tangent and other stuff only somewhat matters. There is a
> >price/efficiency tradeoff in play. I would like to 'see the whole
> >field' before I decide which way to run.
> >
> >Thanks.
> >Kevin Smith
> >
> ...and that's exactly why you need the reps in.
>
> We do thousands of square feet of PCB a year, and we never had to use a
> newsgroup to figure out a good price, or ask anyone in the way you suggest.
> Call the reps. If you want to play games, then you can invite them over on the
> same day and ask for their best price.
>
> The substrate houses are eager for business and you owe it to good
> vendor-customer relationships to play it straight. That's my opinion. But hey,
> what do I know:-)?
>
> BTW, putting FR4 and 4003 in the same sentence indicates you may really need
> the vendors to fill you in: No one uses FR4 efficiently at those freqs--lousy
> loss tangent. OTH, I, personally, do not choose 4003 much due to cost, save
> for very specific high margin needs. But others, of course, may choose these
> great product according to their needs.
>
> 73,
> Chip N1IR

Mr. Fractenna you call it games, everyone else calls it business and
the reps are playing. Are you SURE you are getting the best price for
those thousands of square feet? What if you could knock it down by a
penny/sq in? What better place than a forum like this to figure out
what the right price is?

BTW I know the differences between FR4 and 4003 properties. I don't know the difference in cost so I only have half the equation (if you look above, I told you that there is a cost/efficiency tradoff in place for my application).

BTW You have NOT answered one question I asked so far. It would be helpful if you either answered the questions or stopped wasting my time. You, my friend are the one that's playing games.

1632. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 22:45:40 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c6s0mf$1l5$1@newshost.mot.com>
Source record: 95785

"Dummy" <ahkit1021@yahoo.com> wrote in message
news:74bb84c0.0404282334.3a38772c@posting.google.com...
> I'm having a two-way radio. One wide-band antenna was hooked up on a
> spectrum analyzer. Video BW and RES BW was adjusted to 3khz and 1kHz
> respectively at spectrum analyzer. Span was 300KHz.
>
> When radio was being keyed up, spurs could be seen at around plus
> minus 32Khz and 62khz. However, the amplitude were quite low, about
> -65 to 70dBc. I was wondering what caused the spurs to appear. If
> radio was connected directly to spectrum analyzer, this problem could
> not be seen.
>
> When radio was transmitting to different load with different VSWR (up
> to 8:1), no spurs were seen. Spurs could only be observed while using
> antenna. Could the VSWR of antenna be worse than 8:1? Just could not
> figure out the source of the spurs. Please help.

I'm having a fine day.
There are too many possibilities to decide with this medium. If you are making these kinds of measurements without an experienced RF Tech or Engineer you will see many many strange things which defy explanation in this forum where many assumptions must be made - and we all will make assumptions based on our experience.

Things to consider:
Location of the antenna - RF could be getting into the radio
- RF could be getting into the Spec Analyzer
Do some radio or antenna moving or even some hand waving to see if a RF field is a contributor.
Get the analyzer as FAR away as possible and if the spurs are gone, forget it and delete the rest of this.

The radio synthesizer SHOULD produce such signals. There are reference frequency spurs. It is rare that you won't see this - however, I realize that your antenna vs. no antenna result is odd and I have no idea what the reference frequency is or frequencies are.
Signal level into the analyzer.
Is the analyzer working properly.
Can you duplicate it?
Can you make any other changes which produces an expected result and get what is expected or does something strange happen. Such as signal level into the analyzer or power out of the radio.
SWR could be an issue as you speculate.
Without being there and trying other "crazy" things I can't speculate further...

--
Steve N, K,9;d, c. i My email has no u's.

1633. Re: How does rain effect antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 22:47:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40918693$1_5@corp.newsgroups.com>
Source record: 95784

Dr. Slick wrote:
> Ha! Golden handcuffs instead of Golden parachutes?
>
> Great. I've never heard of a job describe like that,
> but it's quite appropriate, like a 5-star luxury prison
> cell...

Exactly, companies handed out so many stock options that
matured sometime in the future that nobody could afford to
quit the company. That was in the 90's of course when
tech stocks knew no bounds. Don't know how it is working
in the present day.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1634. Receiver dipole vs 23 ft wire for HF

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 22:47:59 UTC
From: Ken <cprstn54zz@att.net>
Message-ID: <e91390dtcl1oh7l5ttrs005t3qc7iv89jg@4ax.com>
Source record: 95783

Shortwave radio manufacturers offer little 23 ft wire antennas on a
reel. See, e.g.:
http://www.universal-radio.com/catalog/sw_ant/3184.html

If I put another 23 ft wire to the radio ground and run it off as
closely s possible to 180 degrees away from the first wire, will this
necessarily (likely?) improve reception?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1635. Re: OT: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 23:15:09 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40918C87.1D5B0A83@shaw.ca>
Source record: 95786

Richard Harrison wrote:
>
> Austin Powers wrote:
> "What can you suggest?"
>
> Using a portable FM receiver, find a spot receiving an acceptable
> signal. Usual problem is an obstructed signal path. An almost
> line-of-sight path is needed between receiving and transmitting
> antennas.
>
> Place the antenna for connection to your stereo receiver in the "sweet
> spot" found with the portable and orient it for best signal to noise
> ratio.
>
> Best regards, Richard Harrison, KB5WZI

Excellent suggestion. It could save hours and bucks! You might even
get away with an antenna in the attic or upstairs. If you can receive it
on the portable, a simple set of rabbit ears might suffice.

Irv VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1636. Re: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-29 23:55:53 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <40919609$1@news.vallnet.com>
Source record: 95787

"Austin Powers" <austinpowers@pobox.com> wrote in message
news:YCckc.57803$1e2.1879@newssvr25.news.prodigy.com...
> Forgive me for asking this here, but I figure you guys are most like to
a)
> know and b) give a helpful answer.
>
> I stereo receiver needs an FM aerial to be able to receive a better
quaoity
> signal (it's VERY 'hissy' at the moment. What can you suggest? All I
want
> to be able to do is listen to the local FM station that carries the BBC
> World Service.
>
> If I knew more aboitu the technicalities of this then I'd give you more
> information, but feel free to ask me more questions, if necessary.
>
> Thanks.
Personally I have an VHF TV 'rabbit ears' antenna tacked to the wall and
attached. It's approximately the right length for the frequency, and it came
with my TV, which I later gave to my parents when theirs died, who had
cable. (I'm to cheap to shell out for cable and get 1 whole station where
I'm at).

Another method would be go down to wherever you can pickup a spool of 24
gauge wire (like 30-90 feet.. Radio shack sells 90' it for $5), use an
alligator clip to attach it to your existing antenna (or attach it to the
antenna lug if you don't have an existing antenna) and run the wire, say, up
the wall, into the attic, and around the edge of the attic.

1637. Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 00:09:29 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <5c539091t2ebcdurorooq3o63ps0moea2m@4ax.com>
Source record: 95788

Hustler says the 6BTV will work OK without radials as long as the ground is not dry. The salesman said so also. So I bought it.

I was delayed in installing it because of a nesting Red Shouldered Hawk that I refuse to disturb.

Meanwhile, I am reading articles online that indicate that the 6BTV might work very poorly without radials even with a low VSWR.

I will have a nasty time installing radials where I want to put it.

Anyone have any experience in that regard?

Thanks, Ron
W1WBV

1638. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 00:18:26 UTC
From: deje a lector guardarse <dlg@pero.net>
Message-ID: <mXgkc.6722$k24.2536@fed1read01>
Source record: 95789

For 1/4 wave verticals like the Hustler, I have had very poor results when ground mounted -- with or without radials.
Placing the vertical on the roof or otherwise elavated -- got much better results with just 3 or 4 radials.

Suggest your read Butternuts blurb on ground radial systems. URL:
http://www.bencher.com/pdfs/00361ZZV.pdf

Good luck
--
deje a lector guardarse

Amateur Radio is the best back-up
communications system in the world,
and that's the way it is. Walter Cronkite

"Ron" <rc@roncrowley.dot.com> wrote in message
news:5c539091t2ebcdurorooq3o63ps0moea2m@4ax.com...
> Hustler says the 6BTV will work OK without radials as long as the
> ground is not dry. The salesman said so also. So I bought it.
>
> I was delayed in installing it because of a nesting Red Shouldered
> Hawk that I refuse to disturb.
>
> Meanwhile, I am reading articles online that indicate that the 6BTV
> might work very poorly without radials even with a low VSWR.
>
> I will have a nasty time installing radials where I want to put it.
>
> Anyone have any experience in that regard?
>
> Thanks, Ron
> W1WBV

1639. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 00:43:21 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <lihkc.957$NI6.193027@attbi_s01>
Source record: 95790

Ron wrote:

> Hustler says the 6BTV will work OK without radials as long as the
> ground is not dry. The salesman said so also. So I bought it.

You were oversold! It really needs a radial system for decent
operation. It will work ... but ...

>
> I was delayed in installing it because of a nesting Red Shouldered
> Hawk that I refuse to disturb.
>
> Meanwhile, I am reading articles online that indicate that the 6BTV
> might work very poorly without radials even with a low VSWR.
>
> I will have a nasty time installing radials where I want to put it.

Can you return it as not suitable for your use. Indicate it was oversold.

>
> Anyone have any experience in that regard?
>
> Thanks, Ron
> W1WBV

1640. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 01:05:41 UTC
From: ahkit1021@yahoo.com
Message-ID: <74bb84c0.0404291705.142d20c5@posting.google.com>
Source record: 95791

Roy Lewallen <w7el@eznec.com> wrote in message
news:<1092fge1cdssua2@corp.supernews.com>...
> More thoughts along the lines of John's comments, 32 kHz is about twice
> the frequency of the horizontal line component of TV video. Do you have
> any TV transmitters reasonably close by?
>
> I've had problems with detected video on a couple of occasions, getting
> into audio circuits. After I redesigned the audio circuits to look more
> like VHF/UHF circuits -- laid out, bypassed, and filtered for VHF/UHF --
> the problems disappeared. A working hypothesis is that there's a strong
> TV transmitter getting into your transmitter via the antenna and/or its
> transmission line, then getting detected and modulating your
> transmitter. In the case of my audio problems, the vertical scan
> component was worse, resulting in a "hum" that varied with the picture
> of the offending TV station. You might take a close look at the spurs
> and see if they vary with a local station's picture.
>
> Roy Lewallen, W7EL
>
> John Smith wrote:
> > Your spurs sound very strange, too close in 32 kHz, 62KHz, normally they are
> > further out several MHz if generated by the RF chain. That is like an audio
> > part/circuit getting into the transmit RF. Try rearranging or twisting up
> > the power cables to the radio.
> > If spurs are low, not much power is there, so little damage to radio
> > rts. -65dBc sounds good for a CB. The farther you look down the more spurs
> > there. The antenna could be reradiating RF power back onto circuit
> > components, which could be a cause too.

The antenna was pointing to any angle and direction randomly while
transmitting. One strange behaviour observed. The spurs could only be
seen at certain angles of transmission only.

Spurs at 32khz and 62khz away from carrier would cause an interference
at adjacent frequencies. A simple test was being carried out. Two
radios. First radio had 502.025MHz as Tx and Rx frequency. While
second radio had 502.057MHz as Tx and Rx frequency. Transmitting at
502.025MHz would cause a interference on second radio, in which we
could hypothesize that spurs at 32kHz away was too high in amplitude
and thus causing interference to other frequency. So, the spurs were
real! It wasn't some kind of 'illusions' produced by spectrum
analyzer. I guess this is highly undesirable.

Besides, I'm sure those spurs weren't produced by radio internal
circuit as I couldn't see any spurs if radios were being transmitted

into spectrum analyzer directly using 50 Ohm coaxial RF cable. Even with 4:1 and 8:1 VSWR load, there's no existence of spurs. Could the antenna's match worse than VSWR 8:1? Perhaps the spurs were part of the intrinsic characteristic of any antennas?

Maybe the culprit was TV transmitter nearby. I have yet to look into that. Another test that can be done is to do transmission in a sealed, interference-free room. If spurs still could be seen, I would say it's the antenna's imperfection that produced the spurs. If spurs gone, it's a good news that the spurs were coming from outer space, Mars maybe.

I would be grateful if somebody could check this out on few radios to see if this problem exists.

1641. Re: Receiver dipole vs 23 ft wire for HF

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 01:18:01 UTC
From: richardharrison@webtv.net
Message-ID: <29233-4091A949-334@storefull-3256.bay.webtv.net>
Source record: 95792

Ken, KC2JDY wrote:
"If I put another 23 ft wire to the radio ground and run it off as closely as possible to 180 degrees away from the first wire, will this necessarily (likely?) improve reception?"

Short answer: Not likely.

Regardless of transmitter antenna polarization, received signal reflected by the ionosphere has random polarization. About equal amounts of vertical and horizontal polarization are available for reception. It`s the way the ionosphere works.

It`s advantageous to use horizontal polarization in a receiving antenna for ionospheric signals. It`s because horizontally polarized antennas reject vertically polarized signals and it`s said that most noise is vertically polarized. That`s largely because there is no ground wave propagation of horizontally polarized signals. The ground reflection of a tangential wave has the opposite polarity to the incident wave. The sum of the direct wave and the reflected wave along the surface of the earth is very nearly zero for horizontal polarization.

A vertically polarized incident wave and its reflection are "head to tail" like flashlight batteries and this is obviously constructive rather than destructive. Even so, the earth is lossy at high frequencies.

Received vertically polarized signals come from afar via the ionosphere or via line of sight. Some ground wave propagation exists but it`s very poor. Received horizontally polarized signals come from afar or from very near because the earth treats them so badly. No ground wave exists for them. Excluding vertically polarized signal reception excludes nearly all out of sight signals except those reflected by the ionosphere at shortwave frequencies.

Noise is worse the closer it occurs to the receiver. Noise from a distance is weaker, in general.

Horizontal polarization is a noise suppressor.
A balanced antenna system is a noise suppressor for much the same reason that a balanced transmission line is a noise suppressor. To the extent that noise induces a common-mode signal on both wires, it balances out in the receiver provided the receiver is not unbalanced.

The problem with adding a balance wire to the ground side of the receiver input is that it is likely that the receiver input is already unbalanced. It likely already has a ground return for the antenna circuit, either directly or through a capacitor, to complete the signal

path for an unbalanced antenna input.

A balanced antenna system could be used with the receiver to improve the signal to noise ratio by inserting a balun at the receiver between the balanced horizontally polarized antenna system and the unbalanced input on the receiver.

Best regards, Richard Harrison, KB5WZI

1642. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 01:46:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0404291746.41bae668@posting.google.com>
Source record: 95793

"The other John Smith" <jocjo-john@yooha.com> wrote in message
news:<5Fdkc.17587$e4.10313@newsread2.news.pas.earthlink.net>...
> "Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
> news:c6rblh$qo6$1@newshost.mot.com...
>...
>
> > It sure seems to me that the Zero angle 50 ohm load must be a bad
> > assumption. The 50 could be anywhere angle-wise and is the hardest to
> > measure since the reflected is so small...
>
>
> Channel B (the channel measuring the reflected signal and its angle) is 100
> uV full scale at its most sensitive setting. I don't think it is a problem.

It's not so much a matter of being able to read a value as it is that
the value could be just about anything. Consider if your bridge is
calibrated exactly for 50 ohms, and your calibration resistor is 50.01
ohms...then you get a 180 degree phase angle. But if your resistor is
49.99 ohms, you get a 0 degree angle. And if you put in some little
tiny bit of reactance because of stray inductance and stray
capacitance, the value could easily be at any angle around your
coupler's 50 ohm reference.

But if you put a SHORT at the calibration point (maybe out at the end
of a transmission line), you KNOW it's zero degrees, plus only a tiny
amount to account for stray series inductance.

It's a lot easier to measure an angle at a large distance from a point
than right up next to the point. If you have a thousandth of an inch
measurement tolerance in any direction, you won't have much confidence
in an angle measured half a thousandth from the center point. But if
you are an inch away from the center point, a thousandth of an inch
error is a milliradian, about 0.06 degrees.

It seems to me that it's well worth taking advantage of that phase
measurement capability, because knowing the phase angle of a load, at
the load, will tell you a whole lot more about how to match to it than
just the amplitude info.

>
> > Wouldn't it be "better" to use a
> > short (of course I'm looking at a couple of Narda shorts at my operating
> > position every night) for a primary 180 degree reference (the open being
> > "harder" to obtain)?
>
>

> I don't know. My assumption is that a purely resistive 50 Ohm load used as a
> reference to set the instrument zero is valid. I'm only looking for the
> relation of an unknown to the 50 Ohm load.
>
>
> > I think you mentioned using several other loads as well
> > (parallel 50s=25, etc). I would use several different loads like this to
> > "measure" to see how the measurements look compared to expected (cal-kit
> > style). I'd measure opens, shorts and several other mismatches to make
> sure
> > all available "knows" looks close, then proceed.
>
>
> I can and probably will do that. Out of curiosity if nothing else. If it all
> produces expected results, it will increase my confidence that I am going
> about this correctly.
>
>
> > I'd also pad the Tx output. Long lengths of miniature coax in lew of
> > actual power attenuators.
> > OOPS! gotta re-boot, 73
> >
> > --
> > Steve N, K,9;d, c. i My email has no u's.
>
>
> I might be inclined to trust an attenuator before the miniature transmission
> line. The books tell me that the transmission lines can get a little
> reactive at the higher frequencies because they begin to move from TE1 to
> another mode. In any case, I think I can adjust my generator to an output
> sufficiently low so that an attenuator will not be necessary.

FWIW, I've fairly recently experimented with some home-made 50 ohm loads that are pretty good out to 1GHz and beyond. They consist of an SMA jack of the sort that mounts in five holes in a PC board, and 2 100 ohm 0805 SMT 1% resistors. I cut the center pin off so it sticks up only the height of the resistors (or so, not terribly critical), and solder a resistor from the center pin to the shell/ground on either side, so the resistors lie on a single diameter through the center pin. The symmetry makes for quite a nice and inexpensive load. I seriously doubt for anything you will be doing that you'll need any better, out to at least 1GHz.

The SMT attenuators such as DigiKey P11103CT, etc., are a cheap way to get low power attenuators which are reasonably flat up to at least a few hundred MHz. I've been using some similar parts from EMC Technology, http://www.emct.com/, that can handle 2 watts and are pretty flat out to several GHz. But you may have trouble getting them, and they are not so cheap.

Indeed, besides the problems of transmission lines' impdeances changing with frequency, there's a more serious problem for precision work finding lines that are the impedance you want. That is, a "50 ohm" line might well be anywhere between 45 ohms and 55 ohms, and may have small fluctuations in impedance along its length. You can get more accurate lines, but you will pay serious money for new flexible lines guaranteed to be within an ohm or less of 50--and I wouldn't trust a used one! But the nice thing is that you can calibrate out the line effects anyway, for measurements at the end of a piece of line. There's usually not much of an issue about the system being nonlinear, at least. (Certain things we do don't allow the luxury of calibrating at the ends of the lines, so I've become familiar with 1-meter-long lines that cost several hundred dollars. I was shocked at first, but have become numb about that. ;-)

Cheers,
Tom

1643. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 01:53:25 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <4091b185$0$440$5cbedd26@news.real-time.com>
Source record: 95794

I agree with the other posters. I had one that worked fairly well
ground mounted, but only with radials for the bands I was using. No
radials for that band meant no performance on that band.

tom
K0TAR

Ron wrote:

> Hustler says the 6BTV will work OK without radials as long as the
> ground is not dry. The salesman said so also. So I bought it.
>
> I was delayed in installing it because of a nesting Red Shouldered
> Hawk that I refuse to disturb.
>
> Meanwhile, I am reading articles online that indicate that the 6BTV
> might work very poorly without radials even with a low VSWR.
>
> I will have a nasty time installing radials where I want to put it.
>
> Anyone have any experience in that regard?
>
> Thanks, Ron
> W1WBV

1644. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 02:26:18 UTC
From: Leonard Martin <lmarti49NOSPAM@bellsouth.net>
Message-ID: <lmarti49NOSPAM-8E9B97.21261829042004@bignews.bellsouth.net>
Source record: 95795
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

In article <1XUgc.2518$e4.320@newsread2.news.pas.earthlink.net>,
"K0HB" <groupk0hb@earthlink.net> wrote:

>"WA3MOJ" <WA3MOJ@home.com> wrote
>
>| Hi all, I'm looking for a good reference manual, pdf file, or web
>site's that
>| will assist me in converting used UHF gear to operate on 11 meters.
>I'm finding
>| there is a substantial market for such gear and I'll need some
>references for
>| various solid state and tube conversions.
>
>The Armenian judges gave this a 9.8 on the Olympic Troll-O-Meter, but
>they were over-ruled by the umpires in instant replay, who award it a
>1.4.
>
>The Armenian judges lodged a formal protest!
>
>It was sufficiently trollish, of course, but way too obvious. It was
>poorly written, poorly executed, and was so incredibly lame as to lack
>the true drawing power of a really masterful troll.
>
>Maybe as high as a 1.6 for the intense stupidity of the premise, but a
>9.8? Never!
>
>The Armenian judges tear their hair out, throw their balalaikas down in
>dismay, and perform the traditional Armenian Dismay Chant!
>
>They demand a recount!
>
>73, de Hans, K0HB
>
>
>

BRAVO!

Leonard

--
"Everything that rises must converge"
--Flannery O'Connor

1645. Re: Receiver dipole vs 23 ft wire for HF

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 02:41:56 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c6sedk$7ck$1@sparta.btinternet.com>
Source record: 95796

> If I put another 23 ft wire to the radio ground and run it off as
> closely s possible to 180 degrees away from the first wire, will this
> necessarily (likely?) improve reception?

==========

You will have an additional, elevated radial wire.

In some directions and elevation angles and frequencies reception will be very slightly improved. In other directions and elevation angles and frequencies reception will be very slightly worse. On the average, no change.

By changing it to a centre-fed dipole, delete 'very slightly'.

1646. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 03:36:35 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4091C9BF.1CED9451@sonic.net>
Source record: 95797

When your wire goes through the 3/4 plastic pipe, do you fill the pipe hole with something?

I was thinking you could wrap that part of the wire with electricians tape to make it snug and to keep bugs and water out.

Bill

Alfred Lorona wrote:

> I have used open wire feedlines in six houses so far. I drill two 3/4 inch
> holes in any wall that is most convenient to bring the line inside and over
> to the tuner. I ram two pieces of plastic pipe in the holes letting about an
> inch or so protrude from the wall surfaces inside and outside.
>
> When I move, I yank out the pipe, jamb stucco, wood filler and/or drywall
> goo in the holes, dad paint on the repair and VOILA! Walls as good as new.
>
> The whole thing is so easy. Why make it hard on yourselves?
>
> 73, AL

1647. Murch Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 04:30:38 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4091D66A.B7EA212B@sonic.net>
Source record: 95798

Anyone have any experience or know anything about the Murch UT2000B transmatch. I ended up with one of these in a (retired) lot that I aquired. Says it works 10-160 meters. Power rating 2KW PEP. Takes coax or balanced line. Seems like it is pretty good, it has a rolling inductor.

I was advised to use my 250W Johnson Matchbox rather than the Murch for feeding my balanced line fed loop. I was planning to eventually use a 4 tube 811A type linear amp (like the 30L-1).

Why would someone advise against the Murch in favor of the Johnson for the balanced line?

The Murch has 160M, the Johnson no (unless I were to modify it).

I may have two antenna options, one coax, the other balanced line, maybe I should use both tuners and add switching. (The Murch does not have a built in antenna switch, the switch it has is either "in", "out", Dummy Load, or Grounded.)

Bill K6TAJ

1648. Does this Shorty Forty Antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 08:47:35 UTC
From: Alex <orillia@rogers.com>
Message-ID: <Hookc.11424$x6K1.8103@news01.bloor.is.net.cable.rogers.com>
Source record: 95799

http://www.flashwebhost.com/circuit/shortant.php

Hello, has anyone built this antenna and if so does it work well? I'd like to try it as an short vertical dipole. Any thoughts? 73

1649. Re: Murch Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 10:04:22 UTC
From: KC1DI <kc1di@arrl.net>
Message-ID: <9v8490dfuf9egd37jgoeu2kitnceb8b8il@4ax.com>
Source record: 95800

On Fri, 30 Apr 2004 04:30:38 GMT, zeno <zeno@sonic.net> wrote:

>Anyone have any experience or know anything about the Murch
>UT2000B transmatch. I ended up with one of these in a
>(retired) lot that I aquired. Says it works 10-160 meters.
>Power rating 2KW PEP. Takes coax or balanced line. Seems like
>it is pretty good, it has a rolling inductor.
>
>I was advised to use my 250W Johnson Matchbox rather than the
>Murch for feeding my balanced line fed loop. I was planning
>to eventually use a 4 tube 811A type linear amp (like the
>30L-1).
>
>Why would someone advise against the Murch in favor of the
>Johnson for the balanced line?
>
>
>The Murch has 160M, the Johnson no (unless I were to modify
>it).
>
>I may have two antenna options, one coax, the other balanced
>line, maybe I should use both tuners and add switching. (The
>Murch does not have a built in antenna switch, the switch it
>has is either "in", "out", Dummy Load, or Grounded.)
>
>
>Bill K6TAJ

Hello Bill,

I used a murch Tuner for many years , it's a fine tuner and will work well for you.. the Reason most people give for using the Johnson over a T- Network like the Murch is that the Johnson is a true Link coupled Balanced line tuner and is a bit more effecent and give better balanced output to the fed line.. I had the murch 2000a which did not include 160M but on 80-- through 10m it workd fine with my horizontal loop and windham antenna.. Use it and enjoy.
73 Dave

1650. Re: Does this Shorty Forty Antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 10:34:14 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c6ta36$f9q$1@sparta.btinternet.com>
Source record: 95801

> Hello, has anyone built this antenna and if so does it work well? I'd
like
> to try it as an short vertical dipole. Any thoughts? 73
>
==========

For design, including the loading coil, of short, center-loaded antennas,
download program MIDLOAD from website below. Coax or twin-line feeder
option.

.....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
.....

1651. Re: Does this Shorty Forty Antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 11:52:43 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40923E0B.6FC167F4@cwis.net>
Source record: 95802

Alex,
Will any shortened antenna work as well as a 'full sized'
one? Not really, but it sort of depends on how much it's
'shortened' too.
Would this "shortened" doublet work well as a vertical
'dipole'? Probably as well as any 1/4 wave vertical with
the usual ground system (the 1/4 wave would be slightly
shorter, though).
Is this antenna worth building? I think any antenna is
worth building/trying if you like 'playing' with antennas.
Is it 'as good' as a 'real live' 40 meter dipole? Not really,
but then that depends on your circumstances. If you don't
have the room to put up a 'real live' 40 meter dipole, it'll
probably 'work' very well for you (anything's better than
nothing, right?)...
'Doc

1652. Re: Murch Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 11:58:19 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40923F5B.81554DDA@cwis.net>
Source record: 95803

Bill,
I've used both (not on 160 meters, though). For the
other bands, I really couldn't rell any great difference.
If it were my choice, I'd modify the 'Johnson' for 160.
It isn't that difficult, and I just like the 'Johnson'...
'Doc

1653. Re: Murch Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 12:43:12 UTC
From: mxduffie@axtxom.net
Message-ID: <45i490t1hchu1i7cpub5ppm7r8l6ochhtm@4ax.com>
Source record: 95805

On Fri, 30 Apr 2004 04:30:38 GMT, zeno <zeno@sonic.net> wrote:

> Anyone have any experience or know anything about the Murch
> UT2000B transmatch. I ended up with one of these in a
> (retired) lot that I aquired. Says it works 10-160 meters.
> Power rating 2KW PEP. Takes coax or balanced line. Seems like
> it is pretty good, it has a rolling inductor.

I liked my Murch, but eventually got rid of it because I wanted a
built-in switch. I don't know if I had the A or B, but I don't think it
had 160. If I remember right, that was one of the reasons for buying
something else when I could afford it.

I would be careful running power above 20m with it. The losses on 10m
were such that I lost quite a bit of power through it and wouldn't use
it. It was a great beginner tuner in the roller-coil class and I'm
certainly not sorry I owned one.

gm
--
Replace x in adr with c

1654. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 12:45:12 UTC
From: Alexandr Nikolaievitj Onym <a.n.onym@nowhere.tk>
Message-ID: <40924A58.936EBE34@nowhere.tk>
Source record: 95804

Also the EH antenna have to follow the laws of nature. The laws of nature is
inthing You can disobey, and get a few Years of prison. It is simply impossible!

So, the EH antenna does not work according the way the inventors claim.
Of course, it radiates. But:

The main radiating element of a "good" EH antenna system is the feeder (koax)
shield. Not the antenna itself.

So, if You have a short feeder, the antenna will radiate very poor (however, it
of
course radiates). And the EH antenna is NOT CHEAP!.

There are some other types og antennas:

1) The Isotron antenna, which is a Q-tank, thus radiates poorly as well,
but the inventors to my knowledge does not make any un-scientifical claims.
You can work some stations with it, it might be a "salvation" if You are
real eager to get on 160, and does not want to do a massive work Yorself.

2) The magloop, an interesting but complex way to make a small antenna.
It WORKS, efficiency is not good, but amazing results can be achieved!

3) DCTL, in fact a magloop, but is NOT recommended for 160.

4) A dipole made of 2 commercially bought mobile whips including coils:
Works, efficiency is not good.

5) A mobile whip.
It is small, and a built in small coil with low Q. Not my kind of tea.

6) Ultra-shortened ground plane aka monopole. A capacitive antenna, which can
be used, if You have good nerves (HIGH VOLTAGE!) and a variometer. Look
what the european 136kHz (LW) hams are achieving! I would recomment this type!
(of COURSE low efficiency, but one can use hi-Q coils, which outperforms
other set-ups)

No type is GOOD for 160m if You have resticted space...

Tyas_MT wrote:

> There's something called an EH-antenna... despite many claims it is not a
> wonder antenna, but it does get you on the air... it's not a substitute for
> a dipole or beam though (I saw a 160m 2 element quad.. that was a monster,
> but I digress).
>
> www.eh-antenna.com
>

> Somewhere I saw someone's test of one at some low band... 80 or 160m I
> forget which... It was pretty good sized, but tiny compared to say, a
> dipole. 2-3' in diameter, looked to be about 10-15' tall. no real good
> 'scale' photos.
>
> I have seen a couple of 'how to build' articles on the web, but don't have
> them handy I'm afraid.
>
> Unfortunately nothing is going to work really well... given your space
> limitations. I'd go for as much of a vertical as I could, and run ground
> radials in the garden, or maybe a <ehem> 'long' wire run around two sides of
> the property maybe?
>
> --
>
> "M3" <***> wrote in message news:4081ab53.0@entanet...
> > Hi,
> >
> > Any designs for a small antenna to work on 160M? My garden is approx 40ft
> x
> > 17ft.
> >
> > Post links here.
> >
> > Thanks.
> >
> >
> >

1655. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 14:11:36 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <s8tkc.136$Hs1.116@newsread2.news.pas.earthlink.net>
Source record: 95806

Hi, Tom -

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0404291746.41bae668@posting.google.com...
> "The other John Smith" <jocjo-john@yooha.com> wrote in message
news:<5Fdkc.17587$e4.10313@newsread2.news.pas.earthlink.net>...
> > "Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
> > news:c6rblh$qo6$1@newshost.mot.com...
> >...
> >
> > > It sure seems to me that the Zero angle 50 ohm load must be a bad
> > > assumption. The 50 could be anywhere angle-wise and is the hardest to
> > > measure since the reflected is so small...
> >
> >
> > Channel B (the channel measuring the reflected signal and its angle) is
100
> > uV full scale at its most sensitive setting. I don't think it is a
problem.
>
> It's not so much a matter of being able to read a value as it is that
> the value could be just about anything. Consider if your bridge is
> calibrated exactly for 50 ohms, and your calibration resistor is 50.01
> ohms...then you get a 180 degree phase angle. But if your resistor is
> 49.99 ohms, you get a 0 degree angle. And if you put in some little
> tiny bit of reactance because of stray inductance and stray
> capacitance, the value could easily be at any angle around your
> coupler's 50 ohm reference.
>
> But if you put a SHORT at the calibration point (maybe out at the end
> of a transmission line), you KNOW it's zero degrees, plus only a tiny
> amount to account for stray series inductance.
>
> It's a lot easier to measure an angle at a large distance from a point
> than right up next to the point. If you have a thousandth of an inch
> measurement tolerance in any direction, you won't have much confidence
> in an angle measured half a thousandth from the center point. But if
> you are an inch away from the center point, a thousandth of an inch
> error is a milliradian, about 0.06 degrees.
>
> It seems to me that it's well worth taking advantage of that phase
> measurement capability, because knowing the phase angle of a load, at
> the load, will tell you a whole lot more about how to match to it than
> just the amplitude info.

>
> >
> > > Wouldn't it be "better" to use a
> > > short (of course I'm looking at a couple of Narda shorts at my
operating
> > > position every night) for a primary 180 degree reference (the open
being
> > > "harder" to obtain)?
> > >
> > >
> > > I don't know. My assumption is that a purely resistive 50 Ohm load used
as a
> > > reference to set the instrument zero is valid. I'm only looking for the
> > > relation of an unknown to the 50 Ohm load.
> > >
> > >
> > > > I think you mentioned using several other loads as well
> > > > (parallel 50s=25, etc). I would use several different loads like this
to
> > > > "measure" to see how the measurements look compared to expected
(cal-kit
> > > > style). I'd measure opens, shorts and several other mismatches to
make
> > > sure
> > > > all available "knows" looks close, then proceed.
> > > >
> > > >
> > > > I can and probably will do that. Out of curiosity if nothing else. If it
all
> > > produces expected results, it will increase my confidence that I am
going
> > > about this correctly.
> > > >
> > > >
> > > > > I'd also pad the Tx output. Long lengths of miniature coax in lew
of
> > > > > actual power attenuators.
> > > > > OOPS! gotta re-boot, 73
> > > > >
> > > > > --
> > > > > Steve N, K,9;d, c. i My email has no u's.
> > > >
> > > >
> > > > I might be inclined to trust an attenuator before the miniature
transmission
> > > line. The books tell me that the transmission lines can get a little
> > > reactive at the higher frequencies because they begin to move from TE1
to
> > > another mode. In any case, I think I can adjust my generator to an
output

> > sufficiently low so that an attenuator will not be necessary.
>
> FWIW, I've fairly recently experimented with some home-made 50 ohm
> loads that are pretty good out to 1GHz and beyond. They consist of an
> SMA jack of the sort that mounts in five holes in a PC board, and 2
> 100 ohm 0805 SMT 1% resistors. I cut the center pin off so it sticks
> up only the height of the resistors (or so, not terribly critical),
> and solder a resistor from the center pin to the shell/ground on
> either side, so the resistors lie on a single diameter through the
> center pin. The symmetry makes for quite a nice and inexpensive load.
> I seriously doubt for anything you will be doing that you'll need any
> better, out to at least 1GHz.
>
> The SMT attenuators such as DigiKey P11103CT, etc., are a cheap way to
> get low power attenuators which are reasonably flat up to at least a
> few hundred MHz. I've been using some similar parts from EMC
> Technology, http://www.emct.com/, that can handle 2 watts and are
> pretty flat out to several GHz. But you may have trouble getting
> them, and they are not so cheap.
>
> Indeed, besides the problems of transmission lines' impdeances
> changing with frequency, there's a more serious problem for precision
> work finding lines that are the impedance you want. That is, a "50
> ohm" line might well be anywhere between 45 ohms and 55 ohms, and may
> have small fluctuations in impedance along its length. You can get
> more accurate lines, but you will pay serious money for new flexible
> lines guaranteed to be within an ohm or less of 50--and I wouldn't
> trust a used one! But the nice thing is that you can calibrate out
> the line effects anyway, for measurements at the end of a piece of
> line. There's usually not much of an issue about the system being
> nonlinear, at least. (Certain things we do don't allow the luxury of
> calibrating at the ends of the lines, so I've become familiar with
> 1-meter-long lines that cost several hundred dollars. I was shocked
> at first, but have become numb about that. ;-)
>
> Cheers,
> Tom

I will try to understand this and apply it accordingly. Thanks for your
help.

John

1656. Re: Murch Antenna Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 14:53:20 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <ALtkc.3778$AV4.106891@attbi_s04>
Source record: 95807

I have a Murch 2000A sitting about 12 inches from this location and
right on top of my AL-80B linear amplifier. I run 1200 watts CW though it.

It is a great tuner! Have used it for over 30 years and I WILL NOT
replace it!

But, it is intended for coax or end fed long wires, not for balanced
lines. I have used it with an old B&W air balun to match 600 ohm open
wire feeders.

Deacon Dave, W1MCE

zeno wrote:

> Anyone have any experience or know anything about the Murch
> UT2000B transmatch. I ended up with one of these in a
> (retired) lot that I aquired. Says it works 10-160 meters.
> Power rating 2KW PEP. Takes coax or balanced line. Seems like
> it is pretty good, it has a rolling inductor.
>
> I was advised to use my 250W Johnson Matchbox rather than the
> Murch for feeding my balanced line fed loop. I was planning
> to eventually use a 4 tube 811A type linear amp (like the
> 30L-1).
>
> Why would someone advise against the Murch in favor of the
> Johnson for the balanced line?
>
>
> The Murch has 160M, the Johnson no (unless I were to modify
> it).
>
> I may have two antenna options, one coax, the other balanced
> line, maybe I should use both tuners and add switching. (The
> Murch does not have a built in antenna switch, the switch it
> has is either "in", "out", Dummy Load, or Grounded.)
>
>
> Bill K6TAJ
>

1657. Re: Does this Shorty Forty Antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 14:54:25 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <BMtkc.4346$ts3.249979@attbi_s02>
Source record: 95808

It's been around for a long time. It is even included in the ARRL
Antenna Book.

Alex wrote:

> http://www.flashwebhost.com/circuit/shortant.php
>
> Hello, has anyone built this antenna and if so does it work well? I'd like
> to try it as an short vertical dipole. Any thoughts? 73
>
>

1658. Re: Does this Shorty Forty Antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 14:54:43 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c6tpbj$b3p$1@sparta.btinternet.com>
Source record: 95809

"'Doc" <w5lz@cwis.net> wrote in message news:40923E0B.6FC167F4@cwis.net...
> Alex,
> Will any shortened antenna work as well as a 'full sized'
> one? Not really, but it sort of depends on how much it's
> 'shortened' too.
> Would this "shortened" doublet work well as a vertical
> 'dipole'? Probably as well as any 1/4 wave vertical with
> the usual ground system (the 1/4 wave would be slightly
> shorter, though).
> Is this antenna worth building? I think any antenna is
> worth building/trying if you like 'playing' with antennas.
> Is it 'as good' as a 'real live' 40 meter dipole? Not really,
> but then that depends on your circumstances. If you don't
> have the room to put up a 'real live' 40 meter dipole, it'll
> probably 'work' very well for you (anything's better than
> nothing, right?)...
> 'Doc
==========

Open-ended questions like this are quite in order. Doc, I like your way of responding to them. Valuable when very often when no other replies are offered.

In this particular case a relatively low, vertical, 40 meter doublet, only 12 feet long, would be not much more than one S-unit down on a full size antenna. Just about noticeable. Whereas a high, full-size, 40m vertical dipole would be out of the construction range of the ordinary amateur.

It is amusing to hear about relative antenna gains of 0.1 dB and better in the presence of 10 dB readable flutters and fades.

Reg, G4FGQ

1659. Re: 160M antenna for a very small garden?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 16:01:59 UTC
From: richardharrison@webtv.net
Message-ID: <4132-40927877-59@storefull-3253.bay.webtv.net>
Source record: 95810

M3 wrote:
"Any designs for a small antenna to work on 160M ?"

Small antennas are inefficient.

Medium wave broadcast stations have operated from small plots with some satisfaction. They once commonly operated from building tops in the middle of the city.

Building top antenna systems were most often short verticals worked against a ground plane. The broadcaster only wanted vertically polarized radiation, radiated at an extremely low angle.

DXers want low-angle radiation too, but not 0-degree radiation. A horizontal wire must be 1/2-wave high for low-angle radiation; more if conductivity is good under the antenna.

The shortest vertical antenna with a groundplane has a null in its radiation pattern directly overhead but most radiation is at low angles.

The efficiency of a vertical antenna over real earth is bad without an excellent ground system. U.S. medium-wave broadcasters approach 100% efficiency using 1/4-wave towers and 120 radials near the earth`s surface. As antenna efficiency is: radiation resistance divided by the sum of radiation resistance plus loss resistance, the short vertical antenna (whip) has a low radiation resistance and poor efficiency. The efficiency formula has a small numerator, thus a small quotient.

As most mobile operators have found, the short vertical antenna is not the best choice. It is the only choice for an extremely restricted space.

How can the best use be made of a small garden space? Jerry Sevick, W2FMI is pictured adjusting his 6-foot high 40-meter vertical on page 6-24 of my 19th edition of the ARRL Antenna Book. There are several other options in chapter 6 of the "Antenna Book". Get it or a similar book and study applicabilities to your situation.

Antennas scale to most wavelengths.

Best regards, Richard Harrison, KB5WZI

1660. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 16:48:48 UTC
From: Jim Higgins <me7@privacy.net>
Message-ID: <b90590du4s4cmja636kmhsvhnoocf5lfcr@4ax.com>
Source record: 95811

On Thu, 29 Apr 2004 20:09:29 -0400, in
<5c539091t2ebcdurorooq3o63ps0moea2m@4ax.com>, Ron
<rc@roncrowley.dot.com> wrote:

>Hustler says the 6BTV will work OK without radials as long as the
>ground is not dry. The salesman said so also. So I bought it.
>
>I was delayed in installing it because of a nesting Red Shouldered
>Hawk that I refuse to disturb.
>
>Meanwhile, I am reading articles online that indicate that the 6BTV
>might work very poorly without radials even with a low VSWR.
>
>I will have a nasty time installing radials where I want to put it.
>
>Anyone have any experience in that regard?

I've had a 5BTV, ground mounted, various types of soil, for over
25 years. On the principle that "anything works," it does "work"
without radials, but not very well, and especially in dry or
sandy soil. The addition of as few as four radials makes a
significant improvement. My radials are buried 2 - 3 inches.

--
Jim Higgins, KB3PU

Help for prospective and new hams, see:
http://groups.yahoo.com/group/HAM-ELMER
Elmers also welcome

1661. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 16:56:40 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <ovt4901i15cr3a3rtb8r6tqmaqo1sjht8m@4ax.com>
Source record: 95812

On Wed, 28 Apr 2004 22:18:19 GMT, "The other John Smith"
<jocjo-john@yooha.com> wrote:

|I now have an HP 8405A Vector Voltmeter. I also have a Narda dual
|directional coupler. Here is how I plan to set up and measure things at
|about 440 MHz (antennas, etc) so I can determine their impedance (view in
|fixed-width font):
|
[snip]

You need a copy of HP app note 77-3.

1662. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 17:05:01 UTC
From: Jim Higgins <me7@privacy.net>
Message-ID: <4g1590l588mm3hdh10gnlcc3vd3shoecmo@4ax.com>
Source record: 95814

On 29 Apr 2004 15:10:00 -0700, in
<50cbda94.0404291410.6959999c@posting.google.com>,
basketball_jones@hotmail.com (basketball_jones) wrote:

>fractenna@aol.com (Fractenna) wrote in message
news:<20040429144441.28729.00000574@mb-m28.aol.com>...
>> >My name is Kevin, Mr. Fractenna. The reason I don't call the reps is
>> >because I am not nearly as interested in the numbers they tell me as I
>> >am in the numbers that folks have already negotiated. In this way
>> >when I eventually call them I have an idea of how much I am getting
>> >ripped off. Last time I called a rep he wanted me to pay 60 cents for
>> >a nickel part. So how much I am overpaying is the answer I am after.
>> >
>> >You indicate that you are aware of less expensive alternatives to
>> >4003. Would you kindly let me know what those are. Are we talking
>> >materials other than FR408? BTW the frequency is in the 3-4GHz band,
>> >so loss tangent and other stuff only somewhat matters. There is a
>> >price/efficiency tradeoff in play. I would like to 'see the whole
>> >field' before I decide which way to run.
>> >
>> >Thanks.
>> >Kevin Smith
>> >
>> ...and that's exactly why you need the reps in.
>>
>> We do thousands of square feet of PCB a year, and we never had to use a
>> newsgroup to figure out a good price, or ask anyone in the way you suggest.
>> Call the reps. If you want to play games, then you can invite them over on the
>> same day and ask for their best price.
>>
>> The substrate houses are eager for business and you owe it to good
>> vendor-customer relationships to play it straight. That's my opinion. But hey,
>> what do I know:-)?
>>
>> BTW, putting FR4 and 4003 in the same sentence indicates you may really need
>> the vendors to fill you in: No one uses FR4 efficiently at those freqs--lousy
>> loss tangent. OTH, I, personally, do not choose 4003 much due to cost, save
>> for very specific high margin needs. But others, of course, may choose these
>> great product according to their needs.
>>
>> 73,
>> Chip N1IR
>
>Mr. Fractenna you call it games, everyone else calls it business and

>the reps are playing. Are you SURE you are getting the best price for
>those thousands of square feet? What if you could knock it down by a
>penny/sq in? What better place than a forum like this to figure out
>what the right price is?
>
>BTW I know the differences between FR4 and 4003 properties. I don't
>know the difference in cost so I only have half the equation (if you
>look above, I told you that there is a cost/efficiency tradoff in
>place for my application).
>
>BTW You have NOT answered one question I asked so far. It would be
>helpful if you either answered the questions or stopped wasting my
>time. You, my friend are the one that's playing games.

Is there anyone left who cares?

--
Jim Higgins, KB3PU

Help for prospective and new hams, see:
http://groups.yahoo.com/group/HAM-ELMER
Elmers also welcome

1663. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 17:13:18 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <4092892E.81E9AC51@uci.edu>
Source record: 95813

Dummy wrote:
> The antenna was pointing to any angle and direction randomly while
> transmitting. One strange behaviour observed. The spurs could only be
> seen at certain angles of transmission only.
>
> Spurs at 32khz and 62khz away from carrier would cause an interference
> at adjacent frequencies. A simple test was being carried out. Two
> radios. First radio had 502.025MHz as Tx and Rx frequency. While
> second radio had 502.057MHz as Tx and Rx frequency. Transmitting at
> 502.025MHz would cause a interference on second radio, in which we
> could hypothesize that spurs at 32kHz away was too high in amplitude
> and thus causing interference to other frequency. So, the spurs were
> real! It wasn't some kind of 'illusions' produced by spectrum
> analyzer. I guess this is highly undesirable.
>
> Besides, I'm sure those spurs weren't produced by radio internal
> circuit as I couldn't see any spurs if radios were being transmitted
> into spectrum analyzer directly using 50 Ohm coaxial RF cable. Even
> with 4:1 and 8:1 VSWR load, there's no existence of spurs. Could the
> antenna's match worse than VSWR 8:1? Perhaps the spurs were part of
> the intrinsic characteristic of any antennas?
>
> Maybe the culprit was TV transmitter nearby. I have yet to look into
> that. Another test that can be done is to do transmission in a sealed,
> interference-free room. If spurs still could be seen, I would say it's
> the antenna's imperfection that produced the spurs. If spurs gone,
> it's a good news that the spurs were coming from outer space, Mars
> maybe.
>
> I would be grateful if somebody could check this out on few radios to
> see if this problem exists.

Could it be you're just expecting a little more from your IF filters
than they can realistically eliminate?

73, AC6XG

1664. NEC2 and J-pole?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 17:52:08 UTC
From: David Winfrey <nospam@nospam.ever.net>
Message-ID: <10954i845cjuf32@corp.supernews.com>
Source record: 95815

Does anyone have a working NEC-2 deck for a 2m or 70cm J-pole?
I suspect it'll turn out to involve a dipole, a transmission
line, and an inductive stub all added together, which is
beyond my present level of NEC expertise.

Thanks,
David Winfrey, KB3ICR
d l w at patriot dot net

1665. newbie question, grounding

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 19:00:42 UTC
From: joe <radioham@nospam.com>
Message-ID: <10958j0hohko8ea@corp.supernews.com>
Source record: 95816

I am thinking of buying a beam antenna for HF.
I have been told that some antennas have earthing straps and some dont.

The antenna I have seen is a tribander with traps for 10-15-20. It has no earthing strap on.
If I were to put an earthing strap on to the braid side first to the pole then earth the pole.

Will this A, give me protection against lightning and B, improve signals recieved.
Will there be any other effect. ie: swr etc.

I understand the middle element is a driven element, with an insulator on and there is a director and reflector.

sorry if its a stupid question !!!

1666. Re: OT: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 19:14:18 UTC
From: richardharrison@webtv.net
Message-ID: <6172-4092A58A-68@storefull-3255.bay.webtv.net>
Source record: 95818

Irv Finkleman wrote:
"Excellent suggestion."

Thank you Irv. It`s been tried and it worked.

Someone at headquarters where I worked long ago shipped us (10) new Gates FM brooadcast transmitters, (10) monitor receivers, and a bunch of corner reflector antennas along with rolls of Heliax, and said: Here, use this for STL (Studio to Transmitter Linkage). This was a seasonal hazard. The organization pinched pennys all year to make the budget last, then splurged on anything in sight to exhaust the budget at yearend so that next year`s budget wouldn`t be cut.

We installed the new equipment alongside the old 450 MHz STL equipment (this wasn`t in the U.S.A.). The FM monitor receivers were in the middle of the shortwave broadcast plant, at the time this was arguably the largest plant of its kind in the world.

Harmonics of the shortwave broadcasts were no problem at 450 MHz, but they obliterated our new STL.

So, the FM portable was our salvation. We found a spot several hundred yards from our transmitter building where the FM-band signals could be received with negligible interference from our broadcasts. We built an STL receiver site there and cabled the programs to our transmitter control room. The back sides of our corner reflectors were facing the transmitter building of course.

Best regards, Richard Harrison, KB5WZI

1667. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 19:17:47 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <c6u8h0$4o0$1@news.oregonstate.edu>
Source record: 95817

basketball_jones <basketball_jones@hotmail.com> wrote:
> BTW You have NOT answered one question I asked so far. It would be
> helpful if you either answered the questions or stopped wasting my
> time.

It's a little ironic that you're trying to save a penny or two on your design and think that bitching about free advice is somehow going to help you achieve that goal...

Look, call up a dozen or so vendors and get some price quotes -- it'll give you some idea of what a 'reasonable' price should be. Figure out what you can charge for your product... if there's enough money left for you to make profit, just go for it and leave the rest of your learning/profit maximization until you actually have an income stream and some track record of the difficulties in building your products.

Anyone worrying about $.01/sq. in. either has such a huge volume that they should be able to afford an expect to get the best prices and redesign the product (this oftens makes a huge difference!) specifically to be easy to manufacture or else is probably never going to get their product out the door in the first place. I've seen many people who seemed to have viable product ideas never get anywhere because they spent far too much time worrying about how to squeeze the last penny out of manufacturing costs and ran out of enthusiasm to simply design and document the product properly.

---Joel Kolstad

1668. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 20:47:40 UTC
From: richardharrison@webtv.net
Message-ID: <14214-4092BB6C-28@storefull-3254.bay.webtv.net>
Source record: 95719

Dummy wrote:
"One wide-band antenna was hooked up on a spectrum analyzer."

Years ago, from time to time, I`d hear the sheriff`s dispatcher in the background, and sometimes TV Channel 8 audio, when monitoring a certain 2-meter amateur repeater. It stopped when the Sheriff changed frequencies.

Turns out the difference between the sheriff and Channel 8 frequencies matched the IF of my Icom radio. When the repeater opened my squelch, there the other signals were.

In 1949 I used to turn on the Mighty 790 here before 5:00 a.m. when we signed on back then.

From my monitor loudspeaker I could hear KTRH, the 50 KW station about 15 miles away which was already broadcasting. The tiny 740 KHz signal was mixing with the carrier in my final and being rebroadcast. Now both stations are owned by Clear Channel so it would make no difference. It made no difference then either because the 740 KHz signal on the 790 KHz signal was more than 50 dB down. That`s under the FCC requirement at the time.

I think the spectrum analyzer antenna is clean and the "spur" is a simple mixing product.

Best regards, Richard Harrison, KB5WZi

1669. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 20:59:12 UTC
From: Larry Moss <larrymoss@citcom.net>
Message-ID: <c6ueo4$8ohb$1@news3.infoave.net>
Source record: 95720

Radials will improve the efficiency the more you have the better the improvement to a certain point of about 120 radials. After that not worth the effort.

"Jim Higgins" <me7@privacy.net> wrote in message news:b90590du4s4cmja636kmhsvhnoocf5lfcr@4ax.com...
> On Thu, 29 Apr 2004 20:09:29 -0400, in
> <5c539091t2ebcdurorooq3o63ps0moea2m@4ax.com>, Ron
> <rc@roncrowley.dot.com> wrote:
>
> >Hustler says the 6BTV will work OK without radials as long as the
> >ground is not dry. The salesman said so also. So I bought it.
> >
> >I was delayed in installing it because of a nesting Red Shouldered
> >Hawk that I refuse to disturb.
> >
> >Meanwhile, I am reading articles online that indicate that the 6BTV
> >might work very poorly without radials even with a low VSWR.
> >
> >I will have a nasty time installing radials where I want to put it.
> >
> >Anyone have any experience in that regard?
>
> I've had a 5BTV, ground mounted, various types of soil, for over
> 25 years. On the principle that "anything works," it does "work"
> without radials, but not very well, and especially in dry or
> sandy soil. The addition of as few as four radials makes a
> significant improvement. My radials are buried 2 - 3 inches.
>
> --
> Jim Higgins, KB3PU
>
> Help for prospective and new hams, see:
> http://groups.yahoo.com/group/HAM-ELMER
> Elmers also welcome

1670. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 21:15:29 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <nU2dnR8yTtdkXA_dUSdV9g@ptd.net>
Source record: 95721

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:Iihkc.957$NI6.193027@attbi_s01...
> Ron wrote:
>
> > Hustler says the 6BTV will work OK without radials as long as the
> > ground is not dry. The salesman said so also. So I bought it.
>
> You were oversold! It really needs a radial system for decent
> operation. It will work ... but ...

I agree ... I have a 5BTV and it worked well with radials (I only had 2 each, temporary, cut to 1/4 wave at each band, but I pulled them up when I ran the coax in an underground PVC conduit, rather than just laying on the ground and haven't put radials back yet - and it doesn't work worth a damn.)

I intend to mow the grass VERY short and place a significant (64 or so radials of 1/4 wave at 40m) in place with wire "staples" made from coat hanger wire, and then let the grass grow over them (the "staples will keep the radials down until the grass grows over them, eliminating the problem of the mower snagging them).

From my experience, ground mount works well - as long as you have a radial system (more is better, but even a pair per band helps a LOT).

73,
Carl - wk3c

1671. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 21:41:06 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6uh5l0u0h@enews4.newsguy.com>
Source record: 95722

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:ovt4901i15cr3a3rtb8r6tqmaqo1sjht8m@4ax.com...
> On Wed, 28 Apr 2004 22:18:19 GMT, "The other John Smith"
> <jocjo-john@yooha.com> wrote:
>
> |I now have an HP 8405A Vector Voltmeter. I also have a Narda dual
> |directional coupler. Here is how I plan to set up and measure things at
> |about 440 MHz (antennas, etc) so I can determine their impedance (view in
> |fixed-width font):
> |
> [snip]
>
>
> You need a copy of HP app note 77-3.

Yes, I do.

1672. Re: newbie question, grounding

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 22:21:36 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <RjAkc.24533$NZ4.22750@lakeread05>
Source record: 95723

"joe" wrote in message news:10958j0hohko8ea@corp.supernews.com...
> I am thinking of buying a beam antenna for HF.
> I have been told that some antennas have earthing straps and some dont.
>
> The antenna I have seen is a tribander with traps for 10-15-20. It has no
> earthing strap on.
> If I were to put an earthing strap on to the braid side first to the pole
> then earth the pole.
>
> Will this A, give me protection against lightning and B, improve signals
> recieved.
> Will there be any other effect. ie: swr etc.
>
> I understand the middle element is a driven element, with an insulator on
> and there is a director and reflector.

Hi Joe,

So many folks in this group were of incredible help to me in learning about lightning protection, I hope you find similar assistance.

There is no example I am aware of where an antenna of a fixed-land facility can avoid an earth ground and still obtain it's design efficiency _or_ be safely attached to any structure. Grounding is vital to both. From the help and discussions that started here, I prepared a collection of information that turned into a web site for station grounding (one of hundreds out there). But here it is if it will help you, I'm happy.
http://members.cox.net/pc-usa/ground1.htm

73's

Jack
Virginia Beach VA

1673. Re: grounding URL correction

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 22:29:55 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <DrAkc.24534$NZ4.3100@lakeread05>
Source record: 95724

Sorry for the error in URL, it s/b:

http://members.cox.net/pc-usa/station/ground1.htm

Jack

> So many folks in this group were of incredible help to me in learning
about
> lightning protection, I hope you find similar assistance.
>
> There is no example I am aware of where an antenna of a fixed-land
facility
> can avoid an earth ground and still obtain it's design efficiency _or_ be
> safely attached to any structure. Grounding is vital to both. From the
help
> and discussions that started here, I prepared a collection of information
> that turned into a web site for station grounding (one of hundreds out
> there). But here it is if it will help you, I'm happy.
> ://members.cox.net/pc-usa/ground1>
> 73's
>
> Jack
> Virginia Beach VA
>
>

1674. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-04-30 22:35:11 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <k0l590tovofd9j1025hr1i76gajn8und1k@4ax.com>
Source record: 95725

On Fri, 30 Apr 2004 16:41:06 -0500, "John" <jocjo_john@yooha.com>
wrote:

|
|"Wes Stewart" <n7ws@_arrl.net> wrote in message
|news:ovt4901i15cr3a3rtb8r6tqmaqo1sjht8m@4ax.com...
|> On Wed, 28 Apr 2004 22:18:19 GMT, "The other John Smith"
|> <jocjo-john@yooha.com> wrote:
|>
|> |I now have an HP 8405A Vector Voltmeter. I also have a Narda dual
|> |directional coupler. Here is how I plan to set up and measure things at
|> |about 440 MHz (antennas, etc) so I can determine their impedance (view in
|> |fixed-width font):
|> |
|> [snip]
|>
|>
|> You need a copy of HP app note 77-3.
|
|
|Yes, I do.

I figured you might. I scanned it into pdf, but to get decent quality
the file is huge and I only have dialup service at about 26 kB.
(Where is that BPL [g])

I'll put it on my web site later when I have a couple of hours free if
you want it.

Wes

|

1675. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 00:47:46 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <oip590dmupoms3ahsdeoiq207h2igedroc@4ax.com>
Source record: 95726

On Thu, 29 Apr 2004 20:09:29 -0400, Ron <rc@roncrowley.dot.com> wrote:

Thanks to everyone who responded to my post. It looks like the general consensus is to add radials if I want it to work. I suspected that all along but I got talked into it. Dipoles have always worked great for me.

So, now I'm toying with the idea of mounting it on the roof. The back half of the roof has only a 3" pitch, so it's easy to work on. There are lots of trees around to tie the radials to.

I think I will do some experimentation with adding traps in the radial lines. Maybe I can make 6 band radials. Would that work?

I have some time to think about it. The Red Shouldered Hawk's incubation lasts about 33 days and the young fledge in 39-45 days. She's been in the nest for about 14 days so it could be July! Then it might be too damn hot to work on the roof.

Of course, I consider her to be a guest of honor, things like that are major events for some of us :-)

Could be my tiny bit of North American aboriginal blood. My spirit bird is the Peregrine and my spirit name is "Whole in the Night Sky" (Micmac).

73's

Ron, W1WBV ~|:-)

1676. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 01:41:38 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <n1069096148bol3djrg7pt6lni5nbid1f3@4ax.com>
Source record: 95727

On Fri, 30 Apr 2004 15:35:11 -0700, Wes Stewart <n7ws@_arrl.net>
wrote:

||> You need a copy of HP app note 77-3.

http://www.qsl.net/n7ws/AN77-3.pdf

1677. Re: PCB Loop antenna using Ensemble Sv

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 01:47:38 UTC
From: Lance <lscarey@pclv.com>
Message-ID: <4lDkc.44751$Qy.15167@fed1read04>
Source record: 95728

Thanks for the info.
I does seem that you can remove the gnd layer or at least define it as air.
I have ran several models copied from know sources and compared the results
to the original. The results do match.
Thanks one more time.
lance

"Mark" <spam@spam.com> wrote in message
news:408ddc9d.29586250@news.east.cox.net...
> On Sun, 25 Apr 2004 13:11:12 -0700, "Lance" <lscarey@pclv.com> wrote:
>
> >I looking to layout a loop or spiral antenna using ensemble sv.
> >Has anybody done this? I have completed some designs with the software
based
> >on some application notes. My problem is I having difficulty matching 50
ohm
> >impedance and a VSWR of less than 1.5.
> >If someone has done this I would appreciate some advice.
> >Thanks
> >
> >
>
> Closed loops in Ensemble are interpreted as solid areas. You would
> need to define an air layer to remove the "middle" of the loop. I'm
> not sure you can do this with the SV version because the number of
> layers is limited. You may want to try disabling the ground layer and
> drawing an object on the dielectric layer to see if you can "fool" the
> program into making this work.
>
> Ansoft shows examples in their literature of what's required to
> properly represent a microstrip quadrature hybrid network by drawing
> an air "object" in the middle of the hybrid.
>
> Spirals (that do not close on themselves) may simulate properly,
> assuming you have enough triangles to represent the design.
>
> Good luck.
>
> Mark
> Mark

1678. Re: Mercury as an antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 02:06:17 UTC
From: kashe@sonic.net
Message-ID: <pe169054o9jcjhh61ks4pfd6ovh08160b2@4ax.com>
Source record: 95729

On Thu, 29 Apr 2004 11:29:43 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>kashe@sonic.net wrote:
>>
>> Would you care to cite where he specified any kind of
>> thermometer-equivalent? That's a complete red herring you dragged into
>> a conversation where the parameters were quite clear to all other
>> participants.
>
>The parameters? Admittedly, I did miss seeing them posted until later
>in the thread. I apologize that you found the phenomenological
>descriptions to be inciteful rather than insightful. I intended only
>the latter. It is my sincere hope that whoever it is will soon stop
>urinating in your soup and/or bunching-up your underpants.

Your last sentence grants you permission to stuff your
apology.

1679. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 02:45:26 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <jfmdnYfvcrqgkg7dRVn-jw@comcast.com>
Source record: 95730

"Dummy" <ahkit1021@yahoo.com> wrote in message
news:74bb84c0.0404291705.142d20c5@posting.google.com...
> Roy Lewallen <w7el@eznec.com> wrote in message
news:<1092fge1cdssua2@corp.supernews.com>...
> > More thoughts along the lines of John's comments, 32 kHz is about twice
> > the frequency of the horizontal line component of TV video. Do you have
> > any TV transmitters reasonably close by?
> >
> > I've had problems with detected video on a couple of occasions, getting
> > into audio circuits. After I redesigned the audio circuits to look more
> > like VHF/UHF circuits -- laid out, bypassed, and filtered for VHF/UHF --
> > the problems disappeared. A working hypothesis is that there's a strong
> > TV transmitter getting into your transmitter via the antenna and/or its
> > transmission line, then getting detected and modulating your
> > transmitter. In the case of my audio problems, the vertical scan
> > component was worse, resulting in a "hum" that varied with the picture
> > of the offending TV station. You might take a close look at the spurs
> > and see if they vary with a local station's picture.
> >
> > Roy Lewallen, W7EL
> >
> > John Smith wrote:
> > > Your spurs sound very strange, too close in 32 kHz, 62KHz, normally
they are
> > > further out several MHz if generated by the RF chain. That is like an
audio
> > > part/circuit getting into the transmit RF. Try rearranging or
twisting up
> > > the power cables to the radio.
> > > If spurs are low, not much power is there, so little damage to radio
> > > rts. -65dBc sounds good for a CB. The farther you look down the more
spurs
> > > there. The antenna could be reradiating RF power back onto circuit
> > > components, which could be a cause too.
>
> The antenna was pointing to any angle and direction randomly while
> transmitting. One strange behaviour observed. The spurs could only be
> seen at certain angles of transmission only.
>
> Spurs at 32khz and 62khz away from carrier would cause an interference
> at adjacent frequencies. A simple test was being carried out. Two
> radios. First radio had 502.025MHz as Tx and Rx frequency. While
> second radio had 502.057MHz as Tx and Rx frequency. Transmitting at
> 502.025MHz would cause a interference on second radio, in which we

> could hypothesize that spurs at 32kHz away was too high in amplitude
> and thus causing interference to other frequency. So, the spurs were
> real! It wasn't some kind of 'illusions' produced by spectrum
> analyzer. I guess this is highly undesirable.
>
> Besides, I'm sure those spurs weren't produced by radio internal
> circuit as I couldn't see any spurs if radios were being transmitted
> into spectrum analyzer directly using 50 Ohm coaxial RF cable. Even
> with 4:1 and 8:1 VSWR load, there's no existence of spurs. Could the
> antenna's match worse than VSWR 8:1? Perhaps the spurs were part of
> the intrinsic characteristic of any antennas?
>
> Maybe the culprit was TV transmitter nearby. I have yet to look into
> that. Another test that can be done is to do transmission in a sealed,
> interference-free room. If spurs still could be seen, I would say it's
> the antenna's imperfection that produced the spurs. If spurs gone,
> it's a good news that the spurs were coming from outer space, Mars
> maybe.
>
> I would be grateful if somebody could check this out on few radios to
> see if this problem exists.

I think somebody else mentioned this in passing, but it is worth considering whether RF is getting into the radio via the microphone cable, or whatever the driving source is. You say the spurs change when you rotate the antenna. Do they go away when the radio is at an antenna nul? Can you key the radio with the microphone unplugged? If not, have somebody look at the spectrum analyzer while somebody else is moving the mic cable around.

This might be grasping at straws, but worth copnsidering.

Tam/WB2TT

1680. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 02:54:49 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c6v3ht02lkg@enews3.newsguy.com>
Source record: 95731

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:k0l590tovofd9j1025hr1i76gajn8und1k@4ax.com...
> On Fri, 30 Apr 2004 16:41:06 -0500, "John" <jocjo_john@yooha.com>
> wrote:
> |Yes, I do.
>
> I figured you might. I scanned it into pdf, but to get decent quality
> the file is huge and I only have dialup service at about 26 kB.
> (Where is that BPL [g])
>
> I'll put it on my web site later when I have a couple of hours free if
> you want it.
>
> Wes

I see you have already put it there. I have the same type of service, but I
can let it download all night, if necessary. I'm off to get it.

Thank you profusely.

John

1681. UHF/VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 06:08:55 UTC
From: dan_hoffard@hailmail.net
Message-ID: <648fff84.0404302208.88db7a2@posting.google.com>
Source record: 95732

Kind of off topic, but I know someone in here can help me. I have a VHF/UHF TV antenna that is about a year old. I always got great reception with it, but now my VHF reception is horrible while my UHF reception is still good. Anyone have any ideas? I have tried replacing the cable and re-grounded the antenna but the problem remains. It seems to have been getting worse and worse over the last few months.

Thanks,
Dan
KE5BCC

1682. Re: newbie question, grounding

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 06:26:35 UTC
From: B Ghostrider <Barryufp@hotmail.com>
Message-ID: <gjg6901t9vf27bufdbk8n1d75im6g6a5e7@4ax.com>
Source record: 95733

GRASSHOPPER. THE ONLY STUPID QUESTIONS ARE THOSE THAT ARE NEVER ASKED.

73's

On Fri, 30 Apr 2004 20:00:42 +0100, "joe" <radioham@nospam.com> wrote:

>I am thinking of buying a beam antenna for HF.
>I have been told that some antennas have earthing straps and some dont.
>
>The antenna I have seen is a tribander with traps for 10-15-20. It has no
>earthing strap on.
>If I were to put an earthing strap on to the braid side first to the pole
>then earth the pole.
>
>Will this A, give me protection against lightning and B, improve signals
>recieved.
>Will there be any other effect. ie: swr etc.
>
>I understand the middle element is a driven element, with an insulator on
>and there is a director and reflector.
>
>sorry if its a stupid question !!!
>
>
>
>
>

1683. Re: newbie question, grounding

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 07:42:27 UTC
From: les <gm4jnw@hotmailnospam.com>
Message-ID: <1096l79o9erqs7e@corp.supernews.com>
Source record: 95734

Jack thats a great website for lightning protection. There is a lot there I hadnt thought about and it is most useful for me. Joe I have recently bought a secondhand hf antenna which didnt come with grounding straps either, cant answer your question but am listening with interest, because I have wondered that myself.
Its not a stupid question at all only a progression of your knowlege banks!!!
Im sure there are guys who have a lot of experience in this field here in the newsgroup and can tell us all about the benefits of grounding the braid or even if we should.
My antenna is a Cushcraft A3S which sounds similar to yours.

Les
GM4JNW

"joe" <radioham@nospam.com> wrote in message news:10958j0hohko8ea@corp.supernews.com...
> I am thinking of buying a beam antenna for HF.
> I have been told that some antennas have earthing straps and some dont.
>
> The antenna I have seen is a tribander with traps for 10-15-20. It has no
> earthing strap on.
> If I were to put an earthing strap on to the braid side first to the pole
> then earth the pole.
>
> Will this A, give me protection against lightning and B, improve signals
> recieved.
> Will there be any other effect. ie: swr etc.
>
> I understand the middle element is a driven element, with an insulator on
> and there is a director and reflector.
>
> sorry if its a stupid question !!!
>
>
>
>
>
>

1684. Re: UHF/VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 09:26:23 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <sXKkc.1339$KG2.2353@reggie.win.bright.net>
Source record: 95735

Have you visually inspected the antenna itself for either broken
elements or the phasing line that connects the coax to the antemma
elements. I would start there...

Scott
N0EDV

Dan wrote:
> Kind of off topic, but I know someone in here can help me. I have a
> VHF/UHF TV antenna that is about a year old. I always got great
> reception with it, but now my VHF reception is horrible while my UHF
> reception is still good. Anyone have any ideas? I have tried
> replacing the cable and re-grounded the antenna but the problem
> remains. It seems to have been getting worse and worse over the last
> few months.
>
> Thanks,
> Dan
> KE5BCC

1685. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 11:20:11 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <c9Kcnf0t7ICCFQ7dUSdV9g@ptd.net>
Source record: 95736

"Ron" <rc@roncrowley.dot.com> wrote in message
news:oip590dmupoms3ahsdeoiq207h2igedroc@4ax.com...
> On Thu, 29 Apr 2004 20:09:29 -0400, Ron <rc@roncrowley.dot.com> wrote:
>
> Thanks to everyone who responded to my post. It looks like the general
> consensus is to add radials if I want it to work. I suspected that all
> along but I got talked into it. Dipoles have always worked great for
> me.
>
> So, now I'm toying with the idea of mounting it on the roof. The back
> half of the roof has only a 3" pitch, so it's easy to work on. There
> are lots of trees around to tie the radials to.
>
> I think I will do some experimentation with adding traps in the radial
> lines. Maybe I can make 6 band radials. Would that work?

It's not strictly necessary that the radials be resonant on all bands to improve your situation ... I would bet that if you cut the radials to 33' you'll find a noticable improvement. As I said, I had only 2 per band (on the ground) and it worked much better than without any radials. More is better, of course, but in an aerial situation you'll be limited and I'd recommend you try four 33' radials and see how that works.

The idea is to provide an "image plane" for the monopole to "work against" and reduce ground losses ...

73,
Carl - wk3c

1686. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 12:16:25 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <c837909gefrvfhusn3a2sjevfo3kvlpe5e@4ax.com>
Source record: 95737

On Sat, 1 May 2004 11:20:11 -0000, "Carl R. Stevenson"
<wk3cqth@wk3c.com> wrote:

Thanks Carl.

I will try that first. 33' should work OK for 40, which is the band I
want most.

Right now the only HF antenna I have working is a 15m dipole. And, 15
has been very quiet here lately.

One of the posters suggested I read Butternut's blurb on radials:
http://www.bencher.com/pdfs/00361ZZV.pdf
I read it last night. It shows a tuned radial using twin lead. It has
a total length of 32' 8". That may be something to try also.

Thanks again . . . 73 . . ., Ron Crowley, W1WBV

>It's not strictly necessary that the radials be resonant on all bands to
>improve your situation ... I would bet that if you cut the radials to 33'
>you'll find a noticable improvement. As I said, I had only 2 per band (on
>the ground) and it worked much better than without any radials. More is
>better, of course, but in an aerial situation you'll be limited and I'd
>recommend you try four 33' radials and see how that works.
>
>The idea is to provide an "image plane" for the monopole to "work against"
>and reduce ground losses ...
>
>73,
>Carl - wk3c

1687. (Aluminum?) Sprinkler Pipe in Southern California

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 14:00:22 UTC
From: Shadow 998 <hrd998cc@nospam.yahoo.com>
Message-ID: <W3Okc.43405$vg1.12399@newssvr29.news.prodigy.com>
Source record: 95738

Hello all, I found this ad on an old tractor/farm classified ad section.
Size of pipe is not mentioned, but I think this stuff is normally 3" or so.
Could be a great (cheap) deal for a boom for your next HF beam.

Russ KG6TDX

Ad: "Sprinkler pipe: mostly 30 foot lengths, with Goodfarmer connections,
risers & heads, was used in '02, good condition, 100+ lengths, $10 each,
need to move it; Tom Barrett 760-378-2295 (Weldon CA)"

1688. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 14:00:57 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c70aiv02b3g@enews2.newsguy.com>
Source record: 95739

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:k0l590tovofd9j1025hr1i76gajn8und1k@4ax.com...
> wrote:
>
> I figured you might. I scanned it into pdf, but to get decent quality
> the file is huge and I only have dialup service at about 26 kB.
> (Where is that BPL [g])
>
> I'll put it on my web site later when I have a couple of hours free if
> you want it.
>
> Wes

Wes -

I got it. I read it. It did not occur to me that I must short the load to get the phase reference (although it should have). The paper clarifies lots of things for me.

I don't have a line stretcher (I though this was a joke when it was mentioned on this forum). However, it appears I can do without it if I recalibrate the phase offset for each change in frequency. I will probably be mostly interested in single-frequency measurements anyway.

After you mentioned it, I searched the Web for this app note and was unsuccessful. Thanks ever so much for making it available to me.

73,
John - KD5YI

1689. Re: (Aluminum?) Sprinkler Pipe in Southern California

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 15:03:26 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <2%Okc.67380$G_.51022@nwrddc02.gnilink.net>
Source record: 95740

"Shadow 998" <hrd998cc@nospam.yahoo.com> wrote in message
news:W3Okc.43405$vg1.12399@newssvr29.news.prodigy.com...
> Hello all, I found this ad on an old tractor/farm classified ad section.
> Size of pipe is not mentioned, but I think this stuff is normally 3" or
so.
> Could be a great (cheap) deal for a boom for your next HF beam.
>
> Russ KG6TDX
>
> Ad: "Sprinkler pipe: mostly 30 foot lengths, with Goodfarmer
connections,
> risers & heads, was used in '02, good condition, 100+ lengths, $10 each,
> need to move it; Tom Barrett 760-378-2295 (Weldon CA)"
>
>
>
>
Shadow

I made a free standing 40 meter vertical out of two pieces of that pipe in
1960. The stuff I used was only 20 ft long, but it was 4 inches diameter as
I remember.

You could fabricate a nice boom with a few 20 foot lengths of that pipe.

Jerry

1690. Re: UHF/VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 16:13:57 UTC
From: dan_hoffard@hailmail.net
Message-ID: <648fff84.0405010813.eea2426@posting.google.com>
Source record: 95741

I did inspect the antenna. Nothing appears to be broken. I even
changed out and reattached the matching transformer.

Dan

Scott <acepilot@bloomer.net> wrote in message
news:<sXKkc.1339$KG2.2353@reggie.win.bright.net>...
> Have you visually inspected the antenna itself for either broken
> elements or the phasing line that connects the coax to the antemma
> elements. I would start there...
>
> Scott
> N0EDV
>
>
> Dan wrote:
> > Kind of off topic, but I know someone in here can help me. I have a
> > VHF/UHF TV antenna that is about a year old. I always got great
> > reception with it, but now my VHF reception is horrible while my UHF
> > reception is still good. Anyone have any ideas? I have tried
> > replacing the cable and re-grounded the antenna but the problem
> > remains. It seems to have been getting worse and worse over the last
> > few months.
> >
> > Thanks,
> > Dan
> > KE5BCC

1691. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 16:14:48 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <5oi790tv0qviq7kn5h9j0o9clesoq92gso@4ax.com>
Source record: 95742

On Sat, 1 May 2004 09:00:57 -0500, "John" <jocjo_john@yooha.com>
wrote:

|
|"Wes Stewart" <n7ws@_arrl.net> wrote in message
|news:k0l590tovofd9j1025hr1i76gajn8und1k@4ax.com...
|> wrote:
|>
|> I figured you might. I scanned it into pdf, but to get decent quality
|> the file is huge and I only have dialup service at about 26 kB.
|> (Where is that BPL [g])
|>
|> I'll put it on my web site later when I have a couple of hours free if
|> you want it.
|>
|> Wes
|
|
|Wes -
|
|I got it. I read it. It did not occur to me that I must short the load to
|get the phase reference (although it should have). The paper clarifies lots
|of things for me.
|
|I don't have a line stretcher (I though this was a joke when it was
|mentioned on this forum). However, it appears I can do without it if I
|recalibrate the phase offset for each change in frequency. I will probably
|be mostly interested in single-frequency measurements anyway.
|
|After you mentioned it, I searched the Web for this app note and was
|unsuccessful. Thanks ever so much for making it available to me.

No problem, glad you can use it. I have used the technique shown in
figure 11. I happen to have all of that stuff. It is really just a
resistance bridge and could be duplicated for a lot less money. I
have also developed a simple-minded Excel sheet to do the math for the
bridge method. If you're interested,

www.qsl.net/n7ws/8405.xls

73,

Wes

1692. Re: Anyone have a 6BTV without radials?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 16:34:21 UTC
From: k9sqg@aol.com
Message-ID: <20040501123421.10191.00000732@mb-m14.aol.com>
Source record: 95743

There are two related issues here. One, getting an adequate match between the antenna and the feedline. Two, having an adequate ground plane to achieve the desired radiation pattern. The fact that an antenna is matched, does not of itself mean it will radiate well.

1693. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 17:09:08 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4nl790tanpg0eb3h5tvih8tr3utrojopcb@4ax.com>
Source record: 95744

On Thu, 29 Apr 2004 02:17:12 GMT, "The other John Smith"
<jocjo-john@yooha.com> wrote:

>> I presume your source offers a 50 Ohm output Z. There is nothing like
>> a mismatched source looking at a mismatched load to increase confusion
>> by the square.
>
>What is the output impedance of an amateur transmitter? I see arguments all
>the time about this. And even so, what will be the result if it is not
>matched? If there are reflections from the source, it will show up in the
>composite forward voltage which will be the reference anyway. Is this not
>so?

Hi John,

By virtue of Wes' providing you a copy of AN 77-3 and to further offer
you disclosure on the significant contributors of error, consider:
http://metrologyforum.tm.agilent.com/download.shtml

As part of the suite of calculators of error offered there, you will
find the answer to your question above. The "arguments" that you have
so closely observed are fundamentally forced naivete (much too long in
the tooth to be taken seriously). This is simply the consequence of
armchair debate squirming in the face of experience. ;-)

73's
Richard Clark, KB7QHC

1694. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 17:10:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1em7905cddi11nglql7u2s2gqsq0smoke9@4ax.com>
Source record: 95745

On Sat, 1 May 2004 09:00:57 -0500, "John" <jocjo_john@yooha.com>
wrote:
>I don't have a line stretcher (I though this was a joke when it was
>mentioned on this forum).

Hi John,

Wait till you hear the one about the sliding load....

73's
Richard Clark, KB7QHC

1695. Re: UHF/VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 17:14:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sim790l4uuj9dbu4psqt5iqda03rmkf0l7@4ax.com>
Source record: 95747

On 1 May 2004 09:13:57 -0700, dan_hoffard@hailmail.net (Dan) wrote:

>I did inspect the antenna. Nothing appears to be broken. I even
>changed out and reattached the matching transformer.
>
>Dan

Hi Dan,

Then it is time to look at the other end. There are usually separate paths to the VHF and UHF tuners - although this may have been obsoleted in the years since I've bought a TV. As such, the VHF tuner may have been zapped. There may also be a splitter involved or other pathing issue. Try substituting another TV to confirm it is in fact the antenna system at fault.

73's
Richard Clark, KB7QHC

1696. Re: UHF/VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 17:15:02 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <fumdnRY_kKt1Rw7dRVn-sQ@comcast.com>
Source record: 95746

"Dan" <dan_hoffard@hailmail.net> wrote in message
news:648fff84.0405010813.eea2426@posting.google.com...
> I did inspect the antenna. Nothing appears to be broken. I even
> changed out and reattached the matching transformer.

Look for a pulled out center conductor in the cable.
You're describing something that's acting like a capacitor in series with
the line, passing higher frequencies better than lower ones.

Also, most antennas like this have a UHF and a VHF section, there may be
some mechanical problem with the VHF section, even if you can't see it from
the ground.

1697. Re: Feed Through Insulators?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 17:50:23 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <4093E35F.6826A6B6@cwis.net>
Source record: 95748

zeno,
Try some stuff called "Gorilla Glue". It's water
proof, expands, lots of bubbles in it so not too
'dense', no idea as to it's dialectric properties but
it isn't gonna matter a lot anyway. Don't think I'd
use 'steel wool' though...
'Doc

1698. Kenwood HF ts-450s

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 19:27:36 UTC
From: Dave Sharpen <dcs-elec@tiscali.co.uk>
Message-ID: <4093fa22$1_1@mk-nntp-2.news.uk.tiscali.com>
Source record: 95749

I bought the above on the understanding it was in first class condition but it appers to give out aprox 8 watt at full power any ideas or know of any repairers in the uk near manchester would be nice the kind person I bought it off seems to have fell off the planet.

1699. Re: Suggestions for a roof top FM aerial?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 20:47:18 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <q1Ukc.6234$Ia6.716833@attbi_s03>
Source record: 95750

You may not need "the best" best basicly being the *longest* boomed and most elements whigh will have the narrowest angle of reseption and the greatest gain (signal capturing ability) in that one narrow direction, but you need good enough. Better can't hurt (within reason) but no point in spending more than needed or handling a huge far fringe antenna if a more modest one is all that is needed. e.g. on http://www.starkelectronic.com/fmpage.htm the $25 #FM-6 (70" long) might do the job, whereas the cross shaped omnidirectional #FMSS for $19 which is basicly a pair of folded dipoles (like the indoor antenna described above but outdoor mounted and w/o the nulls at the ends) might not. For $55, $75, $200 you get longer (eventually 18 feet long) that will suck in ANYTHING not beyond/below (att least much below) the horizon due to the curve of the earth, IF you have it aimed exactly right.

In any case buy good name brand RG-6 type (as opposed to smaller diameter RG-59 type) 75 ohm coax cable (the signal is attenuated/weakeded faster on small diameter or cheap off brand coax) and if outdoors run a heavy grounding wire from the mast, per electric code in your area (this may mean tied to the same place your electric service is grounded to and may mead adding a driven grounding stake if one doesn't already exist, adn using a grounding block connector on th ecoax line to ground the shield of the coax. If you have an attic you can install it in all the easier/better.

What are you using now? At minimum bet a couple dollar folded dipole at radio shack -- the tee shaped FM indoor antennas made on cheap TV twinlead wire. It will receive from the front and back, but not the ends when stretched straight and horizontal with the leads to the receiver going down (or up). If that's not too bad than a simple 3 or 4 element FM andenna in your attic or on your roof should be enough. It is is poor (or what you are using already) a longer FM antenna w/ more elements may be desired. How far is it as the crow flys to the transmitter, are they a fairly powerful station, and are there hills, mountains, high buildings/a city between you in them (or are you in a valley) etc?

The antenna you need is not really all that differant, electrically or mechanically, than some directional ham radio antennas for the VHF or UHF bands some hams use (say 144-148 MHz, a bit higher than 88-108 MHz).

"Austin Powers" <austinpowers@pobox.com> wrote in message
news:zYckc.57810$3q2.42027@newssvr25.news.prodigy.com...
> Thanks for such a quick answer...I hadn't realised they were so expensive.
> Still, if I want the best...
>
>
> "Paul Bauer" <paulb@powerweb.net> wrote in message

> news:e701b$40915842$4076204b$16205@powerweb.allthenewsgroups.com...
> > check out http://www.antennaperformance.com/
> >
> >
> >
> > "Austin Powers" <austinpowers@pobox.com> wrote in message
> > news:YCckc.57803$1e2.1879@newssvr25.news.prodigy.com...
> > > Forgive me for asking this here, but I figure you guys are most like
to
> > a)
> > > know and b) give a helpful answer.
> > >
> > > I stereo receiver needs an FM aerial to be able to receive a better
> > quaoity
> > > signal (it's VERY 'hissy' at the moment. What can you suggest? All I
> > want
> > > to be able to do is listen to the local FM station that carries the
BBC
> > > World Service.
> > >
> > > If I knew more aboitu the technicalities of this then I'd give you
more
> > > information, but feel free to ask me more questions, if necessary.
> > >
> > > Thanks.
> > >
> > >
> >
> >
>
>

1700. fm trap

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 20:58:32 UTC
From: pdrunen@aol.com
Message-ID: <20040501165832.25615.00000508@mb-m19.aol.com>
Source record: 95751

G'M group,

I recall you could make a fm filter trap using a 300 ohm ribbon cable at some length and put a cap on the end.

I am looking for something like this but would be more for channel 8/9. Or would I be just as well to put a parallel L/C ?

What bandwidth and db rejection would I get with one L/C network? Would need like 10MHz of BW.

de KJ4UO.

1701. Re: fm trap

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-01 21:28:45 UTC
From: jgboyles@aol.com
Message-ID: <20040501172845.27526.00000748@mb-m11.aol.com>
Source record: 95752

>I recall you could make a fm filter trap using a 300 ohm ribbon cable at some
>length and put a cap on the end.
>

An electrical half wavelength with a shorted end or an electrical quarter
wavelength with open end are effective traps. Their bandwidth is rather
narrow.
>What bandwidth and db rejection would I get with one L/C network? Would need
>like 10MHz of BW.

For that type of bandwidth, I would think a single section L/C would not work.
Probably need multiple sections.

73 Gary N4AST

1702. test

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 00:00:05 UTC
From: Dave Sharpen <dcs-elec@tiscali.co.uk>
Message-ID: <409439f5$1_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 95753

[No readable article body recovered]

1703. kenwood ts 450

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 00:03:18 UTC
From: Dave Sharpen <dcs-elec@tiscali.co.uk>
Message-ID: <40943ab6$1_1@mk-nntp-2.news.uk.tiscali.com>
Source record: 95754

I bought the above on the understanding it was in first class condition but
it appers to give out aprox 8 watt at full power any ideas or know of
anyrepairers
in the uk near manchester
would be nice the kind person I bought
it off seems to have fell off the planet.

1704. Re: kenwood ts 450

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 01:04:05 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <9OXkc.10807$kh4.678477@attbi_s52>
Source record: 95755

"Dave Sharpen" <dcs-elec@tiscali.co.uk> wrote in message
news:40943ab6$1_1@mk-nntp-2.news.uk.tiscali.com...
>I bought the above on the understanding it was in first class condition but
> it appers to give out aprox 8 watt at full power any ideas or know of
> anyrepairers
> in the uk near manchester
> would be nice the kind person I bought
> it off seems to have fell off the planet.
>

David -

Kenwood Electronics UK home page is here:
http://www.kenwood-electronics.co.uk/First-nm.aspx

This is the UK Communications webpage:
http://www.kenwood-electronics.co.uk/products/FirstProd.aspx?k1=3

This is the listing of service agents / centers throughout the UK
http://www.kenwood-electronics.co.uk/support/ServiceAgents.aspx?men=2&M2=23

w9gb

1705. Re: kenwood ts 450

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 01:05:29 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <tPXkc.10819$kh4.678846@attbi_s52>
Source record: 95756

"Dave Sharpen" <dcs-elec@tiscali.co.uk> wrote in message
news:40943ab6$1_1@mk-nntp-2.news.uk.tiscali.com...
>I bought the above on the understanding it was in first class condition but
> it appers to give out aprox 8 watt at full power any ideas or know of
> anyrepairers
> in the uk near manchester
> would be nice the kind person I bought
> it off seems to have fell off the planet.
>

Here is the correct "radio" service agent web page (the other one was for
audio)
http://www.kenwood-electronics.co.uk/support/ServiceAgents.aspx?men=2&M2=23&M3=8

w9gb

1706. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 01:15:06 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c71i2v0umh@enews1.newsguy.com>
Source record: 95757

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:5oi790tv0qviq7kn5h9j0o9clesoq92gso@4ax.com...

> |After you mentioned it, I searched the Web for this app note and was
> |unsuccessful. Thanks ever so much for making it available to me.
>
> No problem, glad you can use it. I have used the technique shown in
> figure 11. I happen to have all of that stuff. It is really just a
> resistance bridge and could be duplicated for a lot less money. I
> have also developed a simple-minded Excel sheet to do the math for the
> bridge method. If you're interested,
>
> www.qsl.net/n7ws/8405.xls
>
> 73,
>
> Wes

I got it, Wes. Thanks. I'll play with it sometime tonight, I hope.

John

1707. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 01:17:53 UTC
From: John <jocjo_john@yooha.com>
Message-ID: <c71i840uqu@enews1.newsguy.com>
Source record: 95758

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:1em7905cddi11nglql7u2s2gqsq0smoke9@4ax.com...
> On Sat, 1 May 2004 09:00:57 -0500, "John" <jocjo_john@yooha.com>
> wrote:
> >I don't have a line stretcher (I though this was a joke when it was
> >mentioned on this forum).
>
> Hi John,
>
> Wait till you hear the one about the sliding load....
>
> 73's
> Richard Clark, KB7QHC

Well... it sounds funny. Maybe it's the way you put it.

(snicker)

1708. Spectrum Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 04:12:12 UTC
From: n1sni@comcast.net
Message-ID: <a461033a.0405012012.4d6965b1@posting.google.com>
Source record: 95759
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.policy

Hello,
I need some help in figuring out how to properly use a Spec. Analyzer. I have done several hours of research online now, and have somewhat of an idea of what I am doing, but I just can't get down one piece of the puzzle. In my line of work, we use simple devices that give us the noise floor level in dB. I (stupidly) expected to be able to get this same information easily out of a SA. As you may have guessed by now, I ran into a problem when switching the RBW value. After much... much reading, I fully understand *WHY* it changes (Filters increasing in size cause a greater internal noise level, etc.) but I can't figure the best way to get a "base" noise level reading. And as much as I would like to fully understand the theory, what I really need is a few more examples... IE: If you are looking a 100 MHz span and your RBW is 1MHz simply ___Fill in the Blank____ to find the base noise floor. To further explain what I am trying to do, we are setting up a link that requires a SNR of at least 6dB... I need to get the noise floor level to compare with my projected signal strength for this link.

Please be nice... This is my first post <grin>

Thank you! Thank you!

Bill B. - N1SNI

1709. KLM manuals needed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 04:48:08 UTC
From: rlangevin@interwrx.com
Message-ID: <40947D88.9010806@interwrx.com>
Source record: 95760

I am in need of a couple of KLM manuals.
I have searched the net and came up with nothing.
I need the KLM 34A manual the 4 element one.
I also need the KLM 6M5 manual.
a scan is ok as long as I can read the measurements.
These were donated to our club from a silent key last year and now we
want to put them in to service.
Thanks
Rich L
KB7YEB

1710. Re: fm trap

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 10:39:45 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <c72j5o$hgqfb$1@ID-175933.news.uni-berlin.de>
Source record: 95761

Getting a decent amount of rejection across one or two TV channels takes a multi-pole filter. You might check out the 5KV series from Microwave Filter Company http://www.microwavefilter.com/multichannotch.htm . They are well made and not too expensive.

RF

Visit http://rfry.org for FM broadcast RF system papers.

1711. Re: KLM manuals needed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 12:59:46 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <6h6lc.10917$_41.622929@attbi_s02>
Source record: 95762

<rlangevin@interwrx.com> wrote in message
news:40947D88.9010806@interwrx.com...
>I am in need of a couple of KLM manuals.
> I have searched the net and came up with nothing.
> I need the KLM 34A manual the 4 element one.
> I also need the KLM 6M5 manual.
> a scan is ok as long as I can read the measurements.
> These were donated to our club from a silent key last year and now we want
> to put them in to service.
> Thanks
> Rich L
> KB7YEB

Rich -

You may want to contact M2 Antenna Systems
http://www.m2inc.com/index2.html

They are offering upgrade kits (A new set of CNC machined shorting bars, a
new set of capacitor caps
and all new stainless steel hardware) for the KT34A to the M2 version - the
KT34M2
I have to believe the design is almost identical -- except for the parts
upgrades they are offering.

M2 also has a revised version -- the 6M5X (gain 9.4 dBd)

w9gb

1712. Re: Spectrum Analyzer (cross-posting deleted)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 13:09:39 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <4094f5ac_2@news1.prserv.net>
Source record: 95763

Bill:

N = kTb
Boltzman's constant, temperature in degrees Kelvin, bandwidth.
= -174 dBm for 1 Hz bandwidth

Now, if that short primer does not mean anything to you, then you need to start at the beginning with a couple of good electronics texts, and end up with HP (aggie-lint) App Notes 150 and 243. If you don't get the fundamentals of this down in the beginning, you will never be able to rigorously defend any of your results, many of which will be in error.

--
Crazy George
Remove N O and S P A M imbedded in return address
"Bill B." <n1sni@comcast.net> wrote in message
news:a461033a.0405012012.4d6965b1@posting.google.com...
> Hello,
> I need some help in figuring out how to properly use a Spec. Analyzer.
> I have done several hours of research online now, and have somewhat of
> an idea of what I am doing, but I just can't get down one piece of the
> puzzle. In my line of work, we use simple devices that give us the
> noise floor level in dB. I (stupidly) expected to be able to get this
> same information easily out of a SA. As you may have guessed by now, I
> ran into a problem when switching the RBW value. After much... much
> reading, I fully understand *WHY* it changes (Filters increasing in
> size cause a greater internal noise level, etc.) but I can't figure
> the best way to get a "base" noise level reading. And as much as I
> would like to fully understand the theory, what I really need is a few
> more examples... IE: If you are looking a 100 MHz span and your RBW is
> 1MHz simply ___Fill in the Blank____ to find the base noise floor. To
> further explain what I am trying to do, we are setting up a link that
> requires a SNR of at least 6dB... I need to get the noise floor level
> to compare with my projected signal strength for this link.
>
> Please be nice... This is my first post <grin>
>
> Thank you! Thank you!
>
> Bill B. - N1SNI

1713. Re: Spectrum Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 13:38:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <1099uffhdrg4g3d@corp.supernews.com>
Source record: 95764
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.policy

It's not clear to me what noise you're trying to measure. If you're trying to measure the thermal noise of a good resistor, you're SOL -- anything you try to measure it with will add its own noise, which you'll end up measuring instead. You can easily calculate the thermal noise, though. If you're trying to measure the internal noise of the spectrum analyzer, the answer is on the screen and, as you've found, it's a function of the filter bandwidth. If you're trying to measure the noise coming from a receiver, it has to be considerably greater than the SA's internal noise, or you'll never see it. That means you'll have to amplify it until you can see it, with an amplifier that's quiet enough that the noise it adds isn't significant. The noise figure of the SA itself is typically much worse than a decent receiver -- it's been traded for dynamic range.

Once you get whatever noise you're trying to measure up to the level you can see it on the SA, you'll find that its magnitude also varies with the SA filter bandwidth, if the noise is broadband. You can get any S/N ratio you want, if you can tolerate an arbitrarily narrow bandwidth. A real receiver has some particular bandwidth to accommodate the incoming signal. It's usually this bandwidth at which the S/N ratio is measured.

Roy Lewallen, W7EL

Bill B. wrote:
> Hello,
> I need some help in figuring out how to properly use a Spec. Analyzer.
> I have done several hours of research online now, and have somewhat of
> an idea of what I am doing, but I just can't get down one piece of the
> puzzle. In my line of work, we use simple devices that give us the
> noise floor level in dB. I (stupidly) expected to be able to get this
> same information easily out of a SA. As you may have guessed by now, I
> ran into a problem when switching the RBW value. After much... much
> reading, I fully understand *WHY* it changes (Filters increasing in
> size cause a greater internal noise level, etc.) but I can't figure
> the best way to get a "base" noise level reading. And as much as I
> would like to fully understand the theory, what I really need is a few
> more examples... IE: If you are looking a 100 MHz span and your RBW is
> 1MHz simply ___Fill in the Blank____ to find the base noise floor. To
> further explain what I am trying to do, we are setting up a link that
> requires a SNR of at least 6dB... I need to get the noise floor level
> to compare with my projected signal strength for this link.
>
> Please be nice... This is my first post <grin>
>

> Thank you! Thank you!
>
> Bill B. - N1SNI

1714. Adding lengths to bare wire antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 13:43:16 UTC
From: Ken <cprstn54zz@att.net>
Message-ID: <1kt9905f0303bq2vt0fd9fa5e47010d11c@4ax.com>
Source record: 95765

I am making a 40M double extended zepp from bare copper-plated steel wire (26 ga). The wire will be on two reels, each reel holding 87 ft. I will also be able to use this arrangment to make shorter, resonant antennas.

However, the reel is too small to hold 135 ft of wire, which is the next useful length (160M resonant). What is a good way of adding a 48 ft wire tail to the wire on the reel if I find myself on rare occasion wanting to use 135 ft. wires?

I am thinking of crimping and soldering small eyes to the wire ends and joining them with a small stainless nut and bolt. I figure this will take some tension. Is there a better way?

An unrelated question: If it becomes necessary to splice this wire permanently, what is a good way of doing it? Will soldering a twisted 1/2" overlap do the job? How do I keep the solder from tinning (and stiffening) the wire near the joint? Is there a chemical that will repel the solder (anti-flux)? Heat sinks?

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1715. Re: Adding lengths to bare wire antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 14:27:04 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <721a90tlml3uq27ok4f5hda1dqu4lu3cec@4ax.com>
Source record: 95766

On Sun, 02 May 2004 13:43:16 GMT, Ken <cprstn54zz@att.net> wrote:

>
>However, the reel is too small to hold 135 ft of wire, which is the
>next useful length (160M resonant). What is a good way of adding a 48
>ft wire tail to the wire on the reel if I find myself on rare occasion
>wanting to use 135 ft. wires?

Since your wire is so lightweight, only 26 ga., banana plugs/jacks
might work. Otherwise, the stainless nut/bolts should do the trick. It
shouldn't take much -- I've added tails to my dipole with alligator
clips.

Bob
k5qwg

>Ken KC2JDY
>
>Ken
>(to reply via email
>remove "zz" from address)

1716. Re: Adding lengths to bare wire antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 16:25:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gi7a905l7gh8n94pch09akto6s3cqn2vsi@4ax.com>
Source record: 95767

On Sun, 02 May 2004 13:43:16 GMT, Ken <cprstn54zz@att.net> wrote:
>If it becomes necessary to splice this wire
>permanently, what is a good way of doing it? Will soldering a
>twisted 1/2" overlap do the job?

Hi Ken,

By the book, such a join would be done with a "Western Union Splice."

This is a join that would be several inches long:

----
the first overlap of wires would be three or so turns loosely twisted
about each other;
----------////-----
-----\\\\----------
each tail would then be tightly twisted in at least three turns around
the wire it parallels.
----------XXX/\/\/\XXX----------

73's
Richard Clark, KB7QHC

1717. Re: Spectrum Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 16:37:37 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405020837.750d015c@posting.google.com>
Source record: 95768
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.policy

Hi Bill,

Welcome to the wonderful world of posting.

I'd expect noise levels to be specified in (nano)volts per sqrt(Hz), or (femto)watts per Hertz. This can be experessed in dBm, too, of course. If you know the noise bandwidth of the filter the SA is putting the signal through, then you just take the measured noise floor and adjust it by the ratio of that bandwidth to 1 Hz. So if it were a 10Hz noise bandwidth, the noise per Hz would be 10dB below what you see. If the filter is 100Hz, it would be 20dB below. Now, is the noise bandwidth of the filter the same as the resolution bandwidth? Not necessarily, but it should be fairly close, generally within a few percent. We build FFT-based spectral analysis equipment, and have to document the noise bandwidth of the effective filters, but we also generally have a way to directly display "noise density" which is already in v/rt(Hz) or w/Hz or dBm -- so it's worth looking to see if the analyzer MIGHT have such a function. -- It's worthwhile because of the variation from measurement to measurement to use as much averaging as is convenient. This might be called "video filtering", but is done after the signal filtering and detection. Lessee...what else. Normally, the base level noise of the analyzer would be measured with the input terminated in its input resistance, usually 50 ohms.

Footnoote about the bandwidths: the noise bandwidth (or noise power bandwidth) says if you have an input signal of, say, 1.000 picowatts per Hz, and it's uniform power density per unit bandwidth (a flat, broadband noise), and you measure 12.345 picowatts coming through your filter, then the noise bandwidth is 12.345Hz. That may differ from the -3dB bandwidth of the filter, though generally not by a huge amount. With analog filters, it's probably expecting a lot for it to be really the same from analyzer to analyzer of the same model, but with digital filters (not necessarily even FFT-based), it should be spot-on the same from one to the next.

Cheers,
Tom

n1sni@comcast.net (Bill B.) wrote in message
news:<a461033a.0405012012.4d6965b1@posting.google.com>...
> Hello,
> I need some help in figuring out how to properly use a Spec. Analyzer.
> I have done several hours of research online now, and have somewhat of
> an idea of what I am doing, but I just can't get down one piece of the

> puzzle. In my line of work, we use simple devices that give us the
> noise floor level in dB. I (stupidly) expected to be able to get this
> same information easily out of a SA. As you may have guessed by now, I
> ran into a problem when switching the RBW value. After much... much
> reading, I fully understand *WHY* it changes (Filters increasing in
> size cause a greater internal noise level, etc.) but I can't figure
> the best way to get a "base" noise level reading. And as much as I
> would like to fully understand the theory, what I really need is a few
> more examples... IE: If you are looking a 100 MHz span and your RBW is
> 1MHz simply ___Fill in the Blank____ to find the base noise floor. To
> further explain what I am trying to do, we are setting up a link that
> requires a SNR of at least 6dB... I need to get the noise floor level
> to compare with my projected signal strength for this link.
>
> Please be nice... This is my first post <grin>
>
> Thank you! Thank you!
>
> Bill B. - N1SNI

1718. Re: Spectrum Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 17:14:18 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c73a8e$hfbqp$1@ID-225206.news.uni-berlin.de>
Source record: 95669
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.policy

What is the "Bandwidth" of the "stuff" you are trying to measure?
You could set the analyzer to that or a little less, and then use relative measurements.
You may need more gear if you are trying to measure a very low noise wideband preamp.
Depends on what you are trying to measure.
Bigger bandwidth=higher noise floor, simply kTB. and it is a ratio if you change kTB1/kTB2= B1/B2 (10 log it of course)

If you have the analyzer on, then connect the gizmo without signal and the noise floor rises up 10 dB or more, you could probably ignore calculating what the SA contributes. just add signal and it should be 6 dB or more above noise floor established by your gizmo.

If not, then It is possible to calculate almost exactly the noise floor on the analyzer to verify what is displayed is good, but you need a number or two from the MFGR of the analyzer, which takes into account the filter shape of the analyzer. (0.8 ot 1.6 something like that)

SAs are cool! What type do you have, makes a big difference, (depending on what you are trying to measure) Some will not do it.

"Bill B." <n1sni@comcast.net> wrote in message
news:a461033a.0405012012.4d6965b1@posting.google.com...
> Hello,
> I need some help in figuring out how to properly use a Spec. Analyzer.
> I have done several hours of research online now, and have somewhat of
> an idea of what I am doing, but I just can't get down one piece of the
> puzzle. In my line of work, we use simple devices that give us the
> noise floor level in dB. I (stupidly) expected to be able to get this
> same information easily out of a SA. As you may have guessed by now, I
> ran into a problem when switching the RBW value. After much... much
> reading, I fully understand *WHY* it changes (Filters increasing in
> size cause a greater internal noise level, etc.) but I can't figure
> the best way to get a "base" noise level reading. And as much as I
> would like to fully understand the theory, what I really need is a few
> more examples... IE: If you are looking a 100 MHz span and your RBW is
> 1MHz simply ___Fill in the Blank____ to find the base noise floor. To
> further explain what I am trying to do, we are setting up a link that
> requires a SNR of at least 6dB... I need to get the noise floor level
> to compare with my projected signal strength for this link.
>
> Please be nice... This is my first post <grin>
>

> Thank you! Thank you!
>
> Bill B. - N1SNI

1719. Re: Adding lengths to bare wire antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 19:11:57 UTC
From: William Warren <william_warren_nonoise@comcast.net>
Message-ID: <1Kblc.12164$TD4.1438078@attbi_s01>
Source record: 95670

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:gi7a905l7gh8n94pch09akto6s3cqn2vsi@4ax.com...
> On Sun, 02 May 2004 13:43:16 GMT, Ken <cprstn54zz@att.net> wrote:
> >If it becomes necessary to splice this wire
> >permanently, what is a good way of doing it? Will soldering a
> >twisted 1/2" overlap do the job?
>
> Hi Ken,
>
> By the book, such a join would be done with a "Western Union Splice."
>
> This is a join that would be several inches long:
> ----------
> ----------
> the first overlap of wires would be three or so turns loosely twisted
> about each other;
> ----------////-----
> -----\\\\----------
> each tail would then be tightly twisted in at least three turns around
> the wire it parallels.
> ----------XXX/\/\/\XXX----------
>
> 73's
> Richard Clark, KB7QHC

Please post any URL you know of. TIA.

73, Bill

1720. Re: Adding lengths to bare wire antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 20:15:07 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <409556CB.F698B7FC@cwis.net>
Source record: 95671

Ken,
Your idea with the nut/bolt should work, or, just solder
the 'tail' on. Any soldered joint is going to be a bit
'stiffer' than the rest of the antenna, so keeping the joint
as short as possible would probably be less 'stiff' than a
longer one (not really, but easier to manage, maybe).
If you had another couple of reels, put the 160 meter tails
on them and use the reel(s) to 'chunk' over a tree limb. Make
the connections with the 'free' ends of the tails...
'Doc

1721. Re: Adding lengths to bare wire antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-02 20:32:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qjma90hja6nqsgbgp1k2jt51kbhtfnsivr@4ax.com>
Source record: 95672

On Sun, 02 May 2004 19:11:57 GMT, "William Warren"
<william_warren_nonoise@comcast.net> wrote:

>Please post any URL you know of. TIA.

Hi Bill,

http://www.tpub.com/content/construction/14027/css/14027_122.htm

73's
Richard Clark, KB7QHC

1722. Re: UHF/VHF

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 01:32:21 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <0bilc.1371$KG2.2357@reggie.win.bright.net>
Source record: 95675

Ah, good point! I was fixated on the antenna end when I offered up
advice to Dan. Being that it has been getting worse GRADUALLY, you have
a very good point...may be in the TV tuner itself. Hate when THAT happens!

Scott
N0EDV

Richard Clark wrote:
> On 1 May 2004 09:13:57 -0700, dan_hoffard@hailmail.net (Dan) wrote:
>
>
>>I did inspect the antenna. Nothing appears to be broken. I even
>>changed out and reattached the matching transformer.
>>
>>Dan
>
>
> Hi Dan,
>
> Then it is time to look at the other end. There are usually separate
> paths to the VHF and UHF tuners - although this may have been
> obsoleted in the years since I've bought a TV. As such, the VHF tuner
> may have been zapped. There may also be a splitter involved or other
> pathing issue. Try substituting another TV to confirm it is in fact
> the antenna system at fault.
>
> 73's
> Richard Clark, KB7QHC

1723. Re: fm trap

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 01:52:11 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <5o8b90h1s67vbbeukgisg9kqa73katvub6@4ax.com>
Source record: 95673

On 01 May 2004 20:58:32 GMT, pdrunen@aol.com (PDRUNEN) wrote:

>G'M group,
>
>I recall you could make a fm filter trap using a 300 ohm ribbon cable at some
>length and put a cap on the end.
>
>I am looking for something like this but would be more for channel 8/9. Or
>would I be just as well to put a parallel L/C ?
>
>What bandwidth and db rejection would I get with one L/C network? Would need
>like 10MHz of BW.

Do you mean television channels 8 and 9?

I'm kind of guessing at what you're wanting to do, but the easiest
trap is the 1/4 wave open stub. If you're trying to kill off
TV signals, tune it to the video carrier frequency. The length of
the stub will be a physical 1/4 wave times the velocity factor
of the cable you're using (close to 1 for twin lead). Start
long, and trim off just a bit at a time till you get it right.
(That's hard to do, because you don't really know you've got it
right until you trim it off too short and realize you've gone
past your desired notch frequency). Better is to cut it a bit
short and put a trimmer capacitor across the end of the stub,
then adjust the cap for maximum attenuation.

The notch will be very sharp, so you'll need seperate traps for
each channel.

--
-fb-

1724. Re: Does this Shorty Forty Antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 02:31:10 UTC
From: funkbastler <funkbastler@eudoramail.com>
Message-ID: <kr9b90hsh0rvv5b1pv4aqprnqateha06h8@4ax.com>
Source record: 95674

On Fri, 30 Apr 2004 08:47:35 GMT, "Alex" <orillia@rogers.com> wrote:

>http://www.flashwebhost.com/circuit/shortant.php
>

ok - this has nothing to do with the relative merits of the antenna,
but gee whiz - that web site has one heck of a description....

"It is a center loaded antenna with a loading coil at the center."

DUHHHH.....

Then there's the bit about connecting the coax shield to the center
of the coil and connecting the coax center conductor two or three
turns away, AND THE ILLUSTRATION SHOWS JUST THE OPPOSITE!

*S*I*G*H*

(I'll shut up now.)

--
-fb-

1725. Re: Spectrum Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 03:44:53 UTC
From: "Bill B." <n1sniNOSPAM@comcast.net>
Message-ID: <mPKdnbkxMsJclgjdRVn-sQ@comcast.com>
Source record: 95676
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.policy

Thank you so much for all your help (Crazy George, Roy, Tom, John)!! Per Crazy George's suggestion, I am picking up some books tomorrow at Borders <grin>. However, the posts that I received were very helpful. Let me explain a little more what I am trying to do, just to see if I am even close to the right track. We have a Microwave link that operates at 5 GHz... specifically one sides transmits between 5.25-5.25GHz and receives at 5.725-5.825 GHz. The product we are using for this link is a Stratum 100 (http://www.commputercations.com/products/wsstratum.htm - The only datasheet I could find). This link went down hard a few days ago, so we switched polarization (From Horizontal to Vertical). Things got much better, but we still were taking corrupt packets. So, we went out there with an Advantest R3465 SA (http://www.ntecusa.com/graphics/pdf/WE106.pdf), an Omni antenna, and 10 degree directional dish, with the hopes to (1) look at the "same" noise floor that the Stratum sees and (2), try to track down any single direction (And hopefully antenna) that is causing interference. Now, I thought I knew this stuff <grin>, at least enough to retrieve somewhat accurate results. Boy was I wrong! I scanned the receiving frequencies using the following settings:

Start Freq: 5.725GHz
End Freq: 5.825GHz
Span: 100MHz
RBW: 5 MHz
VBW: 1 MHz
Sweep Time: 50ms
ATT: 10dB
REF: 0.0dBm (10dB/)

Knowing what I know now, I would have kept the RBW value MUCH lower (Like 10kHz). But what I saw was a "noise floor" - Which I was assuming to be (I believe) the Thermal noise floor which I now know to be the Filter Noise Floor, peaking out at about -64dBm. Now our receive strength when the radio is on is -65dB... So I figured "Hey, there is our problem... the receiver in the Stratum unit is seeing the noise floor so loud that it can hardly see the actual signal". What makes this even more believable is that these readings were taken in the middle of Boston on the 26th floor roof. So I packed up and went home... Then I tried the same test at my fairly isolated house... and got the same results!

Now I know there is at least one answer to how to avoid this embarrassing situation in the future... read a book (Which I will start tomorrow)... however, I really would like to get this link up in short order and need to know these numbers. Am I correct in saying that I need to (1) contact the manufacture of the Stratum unit, and find out what their Bandwidth filter

looks like and then (2), Set my RBW to the same or lower setting as their radio and do the test again?

If the above two steps are correct than great... I can do that... but I really would like to make use of the measurements I already took if possible.

Again, I really appreciate the comments from before. While I don't yet understand all of it, these really point me in the right direction, and I will keep reading/researching until it all comes together.

Thank you,
Bill B. - N1SNI

"John Smith" <pani@yahoo.com> wrote in message
news:c73a8e$hfbqp$1@ID-225206.news.uni-berlin.de...
> What is the "Bandwidth" of the "stuff" you are trying to measure?
> You could set the analyzer to that or a little less, and then use relative
> measurements.
> You may need more gear if you are trying to measure a very low noise
> wideband preamp.
> Depends on what you are trying to measure.
> Bigger bandwidth=higher noise floor, simply kTB. and it is a ratio if you
> change kTB1/kTB2= B1/B2 (10 log it of course)
>
> If you have the analyzer on, then connect the gizmo without signal and the
> noise floor rises up 10 dB or more, you could probably ignore calculating
> what the SA contributes. just add signal and it should be 6 dB or more
above
> noise floor established by your gizmo.
>
> If not, then It is possible to calculate almost exactly the noise floor
on
> the analyzer to verify what is displayed is good, but you need a number or
> two from the MFGR of the analyzer, which takes into account the filter
shape
> of the analyzer. (0.8 ot 1.6 something like that)
>
> SAs are cool! What type do you have, makes a big difference, (depending on
> what you are trying to measure) Some will not do it.
>
>
> "Bill B." <n1sni@comcast.net> wrote in message
> news:a461033a.0405012012.4d6965b1@posting.google.com...
> > Hello,
> > I need some help in figuring out how to properly use a Spec. Analyzer.
> > I have done several hours of research online now, and have somewhat of
> > an idea of what I am doing, but I just can't get down one piece of the
> > puzzle. In my line of work, we use simple devices that give us the
> > noise floor level in dB. I (stupidly) expected to be able to get this
> > same information easily out of a SA. As you may have guessed by now, I

> > ran into a problem when switching the RBW value. After much... much
> > reading, I fully understand *WHY* it changes (Filters increasing in
> > size cause a greater internal noise level, etc.) but I can't figure
> > the best way to get a "base" noise level reading. And as much as I
> > would like to fully understand the theory, what I really need is a few
> > more examples... IE: If you are looking a 100 MHz span and your RBW is
> > 1MHz simply ___Fill in the Blank____ to find the base noise floor. To
> > further explain what I am trying to do, we are setting up a link that
> > requires a SNR of at least 6dB... I need to get the noise floor level
> > to compare with my projected signal strength for this link.
> >
> > Please be nice... This is my first post <grin>
> >
> > Thank you! Thank you!
> >
> > Bill B. - N1SNI
>
>

1726. Re: Adding lengths to bare wire antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 04:49:28 UTC
From: richardharrison@webtv.net
Message-ID: <28039-4095CF58-151@storefull-3253.bay.webtv.net>
Source record: 95677

Ken, KC2JDY wrote:
"Is there a better way?"

Search on "Nicopress".

Best regards, Richard Harrison, KB5WZI

1727. Re: Does this Shorty Forty Antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 09:59:08 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <109c5vcjfjvf795@corp.supernews.com>
Source record: 95678

funkbastler wrote:

> On Fri, 30 Apr 2004 08:47:35 GMT, "Alex" <orillia@rogers.com> wrote:
>
> > http://www.flashwebhost.com/circuit/shortant.php
> >
>
> ok - this has nothing to do with the relative merits of the antenna,
> but gee whiz - that web site has one heck of a description....

The relative merits of the antenna are very clear . . . "Finding space enough to accommodate 67 feet of wire" . . .

>
> "It is a center loaded antenna with a loading coil at the center."
>
> DUHHHH.....

You can't have a center loaded antenna 'without' a loading coil in the center?

DUH?

>
> Then there's the bit about connecting the coax shield to the center
> of the coil and connecting the coax center conductor two or three
> turns away, AND THE ILLUSTRATION SHOWS JUST THE OPPOSITE!

And your point?

>
> *S*I*G*H*
>
> (I'll shut up now.)

Unless you have something constructive. Point us to the articles you have written . . .

Ron

1728. Re: Spectrum Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 10:05:42 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <hIplc.1376$KG2.2391@reggie.win.bright.net>
Source record: 95679
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.policy

I assume these unit are the unlicensed variety and use spread spectrum technology (frequency hopping)? If interference is the cause, it may be hard to find since you probably don't know the discreet frequencies used in the hops. If I am understanding you correctly, you are looking for the ambient level of noise coming down your coax to the radio? I know just enough to be dangerous as far as spectrum analyzers go. We just plug the coax into the analyzer and see where the "fuzz" is located at the bottom of the display, i.e. -108 dbm.

I am not familiar with the radio you are using, but if it like the ones we use, can you swap frequency bands such as Band A or Band B? We have some Lynx and Tsunami 2.4 GHz T1 radios where the back filter unit comes off and we invert it to select another band of frequencies. Might be worth a shot if you can do it (to both ends of course!)...

Good luck! Let us all know what you find!!

Scott
N0EDV

Bill B. wrote:
> Thank you so much for all your help (Crazy George, Roy, Tom, John)!! Per
> Crazy George's suggestion, I am picking up some books tomorrow at Borders
> <grin>. However, the posts that I received were very helpful. Let me explain
> a little more what I am trying to do, just to see if I am even close to the
> right track. We have a Microwave link that operates at 5 GHz... specifically
> one sides transmits between 5.25-5.25GHz and receives at 5.725-5.825 GHz.
> The product we are using for this link is a Stratum 100 (
> http://www.commputercations.com/products/wsstratum.htm - The only datasheet
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> polarization (From Horizontal to Vertical). Things got much better, but we
> still were taking corrupt packets. So, we went out there with an Advantest
> R3465 SA (http://www.ntecusa.com/graphics/pdf/WE106.pdf), an Omni antenna,
> and 10 degree directional dish, with the hopes to (1) look at the "same"
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> direction (And hopefully antenna) that is causing interference. Now, I
> thought I knew this stuff <grin>, at least enough to retrieve somewhat
> accurate results. Boy was I wrong! I scanned the receiving frequencies using
> the following settings:
>
> Start Freq: 5.725GHz
> End Freq: 5.825GHz
> Span: 100MHz
> RBW: 5 MHz

> VBW: 1 MHz
> Sweep Time: 50ms
> ATT: 10dB
> REF: 0.0dBm (10dB/)
>
> Knowing what I know now, I would have kept the RBW value MUCH lower (Like
> 10kHz). But what I saw was a "noise floor" - Which I was assuming to be (I
> believe) the Thermal noise floor which I now know to be the Filter Noise
> Floor, peaking out at about -64dBm. Now our receive strength when the radio
> is on is -65dB... So I figured "Hey, there is our problem... the receiver in
> the Stratum unit is seeing the noise floor so loud that it can hardly see
> the actual signal". What makes this even more believable is that these
> readings were taken in the middle of Boston on the 26th floor roof. So I
> packed up and went home... Then I tried the same test at my fairly isolated
> house... and got the same results!
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> Now I know there is at least one answer to how to avoid this embarrassing
> situation in the future... read a book (Which I will start tomorrow)...
> however, I really would like to get this link up in short order and need to
> know these numbers. Am I correct in saying that I need to (1) contact the
> manufacture of the Stratum unit, and find out what their Bandwidth filter
> looks like and then (2), Set my RBW to the same or lower setting as their
> radio and do the test again?
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> understand all of it, these really point me in the right direction, and I
> will keep reading/researching until it all comes together.
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> Bill B. - N1SNI
>
> "John Smith" <pani@yahoo.com> wrote in message
> news:c73a8e$hfbqp$1@ID-225206.news.uni-berlin.de...
>
>>What is the "Bandwidth" of the "stuff" you are trying to measure?
>>You could set the analyzer to that or a little less, and then use relative
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>>You may need more gear if you are trying to measure a very low noise
>>wideband preamp.
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>>Bigger bandwidth=higher noise floor, simply kTB. and it is a ratio if you
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>>
>>If you have the analyzer on, then connect the gizmo without signal and the
>>noise floor rises up 10 dB or more, you could probably ignore calculating
>>what the SA contributes. just add signal and it should be 6 dB or more

>
> above
>
>>noise floor established by your gizmo.
>>
>>If not, then It is possible to calculate almost exactly the noise floor
>
> on
>
>>the analyzer to verify what is displayed is good, but you need a number or
>>two from the MFGR of the analyzer, which takes into account the filter
>
> shape
>
>>of the analyzer. (0.8 ot 1.6 something like that)
>>
>>SAs are cool! What type do you have, makes a big difference, (depending on
>>what you are trying to measure) Some will not do it.
>>
>>
>>"Bill B." <n1sni@comcast.net> wrote in message
>>news:a461033a.0405012012.4d6965b1@posting.google.com...
>>
>>>Hello,
>>>I need some help in figuring out how to properly use a Spec. Analyzer.
>>>I have done several hours of research online now, and have somewhat of
>>>an idea of what I am doing, but I just can't get down one piece of the
>>>puzzle. In my line of work, we use simple devices that give us the
>>>noise floor level in dB. I (stupidly) expected to be able to get this
>>>same information easily out of a SA. As you may have guessed by now, I
>>>ran into a problem when switching the RBW value. After much... much
>>>reading, I fully understand *WHY* it changes (Filters increasing in
>>>size cause a greater internal noise level, etc.) but I can't figure
>>>the best way to get a "base" noise level reading. And as much as I
>>>would like to fully understand the theory, what I really need is a few
>>>more examples... IE: If you are looking a 100 MHz span and your RBW is
>>>1MHz simply ___Fill in the Blank____ to find the base noise floor. To
>>>further explain what I am trying to do, we are setting up a link that
>>>requires a SNR of at least 6dB... I need to get the noise floor level
>>>to compare with my projected signal strength for this link.
>>>
>>>Please be nice... This is my first post <grin>
>>>
>>>Thank you! Thank you!
>>>
>>>Bill B. - N1SNI
>>
>>
>
>

1729. Re: Adding lengths to bare wire antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 11:14:56 UTC
From: Ken <cprstn54zz@att.net>
Message-ID: <0bac90d07d5fu6b15gv7uh44s5ofgpn4gl@4ax.com>
Source record: 95680

On Sun, 2 May 2004 23:49:28 -0500, richardharrison@webtv.net (Richard
Harrison) wrote:
>Search on "Nicopress".

Smallest Nicopress I could find is for 1/32" (.031") cable. 26 ga.
wire is .0159".

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

1730. Re: Adding lengths to bare wire antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 14:03:59 UTC
From: richardharrison@webtv.net
Message-ID: <25203-4096514F-272@storefull-3258.bay.webtv.net>
Source record: 95681

Ken, KC2JDY wrote:
"Smallest Nicopress I could find was 1/32" (.031") cable, 26 ga."

That`s pretty small.

If you don`t Nicopress, the "Western Union Splice" is a good alternative. It is shown on page 20-4 of the 19th edition of the ARRL Antenna Book as Fig 3. A copper-wire Table on page 20-2 relates wire size in AWG / B&S to English and Metric sizes and other characteristics.

Much good information is in the 19th edition of the ARRL Antenna Book, Chapter 20, for those who would hang wires, rods, or tubing in the air.

Best regards, Richard Harrison, KB5WZI

1731. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 16:01:19 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c75qgdhdh1@newshost.mot.com>
Source record: 95682

Yikes!

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:5oi790tv0qviq7kn5h9j0o9clesoq92gso@4ax.com...
> On Sat, 1 May 2004 09:00:57 -0500, "John" <jocjo_john@yooha.com>
> wrote:
> ....[snip...]
> |
> |I don't have a line stretcher (I though this was a joke when it was
> |mentioned on this forum).

Oh my! I figured any jokes I make would be obvious. I used it lately for
setting up a switched antenna TDOA DF system. Really nice tool for such
things.

--
73, Steve N, K,9;d, c. i My email has no u's.

1732. Re: Measure Z with Vector Voltmeter properly

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 16:09:16 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c75qvd$hf4$1@newshost.mot.com>
Source record: 95683

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:5oi790tv0qviq7kn5h9j0o9clesoq92gso@4ax.com...

[...snip...]
> I
> have also developed a simple-minded Excel sheet to do the math for the
> bridge method. If you're interested,
>
> www.qsl.net/n7ws/8405.xls
> 73,
> Wes

Nice spreadsheet, Wes. I use them for everything. Never used the
ISBLANK...will now.

--
Steve N, K,9;d, c. i My email has no u's.

1733. Re: Spectrum Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 16:44:41 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c75t6e$2vr4$1@ID-225206.news.uni-berlin.de>
Source record: 95684
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.policy

Your Software Must be robust enough to accept, reject and process corrupt packets as you will Always get them with wireless, always. --You will ALWAYS have bad/corrupted packets with any wireless system.-- The 5 band antennas have very splintered patterns, and ducting from point to point. and you will have +20dB one second and -20 the next second, your firmware, and software must handle this stuff, RF cannot do it alone. Mother nature set the rules on this one.

The MFGR will tell you the max range, and the dishes to use, rain degrades the signal, as well as heat (ducting) The big boys use 4 dishes for a link ATT @ 11 Gigs two on each side spaced vertically some so when ducting occures, the other dish picks it up. If the cost is low enough, you could put in another entire link as backup. Also % of packets getting though is an indicator of SNR, but that can depend on how you have the link hooked up, as a LAN extention, you have timing constraints, and so on. 90% or better is great. Less than 20% you may have a link or LAN timing problem (path too long, pointing is off, ducting, SW lame).

On a roof in Boston, your 5 gig unit may be susceptible to radio and TV interference, the scan may be detected on a junction in the unit. Signal blasts through the case and so on. Urban RF is a dirty world, and we can't see it either!

"Bill B." <n1sniNOSPAM@comcast.net> wrote in message
news:mPKdnbkxMsJcIgjdRVn-sQ@comcast.com...
> Thank you so much for all your help (Crazy George, Roy, Tom, John)!! Per
> Crazy George's suggestion, I am picking up some books tomorrow at Borders
> <grin>. However, the posts that I received were very helpful. Let me
explain
> a little more what I am trying to do, just to see if I am even close to
the
> right track. We have a Microwave link that operates at 5 GHz...
specifically
> one sides transmits between 5.25-5.25GHz and receives at 5.725-5.825 GHz.
> The product we are using for this link is a Stratum 100 (
> http://www.commputercations.com/products/wsstratum.htm - The only
datasheet
> I could find). This link went down hard a few days ago, so we switched
> polarization (From Horizontal to Vertical). Things got much better, but we
> still were taking corrupt packets. So, we went out there with an Advantest
> R3465 SA (http://www.ntecusa.com/graphics/pdf/WE106.pdf), an Omni
antenna,
> and 10 degree directional dish, with the hopes to (1) look at the "same"
> noise floor that the Stratum sees and (2), try to track down any single

> direction (And hopefully antenna) that is causing interference. Now, I
> thought I knew this stuff <grin>, at least enough to retrieve somewhat
> accurate results. Boy was I wrong! I scanned the receiving frequencies
using
> the following settings:
>
> Start Freq: 5.725GHz
> End Freq: 5.825GHz
> Span: 100MHz
> RBW: 5 MHz
> VBW: 1 MHz
> Sweep Time: 50ms
> ATT: 10dB
> REF: 0.0dBm (10dB/)
>
> Knowing what I know now, I would have kept the RBW value MUCH lower (Like
> 10kHz). But what I saw was a "noise floor" - Which I was assuming to be (I
> believe) the Thermal noise floor which I now know to be the Filter Noise
> Floor, peaking out at about -64dBm. Now our receive strength when the
radio
> is on is -65dB... So I figured "Hey, there is our problem... the receiver
in
> the Stratum unit is seeing the noise floor so loud that it can hardly see
> the actual signal". What makes this even more believable is that these
> readings were taken in the middle of Boston on the 26th floor roof. So I
> packed up and went home... Then I tried the same test at my fairly
isolated
> house... and got the same results!
>
> Now I know there is at least one answer to how to avoid this embarrassing
> situation in the future... read a book (Which I will start tomorrow)...
> however, I really would like to get this link up in short order and need
to
> know these numbers. Am I correct in saying that I need to (1) contact the
> manufacture of the Stratum unit, and find out what their Bandwidth filter
> looks like and then (2), Set my RBW to the same or lower setting as their
> radio and do the test again?
>
> If the above two steps are correct than great... I can do that... but I
> really would like to make use of the measurements I already took if
> possible.
>
> Again, I really appreciate the comments from before. While I don't yet
> understand all of it, these really point me in the right direction, and I
> will keep reading/researching until it all comes together.
>
> Thank you,
> Bill B. - N1SNI
>
> "John Smith" <pani@yahoo.com> wrote in message

> news:c73a8e$hfbqp$1@ID-225206.news.uni-berlin.de...
> > What is the "Bandwidth" of the "stuff" you are trying to measure?
> > You could set the analyzer to that or a little less, and then use
relative
> > measurements.
> > You may need more gear if you are trying to measure a very low noise
> > wideband preamp.
> > Depends on what you are trying to measure.
> > Bigger bandwidth=higher noise floor, simply kTB. and it is a ratio if
you
> > change kTB1/kTB2= B1/B2 (10 log it of course)
> >
> > If you have the analyzer on, then connect the gizmo without signal and
the
> > noise floor rises up 10 dB or more, you could probably ignore
calculating
> > what the SA contributes. just add signal and it should be 6 dB or more
> above
> > noise floor established by your gizmo.
> >
> > If not, then It is possible to calculate almost exactly the noise floor
> on
> > the analyzer to verify what is displayed is good, but you need a number
or
> > two from the MFGR of the analyzer, which takes into account the filter
> shape
> > of the analyzer. (0.8 ot 1.6 something like that)
> >
> > SAs are cool! What type do you have, makes a big difference, (depending
on
> > what you are trying to measure) Some will not do it.
> >
> >
> > "Bill B." <n1sni@comcast.net> wrote in message
> > news:a461033a.0405012012.4d6965b1@posting.google.com...
> > > Hello,
> > > I need some help in figuring out how to properly use a Spec. Analyzer.
> > > I have done several hours of research online now, and have somewhat of
> > > an idea of what I am doing, but I just can't get down one piece of the
> > > puzzle. In my line of work, we use simple devices that give us the
> > > noise floor level in dB. I (stupidly) expected to be able to get this
> > > same information easily out of a SA. As you may have guessed by now, I
> > > ran into a problem when switching the RBW value. After much... much
> > > reading, I fully understand *WHY* it changes (Filters increasing in
> > > size cause a greater internal noise level, etc.) but I can't figure
> > > the best way to get a "base" noise level reading. And as much as I
> > > would like to fully understand the theory, what I really need is a few
> > > more examples... IE: If you are looking a 100 MHz span and your RBW is
> > > 1MHz simply ___Fill in the Blank____ to find the base noise floor. To
> > > further explain what I am trying to do, we are setting up a link that

> > > requires a SNR of at least 6dB... I need to get the noise floor level
> > > to compare with my projected signal strength for this link.
> > >
> > > Please be nice... This is my first post <grin>
> > >
> > > Thank you! Thank you!
> > >
> > > Bill B. - N1SNI
> >
> >
>
>

1734. Re: Spectrum Analyzer & "noise" measurements

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 16:52:19 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c75tg1$ht7$1@newshost.mot.com>
Source record: 95685
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.misc,rec.radio.amateur.policy

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:1099uffhdrg4g3d@corp.supernews.com...
> [...snip...]
> If you're trying to measure the noise
> coming from a receiver, it has to be considerably greater than the SA's
> internal noise, or you'll never see it.

Assuming classical "noise" as we are all probably thinking...
First, a minor correction to the above "considerably greater", Roy. If the EXternal noise is just 6dB above the SA's INternal noise (I guess 4 times can be considered 'considerable'), then the resulting displayed value will be only 1 dB higher than the incomming noise actually is. Noise power (when combining in one receiver) simply adds. To see the math, think this way. A 1 dB increase amounts to 1.25 times the power. That extra 25 percent is one fourth the original power. 25% of the power is 6dB down from the original. SO adding some power which is -6 dB (or 25% the original) will raise the total 1 dB.

However, The poster used the term "noise", but doesn't know the source of his problem. His data hits can be caused by other than what we are thinking is noise. It can be (sounds like since it recently started) spurious signals in his channel OR it could be IM being caused from strong signals getting into his receiver. The spurious in-band stuff could be narrow signals or wideband. Typical CDMA signals behave much like simple wide-band noise as we think of noise. A narrow band signal/spur is different.

From a later post I see that he is trying to measure some junk that has appeared on the link frequency causing interference. In any case, the front-end noise floor (noise figure) of the SA will determine how far down you will be able to see and if it is not low enough, then you won't see the interference. I can not comment on the Advantest sensitivity. If you have access to a low noise amplifier of the type used in your system, it can be used in front of the SA and *MAY* raise the sensitivity (lower the noise figure/floor) enough to see yout interference.

Good luck. We've had a strange low level (around -123 dBm)spur on our repeater input since last fall and can't locate it...wish I had lotsa time.
--
Steve N, K,9;d, c. i My email has no u's.

1735. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 19:16:33 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0405031116.44024377@posting.google.com>
Source record: 95686

> It's a little ironic that you're trying to save a penny or two on your
> design and think that bitching about free advice is somehow going to help
> you achieve that goal...
>
> Look, call up a dozen or so vendors and get some price quotes -- it'll give
> you some idea of what a 'reasonable' price should be. Figure out what you
> can charge for your product... if there's enough money left for you to make
> profit, just go for it and leave the rest of your learning/profit
> maximization until you actually have an income stream and some track record
> of the difficulties in building your products.
>
> Anyone worrying about $.01/sq. in. either has such a huge volume that they
> should be able to afford an expect to get the best prices and redesign the
> product (this oftens makes a huge difference!) specifically to be easy to
> manufacture or else is probably never going to get their product out the
> door in the first place. I've seen many people who seemed to have viable
> product ideas never get anywhere because they spent far too much time
> worrying about how to squeeze the last penny out of manufacturing costs and
> ran out of enthusiasm to simply design and document the product properly.
>
> ---Joel Kolstad

Finally a thoughtful response. BTW I have called up the vendors,
that's just common sense, but the prices they quote are rediculous
even if you promise them volume. They don't believe you about the
volume (rightfully so, that's why I am asking someone who has the
volume) and at those prices there is no business. I have done all
that analysis.

Yes, I am worried about $.01/sq in. That's a buck on a 100 sq in
board. That's A LOT of money to me. BTW, I have done as much antenna
footprint minimization as possible (that's a different topic). Now to
your point about never getting anywhere due to too much time squeezing
out pennies. I have experienced a lot more of the opposite, where
people build stuff without paying enough attention to the costs and
then figure out that its too expensive and try to cost reduce. At
that point their previous decisions limit their options and the stuff
can never be built cheap enough. So I am trying to strike a balance.
And if I can get a quick answer on what those costs are, that would
leave me more time to optimize the design. BTW I am NOT asking who
you are, I am just asking how much you pay. That's the beauty of
these boards. I don't see the foul.

ps Free advice is the goal of these boards, I am not bitching about
the advice, I am bitching about lack thereof.

1736. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 19:43:16 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <4096A0D4.6DDDD910@uci.edu>
Source record: 95687

basketball_jones wrote:
>
> > It's a little ironic that you're trying to save a penny or two on your
> > design and think that bitching about free advice is somehow going to help
> > you achieve that goal...
> >
> > Look, call up a dozen or so vendors and get some price quotes -- it'll give
> > you some idea of what a 'reasonable' price should be. Figure out what you
> > can charge for your product... if there's enough money left for you to make
> > profit, just go for it and leave the rest of your learning/profit
> > maximization until you actually have an income stream and some track record
> > of the difficulties in building your products.
> >
> > Anyone worrying about $.01/sq. in. either has such a huge volume that they
> > should be able to afford an expect to get the best prices and redesign the
> > product (this oftens makes a huge difference!) specifically to be easy to
> > manufacture or else is probably never going to get their product out the
> > door in the first place. I've seen many people who seemed to have viable
> > product ideas never get anywhere because they spent far too much time
> > worrying about how to squeeze the last penny out of manufacturing costs and
> > ran out of enthusiasm to simply design and document the product properly.
> >
> > ---Joel Kolstad
>
> Finally a thoughtful response. BTW I have called up the vendors,
> that's just common sense, but the prices they quote are rediculous
> even if you promise them volume. They don't believe you about the
> volume (rightfully so, that's why I am asking someone who has the
> volume) and at those prices there is no business. I have done all
> that analysis.
>
> Yes, I am worried about $.01/sq in. That's a buck on a 100 sq in
> board. That's A LOT of money to me. BTW, I have done as much antenna
> footprint minimization as possible (that's a different topic). Now to
> your point about never getting anywhere due to too much time squeezing
> out pennies. I have experienced a lot more of the opposite, where
> people build stuff without paying enough attention to the costs and
> then figure out that its too expensive and try to cost reduce. At
> that point their previous decisions limit their options and the stuff
> can never be built cheap enough. So I am trying to strike a balance.
> And if I can get a quick answer on what those costs are, that would
> leave me more time to optimize the design. BTW I am NOT asking who
> you are, I am just asking how much you pay. That's the beauty of
> these boards. I don't see the foul.

>
> ps Free advice is the goal of these boards, I am not bitching about
> the advice, I am bitching about lack thereof.

I gotta think you must be taking the wrong approach with these PC houses if you can't get an answer from them. Besides, the answers you get from us don't amount to much if you can't get anybody to make your boards for the prices "quoted" here.
Bottom line is you won't get the low digit price unless you're going to spend some big money. If you let the PC houses know how big a project you have, and it's big, then they'll be plenty anxious to quote you a good price.

73, Jim AC6XG

1737. Help -- Need Installation Advice for Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 22:35:53 UTC
From: Rob <noemail@pse.com>
Message-ID: <mMzlc.20624$3Q4.372643@news20.bellglobal.com>
Source record: 95688

I am now in the market for a new vertical after my old R7000 was hit by lightning.

My old R7000 was mounted on a 45 foot Tower. (At this height, the antenna worked great!)

I am considering purchasing a SmallIR vertical (from www.steppir.com) and mounting it on this 45 foot tower with radials dropping downward from the tower. I won't be able to easily guy the vertical but it would appear that it is pretty strong with a 80 MPH wind survival rating without radials.

Is it a good idea to install the SmallIR on top of a 45 foot Tower?
Has anyone successfully used the SmallIR vertical mounted on a 45 foot Tower?

I am also considering purchasing the BigIR vertical. But if its guying requirements, I won't be able to mount it on the Tower. Instead, I am thinking of using my elevated deck as a support. My Back wooden deck is about 9 foot off the ground with a 4 foot fence and some posts about 7 feet tall. I am thinking of mounting the antenna feed point about 8 to 9 feet off the ground and use the bottom of the deck to install radials. I will use the post to provide additional support instead of using guy wires.

Will this work? (I realise I will have to fiddle with the length of the radials)

73's
Rob
Quebec

1738. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 22:36:29 UTC
From: ghldbrd@ccp.com
Message-ID: <598dc4be.0405031436.6f51ff7f@posting.google.com>
Source record: 95603
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

WA3MOJ <WA3MOJ@home.com> wrote in message news:<c60cuk02d43@drn.newsguy.com>...
> Hi all, I'm looking for a good reference manual, pdf file, or web site's that
> will assist me in converting used UHF gear to operate on 11 meters. I'm finding
> there is a substantial market for such gear and I'll need some references for
> various solid state and tube conversions.
>
> Thanks in advance for any help.
>
> WA3MOJ

First, the circuit techniques for UHF receiver front ends and
transmitter PA's are totally different than those on 11 meters.
Conversion becomes wholesale replacement of about half of the radio.

Second, <<`ALL'>> CB radios must be type-accepted by the FCC for use
on the air. Unless you have the thousands of dollars for R&D, and
legal assistance to complete this, forget the whole thing.

What you are trying to do is tantamount to modifing a VCR into a
satellite uplink to jam television satellites. Can't get there from
here, No how, now way. Zip. Nada. The BIG goose egg.

Now you could use UHF commercial radios on the GMRS (former Class A CB
channels) with very little problem. Just change crystals or reprogram
the synthesizer in the radio, tweak, and you're in business. Any
competent two-way radio shop can do that.

I'd suggest you study a LOT more on basic electronic theory, and
circuit design before you post such an asinine question.

Gary Hildebrand WA7KKP

1739. Re: Help -- Need Installation Advice for Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 23:26:49 UTC
From: jgboyles@aol.com
Message-ID: <20040503192649.27600.00000540@mb-m05.aol.com>
Source record: 95689

>I am now in the market for a new vertical

>My old R7000 was mounted on a 45 foot Tower. (At this height, the antenna
>worked great!)

>I am considering purchasing a SmallIR vertical (from www.steppir.com) and
>mounting it on this 45 foot tower with radials dropping downward.

Rob, You must enjoy spending money on antennas:-) If you can get an inverted vee up 45' at apex, and feed it with ladder line and a tuner, then you have something that will exceed what you are proposing. A 50-65' per leg vee will get you on 80M-10M, and possibly 160M.

The performance on the lower bands (160M-40M) will exceed any store bought vertical. On 20M-10M you may not see any difference in performance, depends on what dx you are trying to snag.

If you are going to put a vertical 45' in the air with radials sloping downward, why not try ladder line and a tuner and see what happens. You will spend considerably less $.

73 Gary N4AST

1740. Channel Master choices

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-03 23:44:10 UTC
From: bdlong@excite.com
Message-ID: <2ed815df.0405031544.338ee44c@posting.google.com>
Source record: 95690

At the present time, I use an indoor "powered" antenna. Almost all of the stations in the local area, (3, 12,16, 27, 29, 35, 40), come in clear. Channel 3 and 12 are usual "fuzzy", but normally watchable. Channel 27 can be difficult at times, but 35 is the worse. There are times when the picture is unviewable, and it is never really clear. The tower for Channel 35 is appr. 30 miles away, all of the others are less than 10.5 miles. The ground if flat, with a few good size oak trees in the area. I have a 25 foot tower which I removed an old non-working antenna from.

My thoughts are to buy an external antenna and try it out, buy a pre-amp only if needed. By the way, I plan to split the signal with the longest run being about 80 feet from the top of the tower. My only concern is the length of the longest cable, which happens to be to the main TV which we watch. If channel 3 and 12 didn't give me problems, I would just buy a UHF only antenna. I am looking at the following antennas: 3010 or 3016. The non-amp 3016 appears to give better numbers, according to Channel Master's website. Does any one have either one of these, with and without a pre-amp? Will the 3010 with an amp,(CM3038), give me much better reception then the 3016 without? (I have a chance to buy one from another individual). I don't care about the fancy numbers, I just want to know, will both of them give me the clear pictures I'm looking for?

Thanks for your suggestions,

John

1741. Re: Help -- Need Installation Advice for Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 00:33:12 UTC
From: Old Ed <eseniorsR-E-M-O-V-E@earthlink.net>
Message-ID: <cxBlc.5976$Hs1.3698@newsread2.news.pas.earthlink.net>
Source record: 95691

Hi Rob -

You might talk to the SteppIR folks about using one of their DIPOLES on your tower. It could probably be mounted vertically if you were so inclined.

If I were going to try that, I would try it first without a balun, and make sure
the dipole leg adjacent to the tower was connected to the shield side.
But you could be assured that the dipole would work killer in the conventional
horizontal orientation, IF the airspace it occupies isn't a problem for you.

Have fun es 73, Ed

"Rob" <noemail@pse.com> wrote in message
news:mMzlc.20624$3Q4.372643@news20.bellglobal.com...
> I am now in the market for a new vertical after my old R7000 was hit by
> lightning.
>
> My old R7000 was mounted on a 45 foot Tower. (At this height, the antenna
> worked great!)
>
> I am considering purchasing a SmallIR vertical (from www.steppir.com) and
> mounting it on this 45 foot tower with radials dropping downward from the
> tower. I won't be able to easily guy the vertical but it would appear
that
> it is pretty strong with a 80 MPH wind survival rating without radials.
>
> Is it a good idea to install the SmallIR on top of a 45 foot Tower?
> Has anyone successfully used the SmallIR vertical mounted on a 45 foot
> Tower?
>
> I am also considering purchasing the BigIR vertical. But if its guying
> requirements, I won't be able to mount it on the Tower. Instead, I am
> thinking of using my elevated deck as a support. My Back wooden deck is
> about 9 foot off the ground with a 4 foot fence and some posts about 7
feet
> tall. I am thinking of mounting the antenna feed point about 8 to 9 feet
> off the ground and use the bottom of the deck to install radials. I will
> use the post to provide additional support instead of using guy wires.
>
> Will this work? (I realise I will have to fiddle with the length of the
> radials)
>
> 73's

> Rob
> Quebec
>
>

1742. Re: Help -- Need Installation Advice for Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 00:54:54 UTC
From: Rob <noemail@pse.com>
Message-ID: <AOBlc.20759$3Q4.418817@news20.bellglobal.com>
Source record: 95693

Hi Ed,

Thanks for the post. Well I considered the SteppIR dipole instead of the vertical. But my Tower is a self supporting TV Tower. It isn't that strong. It handled the R7000 without any problems. But I fear that extra windload of a dipole (or my dream yagi!) would be too much. (One day I will put up a real tower and a yagi!)

I like the low DX angle and omni directional pattern of a vertical. I live in the country so QRN is not a big problem.

I have found that the R7000 vertical worked much better up 45 feet than mounted 8 feet from the ground (as recommended by Cushcraft).

I would like to avoid traps and go with a STeppIR vertical. But only the small StepppIR vertical can be mounted practically on a Tower.

If I want 40m and 30 m coverage, I need the BigIR and mount it near the ground. (Possibly using my elevated deck as support and using the bottom of the deck to support the radials).

Decisions.. Decisions.

Rob

Old Ed wrote:
> Hi Rob -
>
> You might talk to the SteppIR folks about using one of their DIPOLES
> on your tower. It could probably be mounted vertically if you were
> so inclined.
>
> If I were going to try that, I would try it first without a balun,
> and make sure
> the dipole leg adjacent to the tower was connected to the shield side.
> But you could be assured that the dipole would work killer in the
> conventional
> horizontal orientation, IF the airspace it occupies isn't a problem
> for you.
>
> Have fun es 73, Ed
>
> "Rob" <noemail@pse.com> wrote in message
> news:mMzlc.20624$3Q4.372643@news20.bellglobal.com...
>> I am now in the market for a new vertical after my old R7000 was hit
>> by lightning.
>>

>> My old R7000 was mounted on a 45 foot Tower. (At this height, the
>> antenna worked great!)
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>> I am considering purchasing a SmallIR vertical (from
>> www.steppir.com) and mounting it on this 45 foot tower with radials
>> dropping downward from the tower. I won't be able to easily guy the
>> vertical but it would appear that it is pretty strong with a 80 MPH
>> wind survival rating without radials.
>>
>> Is it a good idea to install the SmallIR on top of a 45 foot Tower?
>> Has anyone successfully used the SmallIR vertical mounted on a 45
>> foot Tower?
>>
>> I am also considering purchasing the BigIR vertical. But if its
>> guying requirements, I won't be able to mount it on the Tower.
>> Instead, I am thinking of using my elevated deck as a support. My
>> Back wooden deck is about 9 foot off the ground with a 4 foot fence
>> and some posts about 7 feet tall. I am thinking of mounting the
>> antenna feed point about 8 to 9 feet off the ground and use the
>> bottom of the deck to install radials. I will use the post to
>> provide additional support instead of using guy wires.
>>
>> Will this work? (I realise I will have to fiddle with the length
>> of the radials)
>>
>> 73's
>> Rob
>> Quebec

1743. Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 00:55:48 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4096EA13.B2B05674@sonic.net>
Source record: 95692

How the heck did those TV crews of yesteryear erect 40+ foot telescoping antenna masts sitting atop pointed roofs? Its not exactly like you can set up a step ladder on such a roof to get up the first 10 foot to pull up the rest of the sections. Also setting the guys correctly is nothing to sneeze at I am finding out. Maybe they worked it from the top section down...of course.....! Pluse they already knew from previous experience with standard hardware how long to make the guys....I beginning to see the light....not that I can use that technique.

At the moment I am still recovering from the stress of a yet unfinished mast erecting project and when I calm down or when I am out of deep water so to speak, I will tell you the rest of the story of untangling the pre-strung guys and ropes etc. It is one of those crazy situations where you yourself are the only accountable engineer, everyone thinks your crazy, and you dare not tell anyone what you were thinking because they would just tell you that you must be nuts.

Mostly I better keep this project to myself until I am either out of the hot water or I abort it. Please wish me luck since I am a fellow antenna dream farmer gone of the deep end it seeems.......

BTW, I am not trying to do this atop such a pointed roof, and it still is quite challenging. One is almost up leaning on on end of a barn, another will be free standing out in the field, another will be tied onto a 20 foot "telephone pole" set in another part of the field (hoping to get an additional 24' or so. Plus two more I won's even go into..

then, I heard that sky wire loops are nothing all that great anyway......

talk about taking the wind out of one's sails when one is in the middle of an engineering crises....its all the fun of AMATEUR radio......amateur with its root meaning "to love"....

Bill K6TAJ

1744. Re: Help -- Need Installation Advice for Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 01:01:10 UTC
From: Rob <noemail@pse.com>
Message-ID: <rUBlc.20772$3Q4.420927@news20.bellglobal.com>
Source record: 95694

JGBOYLES wrote:
>
> Rob, You must enjoy spending money on antennas:-) If you can get an
> inverted vee up 45' at apex, and feed it with ladder line and a
> tuner, then you have something that will exceed what you are
> proposing. A 50-65' per leg vee will get you on 80M-10M, and
> possibly 160M.

I suspect you can get near the same performance with an inverted vee. But the vertical will likely have a better DX angle and will be a little more omnidirectional. Also it will be faster to switch bands with an R8 or SteppIR. No need to fiddle with a tuner.

Well I have insurance. The Insurance company will pay for the new antenna and installation. But I need to supply them with an invoice showing the purchase of a new antenna. (It doesn't need to be a vertical but the insurance will only pay for the equivalent replacement cost of a R7000 vertical. I could go for a more expensive yagi but a I would also need to buy a real Tower).

Rob

1745. Re: A call for help with antenna pattern EZNEC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 01:57:09 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109du3nj43n4fe4@corp.supernews.com>
Source record: 95695

Jerry-- Arrl prints a book -and has antenna modeling corse-- book is: ARRL
CEP
Antenna Modeling Corse, $ 39.95, plus shipping from Arrl ISBN #
0-87259-872-1
May be overkill, but, might find it interesting-- also available as a .PDF
download from the loeague for their students-- Jim nn7k

--
No trees were killed in the sending of this message. However, a large number
of electrons were terribly inconvenienced !

" People who never get carried away, should be! " --- Malcom Forbes

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:4ahjc.40373$Aq.4673@nwrddc03.gnilink.net...
> I would like to estimate the radiation pattern from a pair of dipoles.
> I've been told that there are computer programs available for drawing
> antenna patterns. I's like to try drawing the pattern from my antenna
> concept, but would sure like to get some help with learning how to do it
> with EZNEC. Is there anyone on this news froup who has time and patience
> and who might be willing to E-mail help to me??
>
> Jerry
>
>

1746. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 02:43:00 UTC
From: John Moriarity <k6qq@hdo.net>
Message-ID: <109e0u0agqcire3@corp.supernews.com>
Source record: 95696

"zeno" <zeno@sonic.net> wrote in message news:4096EA13.B2B05674@sonic.net...
> How the heck did those TV crews of yesteryear erect 40+ foot
> telescoping antenna masts sitting atop pointed roofs? Its not
> exactly like you can set up a step ladder on such a roof to
> get up the first 10 foot to pull up the rest of the sections.

That's exactly what we did! When you are
young and fearless and believe in your
personal immortality, it's amazing what
you can do ;-)

73, John - K6QQ

1747. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 02:57:52 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409706AF.BE370F75@sonic.net>
Source record: 95697

That is amazing, like you say.

Now that you mention it, I see no other way to do it. So I guess I will quit my bellyaching about doing just that out in an open field pulling up 4 ten foot sections after the first base 10 feet is mounted and guyed.

How did you secure a step ladder on the peak of a roof?

Bill K6TAJ

John Moriarity wrote:

> "zeno" <zeno@sonic.net> wrote in message news:4096EA13.B2B05674@sonic.net...
> > How the heck did those TV crews of yesteryear erect 40+ foot
> > telescoping antenna masts sitting atop pointed roofs? Its not
> > exactly like you can set up a step ladder on such a roof to
> > get up the first 10 foot to pull up the rest of the sections.
>
> That's exactly what we did! When you are
> young and fearless and believe in your
> personal immortality, it's amazing what
> you can do ;-)
>
> 73, John - K6QQ

1748. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 03:07:46 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40970900.561A3B4@sonic.net>
Source record: 95698

Hi John,

For a 50' tall mast, what would you say would be the minimum acceptible square dimensions from vertices (on a flat plane with the base) of the guy wire anchor points?

Bill K6TAJ

John Moriarity wrote:

> "zeno" <zeno@sonic.net> wrote in message news:4096EA13.B2B05674@sonic.net...
> > How the heck did those TV crews of yesteryear erect 40+ foot
> > telescoping antenna masts sitting atop pointed roofs? Its not
> > exactly like you can set up a step ladder on such a roof to
> > get up the first 10 foot to pull up the rest of the sections.
>
> That's exactly what we did! When you are
> young and fearless and believe in your
> personal immortality, it's amazing what
> you can do ;-)
>
> 73, John - K6QQ

1749. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 03:28:38 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <G5Elc.37864$NZ4.500@lakeread05>
Source record: 95699

"> For a 50' tall mast, what would you say would be the minimum acceptible square
> dimensions from vertices (on a flat plane with the base) of the guy wire anchor
> points?

Since it is easy to design a 100' mast with no guying required, there is obviously more information required to answer that question.

Jack

1750. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 04:00:47 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0405032000.32577b7@posting.google.com>
Source record: 95700

Jim Kelley <jwkelley@uci.edu> wrote in message news:<4096A0D4.6DDDD910@uci.edu>...
> basketball_jones wrote:
> >
> > > It's a little ironic that you're trying to save a penny or two on your
> > > design and think that bitching about free advice is somehow going to help
> > > you achieve that goal...
> > >
> > > Look, call up a dozen or so vendors and get some price quotes -- it'll give
> > > you some idea of what a 'reasonable' price should be. Figure out what you
> > > can charge for your product... if there's enough money left for you to make
> > > profit, just go for it and leave the rest of your learning/profit
> > > maximization until you actually have an income stream and some track record
> > > of the difficulties in building your products.
> > >
> > > Anyone worrying about $.01/sq. in. either has such a huge volume that they
> > > should be able to afford an expect to get the best prices and redesign the
> > > product (this oftens makes a huge difference!) specifically to be easy to
> > > manufacture or else is probably never going to get their product out the
> > > door in the first place. I've seen many people who seemed to have viable
> > > product ideas never get anywhere because they spent far too much time
> > > worrying about how to squeeze the last penny out of manufacturing costs and
> > > ran out of enthusiasm to simply design and document the product properly.
> > >
> > > ---Joel Kolstad
> >
> > Finally a thoughtful response. BTW I have called up the vendors,
> > that's just common sense, but the prices they quote are rediculous
> > even if you promise them volume. They don't believe you about the
> > volume (rightfully so, that's why I am asking someone who has the
> > volume) and at those prices there is no business. I have done all
> > that analysis.
> >
> > Yes, I am worried about $.01/sq in. That's a buck on a 100 sq in
> > board. That's A LOT of money to me. BTW, I have done as much antenna
> > footprint minimization as possible (that's a different topic). Now to
> > your point about never getting anywhere due to too much time squeezing
> > out pennies. I have experienced a lot more of the opposite, where
> > people build stuff without paying enough attention to the costs and
> > then figure out that its too expensive and try to cost reduce. At
> > that point their previous decisions limit their options and the stuff
> > can never be built cheap enough. So I am trying to strike a balance.
> > And if I can get a quick answer on what those costs are, that would
> > leave me more time to optimize the design. BTW I am NOT asking who
> > you are, I am just asking how much you pay. That's the beauty of

> > these boards. I don't see the foul.
> >
> > ps Free advice is the goal of these boards, I am not bitching about
> > the advice, I am bitching about lack thereof.
>
> I gotta think you must be taking the wrong approach with these PC houses
> if you can't get an answer from them. Besides, the answers you get from
> us don't amount to much if you can't get anybody to make your boards for
> the prices "quoted" here.
> Bottom line is you won't get the low digit price unless you're going to
> spend some big money. If you let the PC houses know how big a project
> you have, and it's big, then they'll be plenty anxious to quote you a
> good price.
>
> 73, Jim AC6XG

Folks we are missing the point here. I can certainly get a quote from them. You can safely assume I already have it. Ok, that tells me the MOST I am going to pay. Now I want the LEAST I can possibly pay. The only way for me to get that is to go through board manufacturers' cost structure and assume their take. I am not TI or HP, I don't have the resources to do that, and even if I did I wouldn't get it right. Now why would I want to know the LEAST even though I can't get that price at this point. Well, the situation is likely that if I have to pay the MOST, I lose money. Do I still lose money when I get to pay the LEAST? (As far as getting the houses to quote a big project) I can't get the big project funded, much less quoted until I understand that.

Look people. Determining the 'right' price is one of the 'killer aps' of the internet. Use it.

1751. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 04:19:28 UTC
From: John Moriarity <k6qq@hdo.net>
Message-ID: <109e6eg4b7cfu3e@corp.supernews.com>
Source record: 95701

> How did you secure a step ladder on the peak of a roof?

Well, If you're still somewhat chicken,
you can enlist another person to foot
the ladder ;-)

73, John - K6QQ

1752. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 04:21:44 UTC
From: John Moriarity <k6qq@hdo.net>
Message-ID: <109e6in44ri0ce2@corp.supernews.com>
Source record: 95702

> For a 50' tall mast, what would you say would be the minimum acceptible
square
> dimensions from vertices (on a flat plane with the base) of the guy wire
anchor
> points?

I can't answer that authoritatively. Usually
the distance was to the edge of the roof ;-)

73, John - K6QQ

1753. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 05:31:33 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40972AB3.71149ABE@sonic.net>
Source record: 95703

Jack Painter wrote:

> "> For a 50' tall mast, what would you say would be the minimum acceptible
> square
> > dimensions from vertices (on a flat plane with the base) of the guy wire
> anchor
> > points?
>
> Since it is easy to design a 100' mast with no guying required, there is
> obviously more information required to answer that question.
>
> Jack

Hi Jack,

That reminds me of that legendary character who was looking for his keys a thousand feet from where he lost them because the light was better over there, hi hi.

Bill K6TAJ

1754. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 05:42:45 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40972D54.ABB9A9EA@sonic.net>
Source record: 95704

John Moriarity wrote:

> > For a 50' tall mast, what would you say would be the minimum acceptible
> square
> > dimensions from vertices (on a flat plane with the base) of the guy wire
> anchor
> > points?
>
> I can't answer that authoritatively. Usually
> the distance was to the edge of the roof ;-)
>
> 73, John - K6QQ

Well, I guess I will just put the guy wires as far out as I can without bumping into the trees in the orchard.....or I might just not put up this extra 50' mast at all, but that means I will have to span nearly 180 feet on one side of my square loop skywire.

I am already falling out of favor with those around me here with this crazy antenna project....such is the misunderstood life of the ham ....at least I am in the country and it is my own place....and the waf is not an issue at the moment. Some people do not find a 50 foot mast in the middle of an orchard as beautiful as I do. I think the "industrial" aesthetic needs to be boosted a bit these days....fortuitious pun...perhaps intended....

Bill - K6TAJ

1755. Re: Help -- Need Installation Advice for Vertical Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 06:18:48 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405032218.11dfe84f@posting.google.com>
Source record: 95705

"Rob" <noemail@pse.com> wrote in message
news:<mMzlc.20624$3Q4.372643@news20.bellglobal.com>...
> I am now in the market for a new vertical after my old R7000 was hit by
> lightning.
>
> My old R7000 was mounted on a 45 foot Tower. (At this height, the antenna
> worked great!)
>
> I am considering purchasing a SmallIR vertical (from www.steppir.com) and
> mounting it on this 45 foot tower with radials dropping downward from the
> tower. I won't be able to easily guy the vertical but it would appear that
> it is pretty strong with a 80 MPH wind survival rating without radials.
>
> Is it a good idea to install the SmallIR on top of a 45 foot Tower?
> Has anyone successfully used the SmallIR vertical mounted on a 45 foot
> Tower?
>
> I am also considering purchasing the BigIR vertical. But if its guying
> requirements, I won't be able to mount it on the Tower. Instead, I am
> thinking of using my elevated deck as a support. My Back wooden deck is
> about 9 foot off the ground with a 4 foot fence and some posts about 7 feet
> tall. I am thinking of mounting the antenna feed point about 8 to 9 feet
> off the ground and use the bottom of the deck to install radials. I will
> use the post to provide additional support instead of using guy wires.
>
> Will this work? (I realise I will have to fiddle with the length of the
> radials)
>
> 73's
> Rob
> Quebec

It will work, but I'd rather have an antenna on the tower at 45 ft any
day. I think if I had to choose between a smaller antenna higher, or a
longer one lower, I'd usually prefer the higher smaller antenna. But
of course will depend on the number of radials you have at the lower
level. I don't know what bands you prefer, but take 40m...At 8-9 ft,
you would probably need at least 60 radials to equal the level of
performance of just 4 radials at 45 ft. MK

1756. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 14:29:12 UTC
From: gwatts <gwatts@frontiernet.net>
Message-ID: <4097A8B4.203@frontiernet.net>
Source record: 95706

zeno wrote:
> How the heck did those TV crews of yesteryear erect 40+ foot
> telescoping antenna masts sitting atop pointed roofs?
(snip)

> BTW, I am not trying to do this atop such a pointed roof, and
> it still is quite challenging. One is almost up leaning on
> on end of a barn, another will be free standing out in the
> field, another will be tied onto a 20 foot "telephone pole"
> set in another part of the field (hoping to get an additional
> 24' or so. Plus two more I won's even go into..
(snip)
>
> Bill K6TAJ

I'm planning a couple 50' telescoping masts with pulleys at the top to hold up a long, center fed Zepp. I plan to erect some scaffolding around the masts so the deck is at 8-9 feet, then pull up each section while using temporary guys until it's all the way up, set the guys, take down the scaffolding, hoist up the Zepp and have a beer.

I haven't done it yet but it would seem that it would be easier standing on a deck, not balancing on the top of a ladder while lifting so much weight. Scaffolding gives you a bigger place to stand, big enough you can add a second person and make it that much easier. It also serves to help hold the mast vertical if you tie the bottom section to the scaff.

I could see setting scaffolding over the peak of a roof to set up a mast there.

-Galen, W8LNA

1757. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 14:29:58 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <4097aadd_3@news1.prserv.net>
Source record: 95707

Bill:

You need to enlist a little geometry and mechanical engineering. We like to keep our top guys at 45 degrees or less (ground up to guy) where space permits. The down force on the mast for each guy is then .707 of the guy tension. As the guys get steeper, the down force on the mast becomes a larger and larger portion of the total tension. So for a smaller 'footprint' with the guys near straight up, any side force on the guy from wind or antenna tension becomes a larger down force on the mast. I need to make drawings to clarify that point, so find someone mechanically inclined to wave their hands and draw lines and make calculations for you.

As far as the stepladder on the roof, consider the average male is just under 6' tall, with an 18" up reach. So he has to stand only 4 feet above the mounting level of the base of the mast to erect it. A 5 foot stepladder straddling the peak of most roofs is relatively stable if you are young, limber and agile. Having the first (bottom) section SOLIDLY guyed is a must. At least that's what I remember from the middle of the last century.

--
Crazy George
Remove N O and S P A M imbedded in return address
"zeno" <zeno@sonic.net> wrote in message news:40970900.561A3B4@sonic.net...
> Hi John,
>
> For a 50' tall mast, what would you say would be the minimum acceptible
square
> dimensions from vertices (on a flat plane with the base) of the guy wire
anchor
> points?
>
> Bill K6TAJ
>
> John Moriarity wrote:
>
> > "zeno" <zeno@sonic.net> wrote in message
news:4096EA13.B2B05674@sonic.net...
> > > How the heck did those TV crews of yesteryear erect 40+ foot
> > > telescoping antenna masts sitting atop pointed roofs? Its not
> > > exactly like you can set up a step ladder on such a roof to
> > > get up the first 10 foot to pull up the rest of the sections.
> >
> > That's exactly what we did! When you are
> > young and fearless and believe in your
> > personal immortality, it's amazing what

> > you can do ;-)
> >
> > 73, John - K6QQ
>

1758. Re: Spectrum Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 14:56:01 UTC
From: richardharrison@webtv.net
Message-ID: <1683-4097AF01-30@storefull-3257.bay.webtv.net>
Source record: 95708

John Smith wrote:
"The big boys use 4 dishes for a link."

Yes. It is for space diversity which dramatically improves reliability on many paths. Paths tend to fade independently when they are significantly separated, say by 10 wavelengths.
More than just 2 antennas at a path end is required for diversity reception. Separate receivers are required too.

Two dishes connected together just make an antenna array. If both receive the same signal, it is probable a time will come when the signal sum is zero even though either signal is usable.

Two receivers or more must be used for space diversity reception. A special combiner must be used to select the best signal and reject all others. Individual receivers are connected with individual antennas and selection is made from among the receiver outputs. All other receiver outputs are completely rejected.

The shortwave broadcaster I worked for in the 1950`s relayed its programs via HF radio. There were 3 rhombic receiving antennas, separated by about 10 wavelengths broadside, at the lowest frequency. This was repeated for each reception direction. Each rhombic fed its own multicoupler in the receiving station. A receiver for each frequency being received was connected with an output from a multicoupler.The receivers were all Hammarlund SP-600`s.

Three receiver outputs, representing signals from each of three antennas were fed to a "triple diversity combiner" (Crosby or Pioneer). The combiner selscted the best of the three signals and rejected all others. This is a triple diversity reception, "TDR System".

In the 1960`s, I built a diversity microwave system into the Gulf of Mexico from onshore. Water can often reflect well enough for complete signal cancellation at microwave frequencies, so I used space diversity, two dishes vertically separated on the towers, feeding separate receivers at each path end. Only one transmitter at each end of a path operates at a time., but both receivers work with a combiner which functions like that used at HF for the TDR. Output is a video type spectrum rather than audio output as from the TDR combiner. The video combiner picks the better of the two received demodiulated microwave signals and rejects the poorer signal. It works like Gangbusters.

Best regards, Richard Harrison, KB5WZI

1759. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 15:16:02 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <4097ad4b.1520515734@news.galilei.com>
Source record: 95709

Hi Bill

After a serious fall a number of years ago, I am now terrified of heights like you wouldn't believe.

Yet I am still able to put up 50 foot towers, push-ups and even sectional guyed poles by myself with no problems.

On push-up poles, I lay them on the ground first, open them up, make point to point guy ring measurements, mark the poles for their maximum safe expansion and close the assembly back up and haul it up to the roof.

The main body is guyed and finished off prior to doing anything else. Using the formula to find the hypoteneuse the guys are marked for full length, then remarked for each lifting stage of the operation.

The antenna or antennas are affixed to the innermost or highest part of the mast, which is only extended at this time long enough to do this operation. The ladder to reach them is set on the roof and tied to the now rigid base mast section.

Before lifting, the guys for section one are clamped at their first set of markings, which allows a little slack or you couldn't lift it to the proper fixed height. After the clamps are in place, as you lift the first section, the guys slide through the eyes until they near the clamp. The mast is only lifted about 2 feet at a time and the standoffs for the ladder line are installed or the coax affixed to the mast with ties. Again it is lifted another 2 feet and a standoff or tie or both are installed. Repeated until you reach your 10 foot marking and this top section is then locked down solid.

Now clamps are installed to the guys for section two to the first marking, the clamps for section one are loosened and clamps installed on the second marking for the upper guys.
Here is where it helps to have 3 or 4 extra helpers to feed guys and keep them fairly taught. But if you don't have them, the pole is not going to fall further than the next set of clamps on the guys, or about a 2 to 3 foot lean at this early stage, the lean gets less as the guys get longer.

The second mast is pushed up, usually by bouncing it so the first clamps of the section one guys can slide on the cables but still have enough tension to hold the antenna upright for you.
Again, working in 2 foot increments, the standoffs and/or ties are installed.

By the time you get section two up to maximum height, you will not be able to lift the remaining sections by hand. It's not the weight, it's the tension on the guys and floating clamps that are your enemy. If your familiar with how a Pony clamp set works, I had a similar tool made for lifting push-pole sections. A clamp is affixed to pole two and to the main mast in two places. I simply turn the handle to lift the pole about 8 inches, then lock it down, crank the tool back down, let it catch the pole and unlock the mast and crank it up another 8 inches and repeat until I get to the two foot point. Then I install the standoffs and/or ties or both. Then repeat again.

Once the whole assembly is at full height, the guys are then tensioned to their proper rating. If your guys are NOT equal distance from the tower, you will have to make adjustments to the tension settings to maintain a perfectly vertical pole.

Many of your guys themselves can be used as antennas if you plan for this before setting up the system.

I put up an 80 foot vertical single handedly using only 1 inch 10 foot sections of interconnecting pipes. We had intended going up 100 feet, but the pipe was not strong enough to hold itself without telescoping and splitting, so we halted at 80 feet. It stood for 9 years untouched and without problems. Taking it down was really simple. One hit to the lower pipe with a baseball bat and the whole thing came straight down on itself and finally stopped dropping at about 15 feet of height and leaned over, the antenna did not touch the ground and was salvagable.

TTUL
Gary

1760. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 16:46:20 UTC
From: deje a lector guardarse <dlg@pero.net>
Message-ID: <wNPlc.11821$k24.1476@fed1read01>
Source record: 95710

I installed a Hy-Gain TH-3 Jr and an Alliance TV rotor on a 20 foot TV mast on a 2 story house -- used a heavy duty antenna tripod for a base-- total height 42 feet.

The drill was with 5 "Amateurs":
1. Under the roof -- installed 4 by 4's to take lag bolts from the Tripod base
2. Bolted down the tripod mount to roof and 4x4's -- under the roof added sealant to prevent water entering.
3. Raised collapsed TV mast with antenna rotor and 4 guy wires --secured in tripod
4. Guyed the 10 foot section with the 4 guy wires
5. Set step ladder next to 10 foot guyed section -- secured ladder with rope to mast
6. Stong buddy also held ladder against mast
7. Tall guy (me) ascends ladder. Had rope around my waist in case I nose dived off of the ladder
8. Horsed the collapsed section with 4 more guy wires attached -- up to 20 feet - secured guy wires (Total 8 guy wires)
9. Fed all hands Pizza and beer.
10. Antenna stayed up there thru storms winds et al for 15 years before I moved.

Your installation may vary -- this is just the way we did it -- but we were are not professional installers, so caveat installer. I take no responsibility for your installation.

You should contact professional TV antenna installers for their approval -- or better yet -- let them install it.

--
deje a lector guardarse

Amateur Radio is the best back-up
communications system in the world,
and that's the way it is. Walter Cronkite

"John Moriarity" <k6qq@hdo.net> wrote in message
news:109e6eg4b7cfu3e@corp.supernews.com...
> > How did you secure a step ladder on the peak of a roof?
>
> Well, If you're still somewhat chicken,
> you can enlist another person to foot
> the ladder ;-)
>
> 73, John - K6QQ

>
>

1761. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 16:57:50 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4097CB89.EAC4F657@sonic.net>
Source record: 95711

Hi George,

A 45 degree angled guy from the top of a 50' tall mast will be out 50' from the base of the mast. That would suggest that the "square" made from the four anchor points is 100' on a side. I will have to look at the site and see if that is possible.

Bill

Crazy George wrote:

> Bill:
>
> You need to enlist a little geometry and mechanical engineering. We like to
> keep our top guys at 45 degrees or less (ground up to guy) where space
> permits. The down force on the mast for each guy is then .707 of the guy
> tension. As the guys get steeper, the down force on the mast becomes a
> larger and larger portion of the total tension. So for a smaller
> 'footprint' with the guys near straight up, any side force on the guy from
> wind or antenna tension becomes a larger down force on the mast. I need to
> make drawings to clarify that point, so find someone mechanically inclined
> to wave their hands and draw lines and make calculations for you.
>
> As far as the stepladder on the roof, consider the average male is just
> under 6' tall, with an 18" up reach. So he has to stand only 4 feet above
> the mounting level of the base of the mast to erect it. A 5 foot stepladder
> straddling the peak of most roofs is relatively stable if you are young,
> limber and agile. Having the first (bottom) section SOLIDLY guyed is a
> must. At least that's what I remember from the middle of the last century.
>
> --
> Crazy George
> Remove N O and S P A M imbedded in return address
> "zeno" <zeno@sonic.net> wrote in message news:40970900.561A3B4@sonic.net...
> > Hi John,
> >
> > For a 50' tall mast, what would you say would be the minimum acceptible
> square
> > dimensions from vertices (on a flat plane with the base) of the guy wire
> anchor
> > points?
> >
> > Bill K6TAJ
> >
> > John Moriarity wrote:

> >
> > > "zeno" <zeno@sonic.net> wrote in message
> news:4096EA13.B2B05674@sonic.net...
> > > > How the heck did those TV crews of yesteryear erect 40+ foot
> > > > telescoping antenna masts sitting atop pointed roofs? Its not
> > > > exactly like you can set up a step ladder on such a roof to
> > > > get up the first 10 foot to pull up the rest of the sections.
> > >
> > > That's exactly what we did! When you are
> > > young and fearless and believe in your
> > > personal immortality, it's amazing what
> > > you can do ;-)
> > >
> > > 73, John - K6QQ
> >

1762. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 17:07:15 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4097CDBF.74AEEF44@sonic.net>
Source record: 95712

Hi Gary,

Thanks for the thorough instructions. I am not sure I understand the pony clamp, but I agree that I can see a problem trying to lift up the combined weight of the last 4 of the 5 sections after the first 10 foot section is in place. Where can I see an image of such a "pony clamp"? I have two people trying to pull it up maybe it can be done by hand.

Bill

"Gary V. Deutschmann, Sr." wrote:

> Hi Bill
>
> After a serious fall a number of years ago, I am now terrified of
> heights like you wouldn't believe.
>
> Yet I am still able to put up 50 foot towers, push-ups and even
> sectional guyed poles by myself with no problems.
>
> On push-up poles, I lay them on the ground first, open them up, make
> point to point guy ring measurements, mark the poles for their maximum
> safe expansion and close the assembly back up and haul it up to the
> roof.
>
> The main body is guyed and finished off prior to doing anything else.
> Using the formula to find the hypoteneuse the guys are marked for full
> length, then remarked for each lifting stage of the operation.
>
> The antenna or antennas are affixed to the innermost or highest part
> of the mast, which is only extended at this time long enough to do
> this operation. The ladder to reach them is set on the roof and tied
> to the now rigid base mast section.
>
> Before lifting, the guys for section one are clamped at their first
> set of markings, which allows a little slack or you couldn't lift it
> to the proper fixed height. After the clamps are in place, as you
> lift the first section, the guys slide through the eyes until they
> near the clamp. The mast is only lifted about 2 feet at a time and
> the standoffs for the ladder line are installed or the coax affixed to
> the mast with ties. Again it is lifted another 2 feet and a standoff
> or tie or both are installed. Repeated until you reach your 10 foot
> marking and this top section is then locked down solid.
>
> Now clamps are installed to the guys for section two to the first

> marking, the clamps for section one are loosened and clamps installed
> on the second marking for the upper guys.
> Here is where it helps to have 3 or 4 extra helpers to feed guys and
> keep them fairly taught. But if you don't have them, the pole is not
> going to fall further than the next set of clamps on the guys, or
> about a 2 to 3 foot lean at this early stage, the lean gets less as
> the guys get longer.
>
> The second mast is pushed up, usually by bouncing it so the first
> clamps of the section one guys can slide on the cables but still have
> enough tension to hold the antenna upright for you.
> Again, working in 2 foot increments, the standoffs and/or ties are
> installed.
>
> By the time you get section two up to maximum height, you will not be
> able to lift the remaining sections by hand. It's not the weight,
> it's the tension on the guys and floating clamps that are your enemy.
> If your familiar with how a Pony clamp set works, I had a similar tool
> made for lifting push-pole sections. A clamp is affixed to pole two
> and to the main mast in two places. I simply turn the handle to lift
> the pole about 8 inches, then lock it down, crank the tool back down,
> let it catch the pole and unlock the mast and crank it up another 8
> inches and repeat until I get to the two foot point. Then I install
> the standoffs and/or ties or both. Then repeat again.
>
> Once the whole assembly is at full height, the guys are then tensioned
> to their proper rating. If your guys are NOT equal distance from the
> tower, you will have to make adjustments to the tension settings to
> maintain a perfectly vertical pole.
>
> Many of your guys themselves can be used as antennas if you plan for
> this before setting up the system.
>
> I put up an 80 foot vertical single handedly using only 1 inch 10 foot
> sections of interconnecting pipes. We had intended going up 100 feet,
> but the pipe was not strong enough to hold itself without telescoping
> and splitting, so we halted at 80 feet. It stood for 9 years
> untouched and without problems. Taking it down was really simple.
> One hit to the lower pipe with a baseball bat and the whole thing came
> straight down on itself and finally stopped dropping at about 15 feet
> of height and leaned over, the antenna did not touch the ground and
> was salvagable.
>
> TTUL
> Gary

1763. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 18:45:02 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <4097E4AE.8D648B6B@uci.edu>
Source record: 95713

basketball_jones wrote:
> Do I still lose money when I get to pay the
> LEAST?

I think what you need is a book on the business of manufacturing. The price is basically going to fit a line y = mx + b. Think of b as a tooling charge. The unit cost is m. x is the number of units, and y is what you pay per lot.

73, Jim AC6XG

1764. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 19:06:21 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <NQRlc.23067$_41.1648856@attbi_s02>
Source record: 95714

Only three guys are needed. Your 100 foot number may be in error.

How about 75 feet between anchors in a three guy wire system?

zeno wrote:

> Hi George,
>
> A 45 degree angled guy from the top of a 50' tall mast will be out 50' from the
> base of the mast. That would suggest that the "square" made from the four
> anchor points is 100' on a side. I will have to look at the site and see if
> that is possible.
>
> Bill
>
> Crazy George wrote:
>
>
>>Bill:
>>
>>You need to enlist a little geometry and mechanical engineering. We like to
>>keep our top guys at 45 degrees or less (ground up to guy) where space
>>permits. The down force on the mast for each guy is then .707 of the guy
>>tension. As the guys get steeper, the down force on the mast becomes a
>>larger and larger portion of the total tension. So for a smaller
>>'footprint' with the guys near straight up, any side force on the guy from
>>wind or antenna tension becomes a larger down force on the mast. I need to
>>make drawings to clarify that point, so find someone mechanically inclined
>>to wave their hands and draw lines and make calculations for you.
>>
>>As far as the stepladder on the roof, consider the average male is just
>>under 6' tall, with an 18" up reach. So he has to stand only 4 feet above
>>the mounting level of the base of the mast to erect it. A 5 foot stepladder
>>straddling the peak of most roofs is relatively stable if you are young,
>>limber and agile. Having the first (bottom) section SOLIDLY guyed is a
>>must. At least that's what I remember from the middle of the last century.
>>
>>--
>>Crazy George
>>Remove N O and S P A M imbedded in return address
>>"zeno" <zeno@sonic.net> wrote in message news:40970900.561A3B4@sonic.net...
>>
>>>Hi John,
>>>
>>>For a 50' tall mast, what would you say would be the minimum acceptible

>>
>>square
>>
>>>dimensions from vertices (on a flat plane with the base) of the guy wire
>>
>>anchor
>>
>>>points?
>>>
>>>Bill K6TAJ
>>>
>>>John Moriarity wrote:
>>>
>>>
>>>>"zeno" <zeno@sonic.net> wrote in message
>>
>>news:4096EA13.B2B05674@sonic.net...
>>
>>>>>How the heck did those TV crews of yesteryear erect 40+ foot
>>>>>telescoping antenna masts sitting atop pointed roofs? Its not
>>>>>exactly like you can set up a step ladder on such a roof to
>>>>>get up the first 10 foot to pull up the rest of the sections.
>>>>
>>>>That's exactly what we did! When you are
>>>>young and fearless and believe in your
>>>>personal immortality, it's amazing what
>>>>you can do ;-)
>>>>
>>>>73, John - K6QQ
>>>
>

1765. Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 19:46:02 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86r7u0q8lh.fsf@duchess.twilley.org>
Source record: 95715

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

I have seen what appear to be AM broadcast towers in or on the edges of salt marshes, and it seems pretty obvious to me why that's a good place to go. However, the environmentalists being a little more noticeable than they were once upon a time, this particular method of siting is probably a little more challenging than it used to be.

I recognize that salt water is far more conductive than fresh water, but fresh water's still superior to sand and the like. That being said, I am wondering about using a pond as a ground screen and mounting the antenna itself on an island (or a raft) in the middle of the pond.

What I don't know is just how large a pond do I need in order for something like this to work? Obviously it depends on type of antenna and band and a bunch of other things, but even a wild-ass guess (with some math or physics behind it) will help make the difference between whether I bother trying or not.

For those who absolutely require less variables in their equations, imagine a standard dipole tuned for 20m strung roughly 45 feet above ground level between two trees, one on either side of a fresh water pond. How wide does the pond have to be at that point (and others) for it to work right? Even answers like "the pond will have to be wider than the dipole is long" or "there will be no noticeable impact on performance" are fine if they're based in reality, and ideally in math and physics I can understand.

Oh, and another question: what difference, if any, would frozen versus liquid water make in this situation?

Jack.
(exploring new antenna options.)
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAl/MBGPFSfAB/ezgRAo5pAKD35cRH0XFUz7p/uqBwbj3SNRP69QCfaz5C
6he5FgG+/q767KjX9g9T75A=
=j1k0
-----END PGP SIGNATURE-----

1766. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 19:50:19 UTC
From: fractenna@aol.com
Message-ID: <20040504155019.26462.00000885@mb-m07.aol.com>
Source record: 95716

>BTW You have NOT answered one question I asked so far. It would be
>helpful if you either answered the questions or stopped wasting my
>time. You, my friend are the one that's playing games.
>

Please Kevin,

Don't be so righteous. I told you what to do on a private e-mail, way before you sent this. If you couldn't get pricing from the reps--REAL pricing--then I would provide it.

I, too, have priced out boards for microwave apps, and I certainly didn't need to go around the reps.

We need to keep a viable substrate industry continuing in this country, and anything that could be construed as undermining them is not in my vocabulary. They've bled way too much already.

73,
Chip N1IR

1767. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 20:38:52 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405041238.3489010c@posting.google.com>
Source record: 95717

basketball_jones@hotmail.com (basketball_jones) wrote in message news:<50cbda94.0405032000.32577b7@posting.google.com>...
> Jim Kelley <jwkelley@uci.edu> wrote in message Well, the situation is likely that if I have to pay
> the MOST, I lose money. Do I still lose money when I get to pay the
> LEAST? (As far as getting the houses to quote a big project) I can't
> get the big project funded, much less quoted until I understand that.
>
> Look people. Determining the 'right' price is one of the 'killer aps'
> of the internet. Use it.

I think the price is going to be fairly constant within a certain volume, unless you can find someone that does it on the side for a lower price. I used to work at a circuit board company about 20-25 years ago. "Chemetch". I don't think anyone really got any special deals, unless the order was ready to be placed, and the volume required was pretty much known. You just gotta dicker with the sales person. That company was quite high priced actually. Maybe the highest in town, but I didn't do sales. But the quality and inspection was top notch. Thats how they justified the high price. But, the owner knew a few people that did small volume board work on the side, and he let them "rent" his facilities to make boards at night before normal work hours. It's one of those types you want to talk to , as they are always looking for work on the side. We made boards for loads of big companies, and also NASA. The NASA guys were *real* picky about their boards, and thats why we got most of their work. But they probably paid through the nose... They used to have guys in MIB suits/white shirts come around to inspect the boards during the construction stages. We also made boards for loads of other companies, including TI, medical co's, oil , etc. I use to make HUGE double side boards for medical gear. But also little round boards for digital watches and the like on the other end...I used to have to inspect so many of those silver dollar sized things, it nearly gave me brain damage...The copper lines, etching, etc is nasty work. My skin used to stay green all the time from the copper dust, and my breath probably smelled like formaldehyde fumes. :/ I had to give it up after a while. The crap was killing me... MK

1768. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 21:20:53 UTC
From: William Warren <william_warren_nonoise@comcast.net>
Message-ID: <VOTlc.32345$0H1.2636333@attbi_s54>
Source record: 95718

"Jack Twilley" <jmt+usenet@twilley.org> wrote in message
news:86r7u0q8lh.fsf@duchess.twilley.org...
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> I have seen what appear to be AM broadcast towers in or on the edges
> of salt marshes, and it seems pretty obvious to me why that's a good
> place to go. However, the environmentalists being a little more
> noticeable than they were once upon a time, this particular method of
> siting is probably a little more challenging than it used to be.

[snip]

Environmentalists must be realists if they want to be effective: AM
broadcast is one of the lightest footprints in any salt marsh, and AM
stations have very little trouble getting EPA clearance for such places.

FWIW. YMMV.

Bill

1769. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 21:57:44 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <409811D8.88AE81A6@uci.edu>
Source record: 95619

Dave Shrader wrote:
>
> Only three guys are needed. Your 100 foot number may be in error.

100 feet would be the correct number if it was a two guy wire system.
Right? :-)

73, ac6xg

> How about 75 feet between anchors in a three guy wire system?
>
> zeno wrote:
>
> > Hi George,
> >
> > A 45 degree angled guy from the top of a 50' tall mast will be out 50' from the
> > base of the mast. That would suggest that the "square" made from the four
> > anchor points is 100' on a side. I will have to look at the site and see if
> > that is possible.
> >
> > Bill
> >
> > Crazy George wrote:
> >
> >
> >>Bill:
> >>
> >>You need to enlist a little geometry and mechanical engineering. We like to
> >>keep our top guys at 45 degrees or less (ground up to guy) where space
> >>permits. The down force on the mast for each guy is then .707 of the guy
> >>tension. As the guys get steeper, the down force on the mast becomes a
> >>larger and larger portion of the total tension. So for a smaller
> >>'footprint' with the guys near straight up, any side force on the guy from
> >>wind or antenna tension becomes a larger down force on the mast. I need to
> >>make drawings to clarify that point, so find someone mechanically inclined
> >>to wave their hands and draw lines and make calculations for you.
> >>
> >>As far as the stepladder on the roof, consider the average male is just
> >>under 6' tall, with an 18" up reach. So he has to stand only 4 feet above
> >>the mounting level of the base of the mast to erect it. A 5 foot stepladder
> >>straddling the peak of most roofs is relatively stable if you are young,
> >>limber and agile. Having the first (bottom) section SOLIDLY guyed is a
> >>must. At least that's what I remember from the middle of the last century.
> >>
> >>--

> >>Crazy George
> >>Remove N O and S P A M imbedded in return address
> >>"zeno" <zeno@sonic.net> wrote in message news:40970900.561A3B4@sonic.net...
> >>
> >>>Hi John,
> >>>
> >>>For a 50' tall mast, what would you say would be the minimum acceptible
> >>
> >>square
> >>
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> >>
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> >>
> >>>points?
> >>>
> >>>Bill K6TAJ
> >>>
> >>>John Moriarity wrote:
> >>>
> >>>
> >>>>"zeno" <zeno@sonic.net> wrote in message
> >>
> >>news:4096EA13.B2B05674@sonic.net...
> >>
> >>>>>How the heck did those TV crews of yesteryear erect 40+ foot
> >>>>>telescoping antenna masts sitting atop pointed roofs? Its not
> >>>>>exactly like you can set up a step ladder on such a roof to
> >>>>>get up the first 10 foot to pull up the rest of the sections.
> >>>>
> >>>>That's exactly what we did! When you are
> >>>>young and fearless and believe in your
> >>>>personal immortality, it's amazing what
> >>>>you can do ;-)
> >>>>
> >>>>73, John - K6QQ
> >>>
> >>>
> >>

1770. Antenna wire proximity

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 22:13:21 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4098157D.7A856BA8@sonic.net>
Source record: 95620

I have an existing OCF 80m dipole already set up between two trees (actually the socalled Carolina Windom from Radio Works). I was planning to add a 540' sky wire (square) loop to the farm. One leg of the loop would run approx. parallel to the OCF 15-20+' away. I was not planning to use more than one antenna at a time of course, but wondered if the presence of a "nearby" wire might effect the operation of the (at the time) operating antenna. A nearby wire is another metallic object in the vacinity, what significant effect would this have, if any?

Bill K6TAJ

1771. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 22:56:19 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <3cVlc.8415$%o1.2784@lakeread03>
Source record: 95621

You'd still need a ground radial system, lest the varying water
table constantly detune the array. Also, fresh water is generally
a good insulator compared to copper wire.

Pete

"Jack Twilley" <jmt+usenet@twilley.org> wrote in message
news:86r7u0q8lh.fsf@duchess.twilley.org...
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> I have seen what appear to be AM broadcast towers in or on the edges
> of salt marshes, and it seems pretty obvious to me why that's a good
> place to go. However, the environmentalists being a little more
> noticeable than they were once upon a time, this particular method of
> siting is probably a little more challenging than it used to be.
>
> I recognize that salt water is far more conductive than fresh water,
> but fresh water's still superior to sand and the like. That being
> said, I am wondering about using a pond as a ground screen and
> mounting the antenna itself on an island (or a raft) in the middle of
> the pond.
>
> What I don't know is just how large a pond do I need in order for
> something like this to work? Obviously it depends on type of antenna
> and band and a bunch of other things, but even a wild-ass guess (with
> some math or physics behind it) will help make the difference between
> whether I bother trying or not.
>
> For those who absolutely require less variables in their equations,
> imagine a standard dipole tuned for 20m strung roughly 45 feet above
> ground level between two trees, one on either side of a fresh water
> pond. How wide does the pond have to be at that point (and others)
> for it to work right? Even answers like "the pond will have to be
> wider than the dipole is long" or "there will be no noticeable impact
> on performance" are fine if they're based in reality, and ideally in
> math and physics I can understand.
>
> Oh, and another question: what difference, if any, would frozen
> versus liquid water make in this situation?
>
> Jack.
> (exploring new antenna options.)
> - --
> Jack Twilley

> jmt at twilley dot org
> http colon slash slash www dot twilley dot org slash tilde jmt slash
> -----BEGIN PGP SIGNATURE-----
> Version: GnuPG v1.2.4 (FreeBSD)
>
> iD8DBQFAl/MBGPFSfAB/ezgRAo5pAKD35cRH0XFUz7p/uqBwbj3SNRP69QCfaz5C
> 6he5FgG+/q767KjX9g9T75A=
> =j1k0
> -----END PGP SIGNATURE-----

1772. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 22:59:11 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4098203F.27C9654E@sonic.net>
Source record: 95622

With four guys the distance between any two 180 degree opposing guys will be 100' at the base level. That is why I said that four guys at 45 degree angle at the top of a 50' mast will make a square at the four anchor points and that square at the base level is 100' on each side. I am thinking that 30 degrees at the top might be fine for my project in which case a smaller square.

Bill - K6TAJ

Jim Kelley wrote:

> Dave Shrader wrote:
> >
> > Only three guys are needed. Your 100 foot number may be in error.
>
> 100 feet would be the correct number if it was a two guy wire system.
> Right? :-)
>
> 73, ac6xg
>
> > How about 75 feet between anchors in a three guy wire system?
> >
> > zeno wrote:
> >
> > > Hi George,
> > >
> > > A 45 degree angled guy from the top of a 50' tall mast will be out 50' from the
> > > base of the mast. That would suggest that the "square" made from the four
> > > anchor points is 100' on a side. I will have to look at the site and see if
> > > that is possible.
> > >
> > > Bill
> > >
> > > Crazy George wrote:
> > >
> > >
> > >>Bill:
> > >>
> > >>You need to enlist a little geometry and mechanical engineering. We like to
> > >>keep our top guys at 45 degrees or less (ground up to guy) where space
> > >>permits. The down force on the mast for each guy is then .707 of the guy
> > >>tension. As the guys get steeper, the down force on the mast becomes a
> > >>larger and larger portion of the total tension. So for a smaller
> > >>'footprint' with the guys near straight up, any side force on the guy from
> > >>wind or antenna tension becomes a larger down force on the mast. I need to
> > >>make drawings to clarify that point, so find someone mechanically inclined

> > >>to wave their hands and draw lines and make calculations for you.
> > >>
> > >>As far as the stepladder on the roof, consider the average male is just
> > >>under 6' tall, with an 18" up reach. So he has to stand only 4 feet above
> > >>the mounting level of the base of the mast to erect it. A 5 foot stepladder
> > >>straddling the peak of most roofs is relatively stable if you are young,
> > >>limber and agile. Having the first (bottom) section SOLIDLY guyed is a
> > >>must. At least that's what I remember from the middle of the last century.
> > >>
> > >>--
> > >>Crazy George
> > >>Remove N O and S P A M imbedded in return address
> > >>"zeno" <zeno@sonic.net> wrote in message news:40970900.561A3B4@sonic.net...
> > >>
> > >>>Hi John,
> > >>>
> > >>>For a 50' tall mast, what would you say would be the minimum acceptible
> > >>
> > >>square
> > >>
> > >>>dimensions from vertices (on a flat plane with the base) of the guy wire
> > >>
> > >>anchor
> > >>
> > >>>points?
> > >>>
> > >>>Bill K6TAJ
> > >>>
> > >>>John Moriarity wrote:
> > >>>
> > >>>
> > >>>>"zeno" <zeno@sonic.net> wrote in message
> > >>
> > >>news:4096EA13.B2B05674@sonic.net...
> > >>
> > >>>>>How the heck did those TV crews of yesteryear erect 40+ foot
> > >>>>>telescoping antenna masts sitting atop pointed roofs? Its not
> > >>>>>exactly like you can set up a step ladder on such a roof to
> > >>>>>get up the first 10 foot to pull up the rest of the sections.
> > >>>>
> > >>>>That's exactly what we did! When you are
> > >>>>young and fearless and believe in your
> > >>>>personal immortality, it's amazing what
> > >>>>you can do ;-)
> > >>>>
> > >>>>73, John - K6QQ
> > >>>>
> > >>>
> > >

1773. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 23:26:15 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0405041526.8707974@posting.google.com>
Source record: 95623

Jim Kelley <jwkelley@uci.edu> wrote in message news:<4097E4AE.8D648B6B@uci.edu>...
> basketball_jones wrote:
> > Do I still lose money when I get to pay the
> > LEAST?
>
> I think what you need is a book on the business of manufacturing. The
> price is basically going to fit a line y = mx + b. Think of b as a
> tooling charge. The unit cost is m. x is the number of units, and y is
> what you pay per lot.
>
> 73, Jim AC6XG

Excellent, thanks, now, what is the rough equation for 'm' vs volume for PCBs?

1774. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-04 23:51:26 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <j7ednV_DzfJysQXdRVn-uQ@comcast.com>
Source record: 95624

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:3cVlc.8415$%o1.2784@lakeread03...
> You'd still need a ground radial system, lest the varying water
> table constantly detune the array. Also, fresh water is generally
> a good insulator compared to copper wire.

How much is 75 tons of salt, delivered? :)

1775. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 00:21:25 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40983385.1EFCF6B9@uci.edu>
Source record: 95625

basketball_jones wrote:
> Excellent, thanks, now, what is the rough equation for 'm' vs volume for PCBs?

To first order, it's a constant which is proportional to the size of
your PC board.

73, AC6XG

1776. cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 00:57:01 UTC
From: coyotefred@hotmail.com
Message-ID: <b8883a35.0405041657.58a1da0b@posting.google.com>
Source record: 95626

Hello!

I'm trying to improve the reception of my cellphone (LG LX5450) on the alltel network in northwest Nebraska to a remote cabin. Within the cabin itself I can only get weak analog reception with frequent call drops. 'Hike up a nearby hill about 200 feet from the cabin, however, and I can a very strong digital signal (the hillside faces the roof of the cabin).

It may be that a decent yagi antenna, aimed properly and mounted on the cabin roof, will be sufficient to get me a good signal. If not, however, I'm looking for options. I could mount the yagi up on that hillside, but the resulting coax run (200' or so) would, I imagine, have me losing more signal than I gain.

I was intrigued by a couple of posts on this group as far as reflectors, "passive repeaters," etc. I'm not exactly sure where my signal is coming from up on that hillside, however...it could be east or north. I guess a little experimentation/aiming with one of these setups would be the key.

But if anyone has been in a similar situation to what I'm describing here and discovered a decent solution, I'd sure appreciate hearing from you.

Thank you for your time.
coyotefred

1777. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 01:23:17 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <9mXlc.33282$0H1.2751210@attbi_s54>
Source record: 95627

basketball_jones wrote:

> Jim Kelley <jwkelley@uci.edu> wrote in message news:<4097E4AE.8D648B6B@uci.edu>...
>
>>basketball_jones wrote:
>>
>>>Do I still lose money when I get to pay the
>>>LEAST?
>>
>>I think what you need is a book on the business of manufacturing. The
>>price is basically going to fit a line y = mx + b. Think of b as a
>>tooling charge. The unit cost is m. x is the number of units, and y is
>>what you pay per lot.
>>
>>73, Jim AC6XG
>
>
> Excellent, thanks, now, what is the rough equation for 'm' vs volume for PCBs?

I hope you are kidding !!!!

Contact the vendors and get a price schedule showing price breaks as a function of layers, area and quantity of boards.

Do you want finished boards, or will you cut boards from a master sheet, etc.?

What level of quality control is required? If you are selling into the NASA or Military market there are VERY SIGNIFICANT documentation, traceability requirements, and QC requirements and certifications required. Even to controlling the exact chemistry of the board material.

Depending on your customer your unit material cost may be buried in recurring paper costs. I'm an expert in this area {Program Chief Engineer, USAF WS-118, RS/RV ... MX Missile]

1778. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 01:24:55 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <HnXlc.33285$0H1.2751962@attbi_s54>
Source record: 95628

Jim Kelley wrote:

>
> Dave Shrader wrote:
>
>>Only three guys are needed. Your 100 foot number may be in error.
>
>
> 100 feet would be the correct number if it was a two guy wire system.
> Right? :-)
>
> 73, ac6xg

Yep! And the guys would provide an unconditionally unstable system.

1779. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 01:30:04 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <wsXlc.33969$lk.2086261@attbi_s53>
Source record: 95629

Bill, that's correct. But, most guying systems are only 3 wires on a 120 degree spread at 45 degrees from the anchor on the tower/mast. That requires only 75 feet. A three wire system is a STABLE solution. A four wire system is also a stable system.

BTW, I used to have a Rohn 25 system at 50 feet. Rohn recommended double guying. First level at the 30 foot height. Second level just below the rotator platform. Point I'm making is that one set of guys at the 50 foot level may not meet Zoning and Insurance safety requirements.

Deacon Dave, W1MCE

zeno wrote:

> With four guys the distance between any two 180 degree opposing guys will be 100' at
> the base level. That is why I said that four guys at 45 degree angle at the top of a
> 50' mast will make a square at the four anchor points and that square at the base
> level is 100' on each side. I am thinking that 30 degrees at the top might be fine for
> my project in which case a smaller square.
>
> Bill - K6TAJ
>

1780. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 02:29:28 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <c79jgm$1f7$1@news.oregonstate.edu>
Source record: 95630

basketball_jones <basketball_jones@hotmail.com> wrote:
> Folks we are missing the point here. I can certainly get a quote from
> them. You can safely assume I already have it. Ok, that tells me the
> MOST I am going to pay. Now I want the LEAST I can possibly pay.

In many companies that are large enough to have the kind of volumes you seem to be after, I suspect that purchasing is done by, uh, the purchasing department and not the design engineer and said purchasing folks are probably rather unlikely to be reading this newsgroup. :-) Although I'd grant you this is about the best place to ask that I could think of...

1781. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 02:37:16 UTC
From: David Stinson <arc5@ix.netcom.com>
Message-ID: <40985311.9020609@ix.netcom.com>
Source record: 95604
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

bbb

Gary hildebrand wrote:

1782. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 02:38:58 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409853C2.EEEBFC5F@sonic.net>
Source record: 95631

Hi Dave,

Thanks for the info. I am recycling a 50' TV mast, and now that you mentioned the idea of using 3 guy wires, it explains to me why the guy wire rings that came with this old mast have an extra hole on one side (they give you a total of 5 holes). They were providing the option for either 3 or 4 guy wires. On many roof peaks they just tied it to the corners of the building thus using a 4 wire system. Since I will be putting this up in the middle of a field for one of 5 masts to hold a 540' skywire loop, maybe I will just go ahead and use three guy wires like you suggest since it is out in the middle of the orchard and not on a four cornered roof.

In any case, I was previously in error when I said the side of the square at the base of a 4 guy wire 50' tall system was 100'. I meant that the diagonal of the square was 100', making the sides of the square, as was suggested earlier in the thread by Crazy George, a bit under 71' (100 divided by the square root of 2 which is 1.4142... or 100 times .707...

For the 3 wire guy system, I will just wing it and anchor the 3 guys in optimum position considering the position of existing trees in the orchard.

Bill K6TAJ

Dave Shrader wrote:

> Bill, that's correct. But, most guying systems are only 3 wires on a 120
> degree spread at 45 degrees from the anchor on the tower/mast. That
> requires only 75 feet. A three wire system is a STABLE solution. A four
> wire system is also a stable system.
>
> BTW, I used to have a Rohn 25 system at 50 feet. Rohn recommended double
> guying. First level at the 30 foot height. Second level just below the
> rotator platform. Point I'm making is that one set of guys at the 50
> foot level may not meet Zoning and Insurance safety requirements.
>
> Deacon Dave, W1MCE
>
> zeno wrote:
>
> > With four guys the distance between any two 180 degree opposing guys will be 100' at
> > the base level. That is why I said that four guys at 45 degree angle at the top of a
> > 50' mast will make a square at the four anchor points and that square at the base
> > level is 100' on each side. I am thinking that 30 degrees at the top might be fine for
> > my project in which case a smaller square.
> >
> > Bill - K6TAJ
> >

1783. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 02:40:47 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40985430.D56E49FA@sonic.net>
Source record: 95632

So wait a minute, the 3 guy wire system is not good then? Ok, I am back to 4 wires.....

OK, you can accuse me of flip flopping....I am just a normal human.....hi hi...

Bill K6TAJ

Dave Shrader wrote:

> Jim Kelley wrote:
>
> > >
> > > Dave Shrader wrote:
> > >
> > >>Only three guys are needed. Your 100 foot number may be in error.
> > >
> > >
> > > 100 feet would be the correct number if it was a two guy wire system.
> > > Right? :-)
> > >
> > > 73, ac6xg
> >
> > Yep! And the guys would provide an unconditionally unstable system.

1784. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 02:47:58 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409855DE.D3D0947E@sonic.net>
Source record: 95633

I notice that the local rental yard has a boom lift (Genie), I could just throw a little more $ at this project and be up 40' hoisting and guiding this already assembled mast into place (providing a hinge at the base mount).

Before doing that I will check to see just how hard it would be to lift each section up vertically by hand..... seems like lifting that last section with 40' of noodling extension might be tense. With the boom lift, two people could do this easy one way or another, less tension and less cursing along the way, plus the fun of playing with that boom lift.

Bill

zeno wrote:

> Hi Gary,
>
> Thanks for the thorough instructions. I am not sure I understand the pony
> clamp, but I agree that I can see a problem trying to lift up the
> combined weight of the last 4 of the 5 sections after the first 10 foot
> section is in place. Where can I see an image of such a "pony clamp"? I
> have two people trying to pull it up maybe it can be done by hand.
>
> Bill
>
> "Gary V. Deutschmann, Sr." wrote:
>
> > Hi Bill
> >
> > After a serious fall a number of years ago, I am now terrified of
> > heights like you wouldn't believe.
> >
> > Yet I am still able to put up 50 foot towers, push-ups and even
> > sectional guyed poles by myself with no problems.
> >
> > On push-up poles, I lay them on the ground first, open them up, make
> > point to point guy ring measurements, mark the poles for their maximum
> > safe expansion and close the assembly back up and haul it up to the
> > roof.
> >
> > The main body is guyed and finished off prior to doing anything else.
> > Using the formula to find the hypoteneuse the guys are marked for full
> > length, then remarked for each lifting stage of the operation.
> >
> > The antenna or antennas are affixed to the innermost or highest part

> > of the mast, which is only extended at this time long enough to do
> > this operation. The ladder to reach them is set on the roof and tied
> > to the now rigid base mast section.
> >
> > Before lifting, the guys for section one are clamped at their first
> > set of markings, which allows a little slack or you couldn't lift it
> > to the proper fixed height. After the clamps are in place, as you
> > lift the first section, the guys slide through the eyes until they
> > near the clamp. The mast is only lifted about 2 feet at a time and
> > the standoffs for the ladder line are installed or the coax affixed to
> > the mast with ties. Again it is lifted another 2 feet and a standoff
> > or tie or both are installed. Repeated until you reach your 10 foot
> > marking and this top section is then locked down solid.
> >
> > Now clamps are installed to the guys for section two to the first
> > marking, the clamps for section one are loosened and clamps installed
> > on the second marking for the upper guys.
> > Here is where it helps to have 3 or 4 extra helpers to feed guys and
> > keep them fairly taught. But if you don't have them, the pole is not
> > going to fall further than the next set of clamps on the guys, or
> > about a 2 to 3 foot lean at this early stage, the lean gets less as
> > the guys get longer.
> >
> > The second mast is pushed up, usually by bouncing it so the first
> > clamps of the section one guys can slide on the cables but still have
> > enough tension to hold the antenna upright for you.
> > Again, working in 2 foot increments, the standoffs and/or ties are
> > installed.
> >
> > By the time you get section two up to maximum height, you will not be
> > able to lift the remaining sections by hand. It's not the weight,
> > it's the tension on the guys and floating clamps that are your enemy.
> > If your familiar with how a Pony clamp set works, I had a similar tool
> > made for lifting push-pole sections. A clamp is affixed to pole two
> > and to the main mast in two places. I simply turn the handle to lift
> > the pole about 8 inches, then lock it down, crank the tool back down,
> > let it catch the pole and unlock the mast and crank it up another 8
> > inches and repeat until I get to the two foot point. Then I install
> > the standoffs and/or ties or both. Then repeat again.
> >
> > Once the whole assembly is at full height, the guys are then tensioned
> > to their proper rating. If your guys are NOT equal distance from the
> > tower, you will have to make adjustments to the tension settings to
> > maintain a perfectly vertical pole.
> >
> > Many of your guys themselves can be used as antennas if you plan for
> > this before setting up the system.
> >
> > I put up an 80 foot vertical single handedly using only 1 inch 10 foot
> > sections of interconnecting pipes. We had intended going up 100 feet,

> > but the pipe was not strong enough to hold itself without telescoping
> > and splitting, so we halted at 80 feet. It stood for 9 years
> > untouched and without problems. Taking it down was really simple.
> > One hit to the lower pipe with a baseball bat and the whole thing came
> > straight down on itself and finally stopped dropping at about 15 feet
> > of height and leaned over, the antenna did not touch the ground and
> > was salvagable.
> >
> > TTUL
> > Gary

1785. Screwdriver Antennas!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 02:49:51 UTC
From: Jerry <joxendi@bellsouth.net>
Message-ID: <lxYlc.75192$oN1.22215@bignews5.bellsouth.net>
Source record: 95634

I would just like to invite your attention to the Carolina Cyclone screwdriver antenna at www.qsl.net/k4kwh . This mobile antenna packs a punch without "punching" a hole in your wallet! It is made of the finest materials available--such as the loading coil. It is made of black nylon and is grooved to exactly fit the coil windings and
not "jump" out of place. Your loading coil will not wiggle around inside the mast more than 1/32 of an inch; it is precisely machined to fit the mast even when fully extended. Check out those "flimsy" weather covers that
flex with a squeeze. In a year, you'll be looking for another one because it will have split and cracked under the UV rays! The Carolina Cyclone come with covers made of 1/8" wall Lexan. NO cracking and splitting here! It will last for many years.

Don't be afraid to run 1000 watts SSB on Carolina Cyclone I, or 1500 watts on CC II!

Compare the price, too. Nowhere will you find this kind of value and performance for the price!

Visit www.qsl.net/k4kwh for photos and info.

73

Jerry

1786. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 03:15:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jukg905afafl25mbq15ucq0grcaunja5b6@4ax.com>
Source record: 95635

On Tue, 04 May 2004 12:46:02 -0700, Jack Twilley
>I recognize that salt water is far more conductive than fresh water,

Hi Jack,

Unfortunately, this is a persistent illusion that begs real comparison to real conductors. Salt water is miserable as a conductor, and its special place in the pantheon of noble applications has little to do with "conductivity."

>but fresh water's still superior to sand and the like.

Even this is arguable, sand has less loss (as sand is one of the most common precursors to making glass, it is hard to suggest it presents issues of conduction or loss).

> That being
>said, I am wondering about using a pond as a ground screen and
>mounting the antenna itself on an island (or a raft) in the middle of
>the pond.

No doubt you will get a raft of anecdotal support, but not much data.
>
>What I don't know is just how large a pond do I need in order for
>something like this to work?

I will do something dangerous and make a presumption. To work, as you suggest it through the example of the AM stations, you need to be operating in the 160M band. OK, so that was a caprice of guesswork, the remainder of your post offers other opportunity to suggest you are building your house on sand.

>For those who absolutely require less variables in their equations,
>imagine a standard dipole tuned for 20m strung roughly 45 feet above
>ground level between two trees, one on either side of a fresh water
>pond.

Well, this is where you are in over your head (water metaphors are abundant in this topic). This, again, requires presumptions insofar as the original observation was driven by the AM example. However, at this point we will depart from the low frequency mandate to examine another mandate: polarization and your presumption of conductivity.

A horizontally polarized antenna seeing a horizontally conducting surface is a scenario that describes a self-short-circuit. Horizontally polarized waves meeting the earth (a conductive one) immediately snuff themselves (how long would your car battery last

with a screwdriver held across its poles?).

On the other hand, vertical antennas do not suffer this fate - and for the same reason: it is a current wave (or at least the magnetic component inducing such a current, in a conductive earth) that spans earth making a perfectly reasonable relationship to continued propagation.

>How wide does the pond have to be at that point (and others)
>for it to work right? Even answers like "the pond will have to be
>wider than the dipole is long" or "there will be no noticeable impact
>on performance" are fine if they're based in reality, and ideally in
>math and physics I can understand.

Well, once you divorce yourself of the notion of using a horizontal antenna, it becomes a matter of "ray tracing" from the vertical polarized source, out to the reflecting surface. If you want a radiation lobe to bounce away at an angle of 45ï¿½; then this surface has to be as far away as the origin of the ray's source is above ground. If you want a radiation lobe to bounce away at an angle of 5ï¿½; then this surface has to be 10 or 20 wavelengths away (which is why large bodies of water are so attractive).

OK now to drop the other shoe.

The reason why this all works can be described through conduction, but that is messy and far from intuitive (why is a poor conductor better than a poorer conductor that is sometimes better than the poor conductor?).

The whole matter of near earth conductivity (through the application of trig) hardly matters a whit in regard to DX angles. DX angles are a property of the earth in the far region (at least 5 wavelengths away, which describes the almost certain frustration of planting long enough radials that will make any difference in that regard).

The trick is to simply abandon the thought of the antenna except as a point representing the source of the ray to be traced to ground. Think of the wave propagating along that ray. It has left the antenna far behind and is in its native media of 377 Ohms. It then happens to intersect another media - salt water. Salt water's characteristic Z presents that wave with a 10:1 SWR mismatch, and as we all know exceedingly little power passes through that interface, and nearly all of it is reflected (again, in the same angle of reflection already described by the ray we started with).

THIS is the power of salt water, marsh water, and other so-called conductive surfaces. The conductivity is for s**t and matters just as much - it is mismatch that does our work. Even average earth presents a mismatch, but not nearly so effective; thus power passes through the interface at its critical angle (another optics concept that is intimately tied into this ray-tracing). We call this (as does the optics community) the Brewster Angle. Optics has a simple method of

forecasting the angle, and it is the same math that gives us SWR. a ratio.

Well, there is more that could be said, but this is enough to part the waves.

73's
Richard Clark, KB7QHC

1787. coax type traps

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 03:52:42 UTC
From: pdrunen@aol.com
Message-ID: <20040504235242.25458.00000914@mb-m29.aol.com>
Source record: 95636

Hi Group,

Many thanks to the folks that posted a message for my FM trap question.

I been studying the traps made out of coax for several years, they all form a parallel circuit.

Is there any way I could connect the inner conductor and braid such that I form a series circuit. I want to pass my signal not keep it in.

de KJ4UO

1788. Re: coax type traps

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 04:26:12 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c79qd4$b91$1@titan.btinternet.com>
Source record: 95637

I want to pass my signal not keep it in.
>
==========

Just remove the trap and replace it with a short length of 14 awg wire.

1789. Re: coax type traps

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 04:31:22 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <VuCdnfQTpfgU8wXd4p2dnA@comcast.com>
Source record: 95638

"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20040504235242.25458.00000914@mb-m29.aol.com...
> Hi Group,
>
> Many thanks to the folks that posted a message for my FM trap question.
>
> I been studying the traps made out of coax for several years, they all
form a
> parallel circuit.
>
> Is there any way I could connect the inner conductor and braid such that I
form
> a series circuit. I want to pass my signal not keep it in.

A 1/4 wave shorted stub reflects an open.

1790. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 04:37:20 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405042037.1ab63d23@posting.google.com>
Source record: 95639

Jim Kelley <jwkelley@uci.edu> wrote in message news:<409811D8.88AE81A6@uci.edu>...
> Dave Shrader wrote:
> >
> > Only three guys are needed. Your 100 foot number may be in error.
>
> 100 feet would be the correct number if it was a two guy wire system.
> Right? :-)
>
> 73, ac6xg

You just HAD to do that din ya?!

w3rv

1791. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 04:40:10 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86isfbqyfp.fsf@duchess.twilley.org>
Source record: 95640

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Thank you for the very detailed explanation. So much for that
idea. :-)

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAmHAvGPFSfAB/ezgRAoBlAKC04X44ElnDqbiN024oNciJ6pSItwCeNuXX
B8NCVjYJ3vYQZ9LcQbITBRM=
=S6Tn
-----END PGP SIGNATURE-----
```

1792. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 04:48:44 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405042048.608fd340@posting.google.com>
Source record: 95641

zeno <zeno@sonic.net> wrote in message news:<4097CDBF.74AEEF44@sonic.net>...
> Hi Gary,
>
> Thanks for the thorough instructions. I am not sure I understand the pony
> clamp, but I agree that I can see a problem trying to lift up the
> combined weight of the last 4 of the 5 sections after the first 10 foot
> section is in place. Where can I see an image of such a "pony clamp"?

http://images.amazon.com/images/P/B0000224C9.01.LZZZZZZZ.gif

Home Depot.

w3rv

1793. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 04:53:31 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <gr_lc.40858$NZ4.22145@lakeread05>
Source record: 95642

"zeno" <zeno@sonic.net> wrote in message news:409855DE.D3D0947E@sonic.net...
> I notice that the local rental yard has a boom lift (Genie), I could just
> throw a little more $ at this project and be up 40' hoisting and guiding
> this already assembled mast into place (providing a hinge at the base
> mount).

Now you're talkin', Bill! ;-) Just don't expect that lift to have much work left in it when it's mostly extended, especially with two men in the basket.

Just a note on high winds effect on light gear: It might save you some repairs to add a very light guy wire in the general direction that summer thnderstorms throw line squalls at you. Add that as near to the antenna itself as possible. After seeing one or two storms a summer shake some elements pretty hard, I noticed that our 50-60mph line squalls _always_ blew in the same direction (within 10 degrees every time). Adding one single (high) guy wire fixed that problem, as it stopped the whip-sawing action that a good blow will do to any light gear, no matter how well it's mast is guyed.

73's

Jack
Virginia Beach VA

1794. Re: Screwdriver Antennas!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 06:49:40 UTC
From: Jeremy Salch <salchNOSPAM@tblx.net>
Message-ID: <c7a2rt$1cl0f$1@ID-225834.news.uni-berlin.de>
Source record: 95643

Jerry wrote:

> I would just like to invite your attention to the Carolina Cyclone
> screwdriver antenna at www.qsl.net/k4kwh . This mobile antenna packs a
punch
> without "punching" a hole in your wallet! It is made of the finest
materials
> available--such as the loading coil. It is made of black nylon and is
> grooved to exactly fit the coil windings and
> not "jump" out of place. Your loading coil will not wiggle
> around inside the mast more than 1/32 of an inch; it is precisely machined
> to fit the mast even when fully extended. Check out those "flimsy"
weather
> covers that
> flex with a squeeze. In a year, you'll be looking for another one because
it
> will have split and cracked under the UV rays! The Carolina Cyclone come
> with covers made of 1/8" wall Lexan. NO cracking and splitting here!
> It will last for many years.
>
> Don't be afraid to run 1000 watts SSB on Carolina Cyclone I, or 1500 watts
> on CC II!
>
> Compare the price, too. Nowhere will you find this kind of value and
> performance for the price!
>
> Visit www.qsl.net/k4kwh for photos and info.
>
>
> 73
>
> Jerry

I have a differeny "brand" of screwdriver that has a flexible weather
cover that has been out in the sun for several years.. and its still as
good as it was the day i bought it. AND for the price of the cyclone i
could have bought the antenna I did.. and one of the new automated digital
controllers for it.

--
Registered Linux User #346565
http://www.tblx.net
WA5K

1795. Re: Screwdriver Antennas!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 13:18:17 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <4098ea3d_2@newsfeed.slurp.net>
Source record: 95644

I would just like to invite you to SPAM elsewhere, and actually spend some advertising money instead of dropping your stuff on this group.

BTW - Does Don Johnson know you're using the term "screwdriver antenna??

- KI6PR

"Jerry" <joxendi@bellsouth.net> wrote in message news:lxYlc.75192$oN1.22215@bignews5.bellsouth.net...
> I would just like to invite your attention to the Carolina Cyclone
> screwdriver antenna at www.qsl.net/k4kwh . This mobile antenna packs a punch
> without "punching" a hole in your wallet! It is made of the finest materials
> available--such as the loading coil. It is made of black nylon and is
> grooved to exactly fit the coil windings and
> not "jump" out of place. Your loading coil will not wiggle
> around inside the mast more than 1/32 of an inch; it is precisely machined
> to fit the mast even when fully extended. Check out those "flimsy" weather
> covers that
> flex with a squeeze. In a year, you'll be looking for another one because it
> will have split and cracked under the UV rays! The Carolina Cyclone come
> with covers made of 1/8" wall Lexan. NO cracking and splitting here!
> It will last for many years.
>
> Don't be afraid to run 1000 watts SSB on Carolina Cyclone I, or 1500 watts
> on CC II!
>
> Compare the price, too. Nowhere will you find this kind of value and
> performance for the price!
>
> Visit www.qsl.net/k4kwh for photos and info.
>
>
> 73
>
> Jerry
>
>

1796. Re: Screwdriver Antennas!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 13:44:53 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <pd6mc.32194$sK3.3461@nwrddc03.gnilink.net>
Source record: 95645

"Mikey" <ki6pr@arrl.net> wrote in message
news:4098ea3d_2@newsfeed.slurp.net...
> I would just like to invite you to SPAM elsewhere, and actually spend some
> advertising money instead of dropping your stuff on this group.
>
> BTW - Does Don Johnson know you're using the term "screwdriver antenna??
>
> - KI6PR
>I'd be interested to know that too. Don remains the "unsung hero" of this
design.

W4OP

1797. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 14:05:18 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <lw6mc.1008$mE5.182@fe39.usenetserver.com>
Source record: 95646

Contact Altel and ask them where is the nearest site to your cabin, and in what direction.

There is also the chance that you can get to talk to a friendly person who can give you suggestions as to an external antenna.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net
"coyotefred" <coyotefred@hotmail.com> wrote in message
news:b8883a35.0405041657.58a1da0b@posting.google.com...
> Hello!
>
> I'm trying to improve the reception of my cellphone (LG LX5450) on the
> alltel network in northwest Nebraska to a remote cabin. Within the
> cabin itself I can only get weak analog reception with frequent call
> drops. 'Hike up a nearby hill about 200 feet from the cabin, however,
> and I can a very strong digital signal (the hillside faces the roof of
> the cabin).
>
> It may be that a decent yagi antenna, aimed properly and mounted on
> the cabin roof, will be sufficient to get me a good signal. If not,
> however, I'm looking for options. I could mount the yagi up on that
> hillside, but the resulting coax run (200' or so) would, I imagine,
> have me losing more signal than I gain.
>
> I was intrigued by a couple of posts on this group as far as
> reflectors, "passive repeaters," etc. I'm not exactly sure where my
> signal is coming from up on that hillside, however...it could be east
> or north. I guess a little experimentation/aiming with one of these
> setups would be the key.
>
> But if anyone has been in a similar situation to what I'm describing
> here and discovered a decent solution, I'd sure appreciate hearing
> from you.
>
> Thank you for your time.
> coyotefred

1798. Wire antenna - dipole vs inverted vee

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 14:47:24 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <109hvjum3c6qba7@corp.supernews.com>
Source record: 95647

I have always been of the opinion that when it comes to wire antennas, the prevailing rule of thumb is "the higher the better". However, I am about to deploy a 270' 160m antenna, and -- based on available trees -- I can either install an inverted vee with a 50 foot apex, along a straight vertical plane, with ends dropping off to about 15 feet high; or a dipole at 50 feet, with the antenna in a straight horizontal plane (center and ends at 50 feet), but the vertical plane in a V beam configuration of about 90 degrees.

I enjoy chasing DX - so which configuration should I choose? Would the slight vertical component of the inverted vee offer me a better take-off angle than the horizontal dipole? Or should I opt for the "higher the better" route?

Thanks in advance for your responses,

-larry
K8UT

1799. Re: Screwdriver Antennas!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 14:50:33 UTC
From: phil <Phil@screwdriver.com>
Message-ID: <4098FF37.BBBC4F1A@screwdriver.com>
Source record: 95648

Hi,

I like the tarheel and baby tarheel type of screwdriver antenna !

I quick search on TESS shows no registered trademark for

screwdriver antenna

http://www.uspto.gov/

73 phil

Mikey wrote:

> I would just like to invite you to SPAM elsewhere, and actually spend some
> advertising money instead of dropping your stuff on this group.
>
> BTW - Does Don Johnson know you're using the term "screwdriver antenna??
>
> - KI6PR
>
> "Jerry" <joxendi@bellsouth.net> wrote in message
> news:lxYlc.75192$oN1.22215@bignews5.bellsouth.net...
> > I would just like to invite your attention to the Carolina Cyclone
> > screwdriver antenna at www.qsl.net/k4kwh . This mobile antenna packs a
> punch
> > without "punching" a hole in your wallet! It is made of the finest
> materials
> > available--such as the loading coil. It is made of black nylon and is
> > grooved to exactly fit the coil windings and
> > not "jump" out of place. Your loading coil will not wiggle
> > around inside the mast more than 1/32 of an inch; it is precisely machined
> > to fit the mast even when fully extended. Check out those "flimsy"
> weather
> > covers that
> > flex with a squeeze. In a year, you'll be looking for another one because
> it
> > will have split and cracked under the UV rays! The Carolina Cyclone come
> > with covers made of 1/8" wall Lexan. NO cracking and splitting here!
> > It will last for many years.
> >
> > Don't be afraid to run 1000 watts SSB on Carolina Cyclone I, or 1500 watts
> > on CC II!
> >
> > Compare the price, too. Nowhere will you find this kind of value and
> > performance for the price!

> >
> > Visit www.qsl.net/k4kwh for photos and info.
> >
> >
> > 73
> >
> > Jerry
> >
> >

1800. easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 15:16:32 UTC
From: Larry Gagnon <lagagnon@fakeuniserve.com>
Message-ID: <371i905qt2tm1ndnlu6ki8pchjj632dehu@4ax.com>
Source record: 95649

I need to solder a new section of 14 gauge copper antenna wire to a very old section of wire that is highly tarnished and very old. Other than pulling each strand apart and attempting to sand off the tarnish is there an easier way to remove it so that I can solder it effectively?

Larry VE7EA
****
remove "fake" from email address

1801. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 15:34:53 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <409909A5.7099FA27@shaw.ca>
Source record: 95650

Jack Twilley wrote:
>
>
> Thank you for the very detailed explanation. So much for that
> idea. :-)
>
> Jack.
> - --
> Jack Twilley

You aren't the first to think of that idea, and if you stick around
the newsgroup long enough, you will find you are not the last! It's not
a dumb question -- the only dumb question is the one that isn't asked.

Irv VE6BP

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1802. Re: Wire antenna - dipole vs inverted vee

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 15:45:22 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40990C12.FD80B3BA@cwis.net>
Source record: 95651

Larry,
At 50 feet, the differences between the two antennas
are going to be negligible. Put up whichever will be
easiest for you.
'Doc

1803. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 15:49:22 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <867jvqri0t.fsf@duchess.twilley.org>
Source record: 95652

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Irv" == Irv Finkleman <finkirv@shaw.ca> writes:

[... I post an idea, Richard explains why it wouldn't work ...]

Jack> Thank you for the very detailed explanation. So much for that
Jack> idea. :-)

Irv> You aren't the first to think of that idea, and if you stick
Irv> around the newsgroup long enough, you will find you are not the
Irv> last! It's not a dumb question -- the only dumb question is the
Irv> one that isn't asked.

When I think of something I haven't heard anyone else discuss, and I
haven't seen mentioned here or in other online fora, I try to research
it a little online and see if I can learn more about it. With this
one, it was too tempting (because of the AM example) and the stuff I
had read about Sommerfeld grounds in the NEC2 source and also comments
seen on Mr. Cebik's site (usually associated with graphs of antenna
patterns made with different types of ground) led me to believe that a
quasi-infinite plane of salt water goodness would be a huge boost. It
sure beats placing a layer of aluminum foil or steel plate over the
backyard. ;-)

Irv> Irv VE6BP

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAmQ0IGPFSfAB/ezgRAvr5AKDlREO+WmtdX+Fv5I/g0FF9+cz29ACgkiYX
MDO46gVXAQlDPzswMaRPVAI=
=emQp
-----END PGP SIGNATURE-----
```

1804. Re: Antenna wire proximity

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 15:53:23 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40990DF3.D1EF4C0D@cwis.net>
Source record: 95653

Bill,
The proximity will distort the radiation pattern of
the antenna in use, slightly. If the loops is used on
80 meters, the OCF antenna will 'rob' a little signal,
and visa-versa. I don't know if I'd call it significant,
though, probably not...
'Doc

1805. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 16:02:58 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40991032.1E4D8DF7@cwis.net>
Source record: 95654

Jack,
Depending on how difficult errecting the thing would be,
why not give it a try anyway? The water may not 'help' a
signal, but the antenna being away from nearby 'stuff' might.
If you have the wire, a pond, a boat(?), etc...?
'Doc

1806. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 16:10:26 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <863c6erh1p.fsf@duchess.twilley.org>
Source record: 95655

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Doc" == w5lz <w5lz@cwis.net> writes:

Doc> Jack, Depending on how difficult errecting the thing would be,
Doc> why not give it a try anyway? The water may not 'help' a signal,
Doc> but the antenna being away from nearby 'stuff' might. If you
Doc> have the wire, a pond, a boat(?), etc...? 'Doc

I plan on bringing along the bits just in case I feel extra
motivated. Should anything be learned from the experience, rest
assured that I will post. :-)

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAmRH3GPFSfAB/ezgRAlfEAKDK02z2wO6uhR/pahhoiPEAiENb+wCgzGpb
Bw8oMh6xIi2PWdjjp2OxwjY=
=0nRC
-----END PGP SIGNATURE-----
```

1807. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 16:20:11 UTC
From: zeno <zeno@sonic.net>
Message-ID: <4099143A.9A686F3F@sonic.net>
Source record: 95656

Don't laugh, but I did put up a mast with only two guys, and I don't mean the guys that helped me in my madness. I was thinking that the antenna wire would act as the third guy. Bad idea! OK, dumb. Now I am having to do a work-around pulling up another rope taped to the one rope I was going to use to hoist the antenna, so I will have an extra rope that I can use as the third guy in addition to the rope that would hoist up the antenna. I will be happier when I am out of all this hot water.

Bill

Brian Kelly wrote:

> Jim Kelley <jwkelley@uci.edu> wrote in message news:<409811D8.88AE81A6@uci.edu>...
> > Dave Shrader wrote:
> > >
> > > Only three guys are needed. Your 100 foot number may be in error.
> > >
> > 100 feet would be the correct number if it was a two guy wire system.
> > Right? :-)
> > >
> > 73, ac6xg
> >
> You just HAD to do that din ya?!
>
> w3rv

1808. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 16:38:10 UTC
From: "Clair J. Robinson" <cjr@visi.com>
Message-ID: <40991872.8AF6BDFE@visi.com>
Source record: 95657

I am told that soaking the wire in vinegar with a little salt added shines it up nicely. This was a recent Hints and Kinks item. Buddies tried it and say that it works. Seems to me that vinegar alone might work, too. Good luck!

73, CJ K0CJ

Larry Gagnon wrote:
>
> I need to solder a new section of 14 gauge copper antenna wire to a
> very old section of wire that is highly tarnished and very old. Other
> than pulling each strand apart and attempting to sand off the tarnish
> is there an easier way to remove it so that I can solder it
> effectively?
>
> Larry VE7EA
> **********
> remove "fake" from email address

1809. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 16:57:48 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40991D0A.6B62B3A4@sonic.net>
Source record: 95658

Oh, those "pony clamps", I have a shop full of them, but I don't quite yet get how to use this tool to pull up a section of mast which is nearly 2 inches in diameter, although I do see how such a device might be something related to the problem, I will have to think about this. Maybe put this clamp on a 15' piece of pipe down to the ground and use that ratchet section somehow...?

Other related tools around the farm: the "tractor" jack, you know the kind of jack you use to lift the side of a building from the outside, or that same jack with a short twist of chain used to pull up old metal fence posts out of the dry ground. These jacks are heavy and about 4' tall, but theoretically there could be a way to employ it to yank up a section of the telescoping mast, but the whole image of this seems awkward to me.

Another related, antiquated, and obscure tool would be a type of jack that is used when pulling a long pipe out of a well. It clamps around the pipe as it is being pulled up and has a rachet so that the pipe cannot slip back down the well while you adjust your grip for the next pull. Each 20' section of pipe is pulled up and disconnected so the next section can be pulled up. Unfortunately I sold this at a local flea market years ago thinking I would never need it again. Truth be told, I didn't even know what the thing was at the time, it was something in the barn when I bought this place in '74, so when I cleaned up the barn I unloaded a bunch of stuff. The old timer who bought it at the flea market told me what is was for.....D'oh!!!! One man's junk=another man's treasure..... maybe I can track him down and buy it back....it is probably lying around in another barn somewhere.....

Meanwhile that 2HP electric submersible pump down 240' has been working for at least 40++ years! Had to have it pulled up once to replace the wires. They don't make things like that anymore!...you should have seen this thing, all brass pump section 4' long, and then the 2hp motor section which seems indestructible, knock on wood....

Still have the old wire (which was replaced) out in the barn, three 240' lengths of solid #10 insulated copper (with a few places where the insulation broke down)....now there is an antenna project waiting in the wings.....either that or some nice pennies at the recycling yard....

Bill K6TAJ

Brian Kelly wrote:

> zeno <zeno@sonic.net> wrote in message news:<4097CDBF.74AEEF44@sonic.net>...
> > Hi Gary,
> >
> > Thanks for the thorough instructions. I am not sure I understand the pony
> > clamp, but I agree that I can see a problem trying to lift up the

> > combined weight of the last 4 of the 5 sections after the first 10 foot
> > section is in place. Where can I see an image of such a "pony clamp"?
>
> http://images.amazon.com/images/P/B0000224C9.01.LZZZZZZZ.gif
>
> Home Depot.
>
> w3rv

1810. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 17:56:47 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <AV9mc.42932$NZ4.5019@lakeread05>
Source record: 95659

"Larry Gagnon" wrote in
> I need to solder a new section of 14 gauge copper antenna wire to a
> very old section of wire that is highly tarnished and very old. Other
> than pulling each strand apart and attempting to sand off the tarnish
> is there an easier way to remove it so that I can solder it
> effectively?

Larry, try a solution of sulphuric acid (avalable at retail) for cleaning and preparing copper joints for soldering. This has been used in plumbing/pipefitting trades for decades to make a clean joint for soldering. It should work as well on stranded copper. From your description of the old wire condition however, your efforts would be better served by just replacing the old wire and using all new material.

Jack
Virginia Beach VA

1811. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 19:02:32 UTC
From: gsm@mendelson.com
Message-ID: <slrnc9ieeb.frp.gsm@cable.mendelson.com>
Source record: 95660

In article <371i905qt2tm1ndnlu6ki8pchjj632dehu@4ax.com>, Larry Gagnon wrote:
> I need to solder a new section of 14 gauge copper antenna wire to a
> very old section of wire that is highly tarnished and very old. Other
> than pulling each strand apart and attempting to sand off the tarnish
> is there an easier way to remove it so that I can solder it
> effectively?

Soak it in Coca-Cola.

Geoff.

--
Geoffrey S. Mendelson gsm@mendelson.com

1812. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 19:23:44 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40993F40.B09DC453@uci.edu>
Source record: 95661

Dave Shrader wrote:
>
> Jim Kelley wrote:
>
> >
> > Dave Shrader wrote:
> >
> >>Only three guys are needed. Your 100 foot number may be in error.
> >
> >
> > 100 feet would be the correct number if it was a two guy wire system.
> > Right? :-)
> >
> > 73, ac6xg
>
> Yep! And the guys would provide an unconditionally unstable system.

So then what you're saying is that it's not twice as good as a one guy
wire system?

73, Jim AC6XG

1813. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 19:49:38 UTC
From: Bill <qzd@excite.com>
Message-ID: <uzbmc.103808$f_5.26136@lakeread01>
Source record: 95662

Vinegar and salt solution.

Larry Gagnon wrote:
> I need to solder a new section of 14 gauge copper antenna wire to a
> very old section of wire that is highly tarnished and very old. Other
> than pulling each strand apart and attempting to sand off the tarnish
> is there an easier way to remove it so that I can solder it
> effectively?
>
> Larry VE7EA
> **********
> remove "fake" from email address

1814. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 19:59:54 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <4099460b.1625156406@news.galilei.com>
Source record: 95663

Hi Bill

I was using the Pony Clamp as an example only.
It is a woodworking tool used to hold boards together for gluing or whatever.
The way the Pony Clamp device grips the pipe on the floating end is roughly similar to the way the twin grips grip the mast for more secure lifting than using a pair of gloves and brute strength.

A fellow ham used a similar technique, He made a small platform at the top of the lowest mast that supported a simple hydraulic jack.
The piston of the jack was used to elevate the upper masts about 6 to 8 inches at a time, also using a holding device on the upper mast being raised similar to the Pony Clamp holding device.

However, to make them removable, instead of being a few pieces of steel plate with a hole in them. They are more like a pair of "F" shaped plates that lock on top of each other.

The idea is to be able to hold the mast being lifted securely so it doesn't slide back down.

An alternative of course is to THREAD each section of the mast and install external pulleys and internal glides and make it a crank up tower.

TTUL
Gary

1815. Re: Telescoping Masts

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 20:05:34 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <409947d2.1625611406@news.galilei.com>
Source record: 95664

Hi Bill

Tilt up is a GOOD way to go, if your pole is strong enough!

Did you know that you can get heavy guage aluminum light standards from your local street department that have been hit by cars. Or sign masts from local sign companies for a very fair price? (Often the price is the price of the metal as scrap).

At my old house, I had a 45 foot tilt up light standard. I mounted it near the eave of the house using a steel standoff to lock it to (even though it didn't really need it). A small boat winch was mounted to the roofing rafters and the cable fed through the facia board to the winch.
On top of this 45 light standard, I added an additional 10 foot section of mast tubing.
Had no trouble at all putting it up or taking it down and it needed no guys at all.

TTUL
Gary

1816. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 21:26:15 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0405051326.70c1495c@posting.google.com>
Source record: 95665

fractenna@aol.com (Fractenna) wrote in message
news:<20040504155019.26462.00000885@mb-m07.aol.com>...
> >BTW You have NOT answered one question I asked so far. It would be
> >helpful if you either answered the questions or stopped wasting my
> >time. You, my friend are the one that's playing games.
> >
>
> Please Kevin,
>
> Don't be so righteous. I told you what to do on a private e-mail, way before
> you sent this. If you couldn't get pricing from the reps--REAL pricing--then I
> would provide it.
>
> I, too, have priced out boards for microwave apps, and I certainly didn't need
> to go around the reps.
>
> We need to keep a viable substrate industry continuing in this country, and
> anything that could be construed as undermining them is not in my vocabulary.
> They've bled way too much already.
>
> 73,
> Chip N1IR

I am sorry, I don't remember getting an email from you, would you
kindly re-send. Thanks. Could you kindly put 'PCB costs' or
something along those lines in the header because (as you can tell)
this is my spam email account.

I have gotten pricing from the reps (before I started this thread),
but until you are ready to sign on the dotted line and sign up to the
volume the pricing is not accurate (budgetary pricing), so once again,
so far I know the MOST I am going to pay.

I am in NO WAY trying to undermine the substrate industry, on the
contrary, I am just trying to figure out that happy point at which
BOTH they and I make money. If you look at my above posts I fully
expect and want them to make a profit, but not too much profit (BTW
there is no such thing as 'too much profit', I, like them, am trying
to maximize mine). Remember, I am asking for the lowest price at
which they ARE willing to do business. Once again, I CAN'T get that
price until I am ready to sign and I can't be ready to sign until I
get that price.

K.

1817. Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 21:46:57 UTC
From: Marc Battyani <Marc.Battyani@fractalconcept.com>
Message-ID: <c7bn90$eed@library1.airnews.net>
Source record: 95666

Hello,

I've made a Class-E amplifier which works rather well as I get 25VRMS into a 50 Ohm resistor.
But heating a resistor is not really want I do ;-)

I want to send this power into a loop antenna to transmit power by induction to another aantenna 10 to 20 mm away.
The transmit loop antenna is in series with a capacitor and the receive antenna is in parallel with a capacitor. Both antennas are tuned to the correct frequency.

The problem is that though I have 125Vpkpk at the transistor drain, I only have 15Vpkpk at my loop antenna and also 15Vpkpk in the receive antenna (not loaded)
I guess I need to to some impedance matching but how do I compute the impedance of those loops antennas (is it just the L//C ?) and how do I compute the output impedance of the class-E amplifier ?

Any suggestion, URL etc ?

Thanks,

Marc Battyani

1818. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 22:38:06 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <i1emc.22977$Ut1.673802@bgtnsc05-news.ops.worldnet.att.net>
Source record: 95667

Richard,

Are you sure you meant the statements quoted below?

Horizontal polarization bounces just fine from "horizontally conducting surfaces". Indeed, when a mixed polarization wave hits a conducting surface the horizontal polarization in the reflected wave is enhanced, not "short-circuited". This is the same phenomenon that is the related to Brewster's angle.

Perhaps you really meant to say that a special guided wave mode, namely the ground wave, does not support horizontal polarization.

73,
Gene
W4SZ

Richard Clark wrote:

[Lots of more or less correct stuff snipped]

> Well, this is where you are in over your head (water metaphors are
> abundant in this topic). This, again, requires presumptions insofar
> as the original observation was driven by the AM example. However, at
> this point we will depart from the low frequency mandate to examine
> another mandate: polarization and your presumption of conductivity.
>
> A horizontally polarized antenna seeing a horizontally conducting
> surface is a scenario that describes a self-short-circuit.
> Horizontally polarized waves meeting the earth (a conductive one)
> immediately snuff themselves (how long would your car battery last
> with a screwdriver held across its poles?).
>
> On the other hand, vertical antennas do not suffer this fate - and for
> the same reason: it is a current wave (or at least the magnetic
> component inducing such a current, in a conductive earth) that spans
> earth making a perfectly reasonable relationship to continued
> propagation.

[More snip]

1819. Re: coax type traps

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 23:26:18 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405051526.4682d356@posting.google.com>
Source record: 95668

If you just want to pass your signal, what's wrong with just
connecting the coax from the source to the load?

Or do you also want some filtering? If that's what you want, consider
two stubs. (Actually, a single stub is generally not a very good
filter...) These two will be attached to your feedline at the same
place. One will be shorted on the other end, and the other will be
open on the other end. Their total length will be 1/4 wave
(accounting for the line's propagation velocity). So you're feeding
your line through a 1/4-wave resonator, tuned to your signal
frequency. But the shorted part will reflect back a short at some
frequency, and knock that one out. And the open part will do
likewise. And you can so a similar thing, but with different notch
frequencies, if you use a half-wave resonator open on both ends, or
one shorted on both ends. The key is all these will pass the
frequency the resonator is tuned to. Beware of resonator losses if
you tap way down on it.

RFSim99 is a good tool for playing with this sort of thing. You can
readily see the inevitable harmonic responses that occur with stubs:
things tend to repeat at even and odd multiples of lowest resonance
frequencies. But you can get more accurate results by including the
line loss in your calcs. There are generally only a few "intersting"
frequencies to check, easy to do in a spreadsheet for example, using
accurate line equations.

There are lots of other configurations that can do interesting things,
too...you can make a harmonic filter out of series pieces which
alternate impedances above and below the main line's, for example.
It's not very easy to insert a stub in series with a piece of coax,
but I've seen examples of that with balanced line.

Cheers,
Tom

pdrunen@aol.com (PDRUNEN) wrote in message
news:<20040504235242.25458.00000914@mb-m29.aol.com>...
> Hi Group,
>
> Many thanks to the folks that posted a message for my FM trap question.
>
> I been studying the traps made out of coax for several years, they all form a
> parallel circuit.
>
> Is there any way I could connect the inner conductor and braid such that I form
> a series circuit. I want to pass my signal not keep it in.

>
> de KJ4UO

1820. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 23:47:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <grui90h552j0sggaunkti4bqrktdb8jtgv@4ax.com>
Source record: 95569

On Wed, 05 May 2004 08:49:22 -0700, Jack Twilley
<jmt+usenet@twilley.org> wrote:

> comments
>seen on Mr. Cebik's site (usually associated with graphs of antenna
>patterns made with different types of ground) led me to believe that a
>quasi-infinite plane of salt water goodness would be a huge boost.

Hi Jack,

Let's not lose track of why this is true, rather than fixating on the
downside of alternative illusory explanations. We have DXers here
frequently gushing about their shore installations.

We also had reports from one fellow who maintained a regular schedule
with an Aussie who worked CW mobile in his car coming home from work.
Our man here could literally see the variation in signal strength as
he approached or moved away from the shore down under.

Now, this report is typically known as anecdotal. However, when you
can repeat the observations and correlate them to your hypothesis (as
they did), then such reports gain materially.

73's
Richard Clark, KB7QHC

1821. SteppIR Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-05 23:54:35 UTC
From: W0SZ <zumbruns@evertek.net>
Message-ID: <c7bursjpv1@news.netins.net>
Source record: 95570

I would like to arrange a sked with someone who has either a 3 or 4 element SteppIR yagi in place. Thanks and 73, Steve W0SZ.

1822. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 00:01:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <j9vi90dd74eq8gr1td4f3ip2btbepe2pl4@4ax.com>
Source record: 95571

On Wed, 05 May 2004 22:38:06 GMT, Gene Fuller <W4SZzzzzzz@att.net>
wrote:

>Richard,
>
>Are you sure you meant the statements quoted below?
>
>Horizontal polarization bounces just fine from "horizontally conducting
>surfaces". Indeed, when a mixed polarization wave hits a conducting
>surface the horizontal polarization in the reflected wave is enhanced,
>not "short-circuited". This is the same phenomenon that is the related
>to Brewster's angle.
>
>Perhaps you really meant to say that a special guided wave mode, namely
>the ground wave, does not support horizontal polarization.
>
>73,
>Gene
>W4SZ
>
>Richard Clark wrote:
>
>[Lots of more or less correct stuff snipped]
>
>> A horizontally polarized antenna seeing a horizontally conducting
>> surface is a scenario that describes a self-short-circuit.
>> Horizontally polarized waves meeting the earth (a conductive one)
>> immediately snuff themselves (how long would your car battery last
>> with a screwdriver held across its poles?).
>>

Hi Gene,

Vertical polarization is the only mode that the Brewster Angle works
for (that's why polarized sunglasses work so well, they are
contra-polarized for what DOES reflect).

To test your hypothesis, use EZNEC over a perfect ground and note the
distinct difference at low angles (less than 5 degrees). The
horizontal radiation lobe is an example of Lambertian (another Optics
term) distribution where the maximal gain is observed directly
overhead, and only when phases positively combine (due to the high
surface conduction presenting a second source). Other phases give
rise to this Lambertian distribution which is much like the lobe
characteristics of a headlight glowing in the fog.

73's
Richard Clark, KB7QHC

1823. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 00:06:43 UTC
From: nx7u@arrl.net
Message-ID: <40997ef4.3379734@news.west.cox.net>
Source record: 95572

passive repeaters are a very specific application, that likely won't work in your case.

Let's say you have a -70dBm signal at the hilltop (that's fairly strong for either analog or digital). Even with two 10dB gain yagis (one pointed at the cell site and the other pointed at your cabin), the signal sent down (from the "passive repeater" is starting out at -50dBm (-70+10+10, ignoring connecting cable loss). That's compared to a power radiated of +50dBm at the cell site.
Anyhow, if the hill is 200' tall and 200' away, the space loss from your "passive repeater" to your cabin is another 70dB or so, for a final signal of -120dBm--too weak to be of any use.

On the other hand, 100' of cheap RG-58 loses about 14dB/100ft at cellular, a 300' run would be -42dB, and if hooked to a yagi on a hilltop gives you -70+10-42=-102dBm at the end of the cable...weak but probably usable. Problem is, it would have to be connected directly to the phone. Not very mobile at that point :-) The instant you hook up an antenna (to reradiate) you will lose at least 10dB right off the bat (the first foot of distance from an antenna at cellular is -22dB space loss).

You could get lucky though...if the hilltop signal were -50dBm (that's pretty damn strong) and you splurged on 15dB yagis, you'd end up with -50+15+15-70=-90dBm which would work fine.

On 4 May 2004 17:57:01 -0700, coyotefred@hotmail.com (coyotefred) wrote:

>Hello!
>
>I'm trying to improve the reception of my cellphone (LG LX5450) on the
>alltel network in northwest Nebraska to a remote cabin. Within the
>cabin itself I can only get weak analog reception with frequent call
>drops. 'Hike up a nearby hill about 200 feet from the cabin, however,
>and I can a very strong digital signal (the hillside faces the roof of
>the cabin).
>
>It may be that a decent yagi antenna, aimed properly and mounted on
>the cabin roof, will be sufficient to get me a good signal. If not,
>however, I'm looking for options. I could mount the yagi up on that
>hillside, but the resulting coax run (200' or so) would, I imagine,
>have me losing more signal than I gain.
>
>I was intrigued by a couple of posts on this group as far as
>reflectors, "passive repeaters," etc. I'm not exactly sure where my

>signal is coming from up on that hillside, however...it could be east
>or north. I guess a little experimentation/aiming with one of these
>setups would be the key.
>
>But if anyone has been in a similar situation to what I'm describing
>here and discovered a decent solution, I'd sure appreciate hearing
>from you.
>
>Thank you for your time.
>coyotefred

1824. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 00:12:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5d0j90tv9ksu9cdqlgrp56bkpgdm31dgrr@4ax.com>
Source record: 95573

On Thu, 06 May 2004 00:01:19 GMT, Richard Clark <kb7qhc@comcast.net>
wrote:

>To test your hypothesis, use EZNEC over a perfect ground and note the
>distinct difference at low angles (less than 5 degrees).

I might add, compare this horizontal's low angle performance to its
free space performance (a world of difference from that nearby
"conductivity" and none of it remarkably "good" even for the most
perfect of grounds). You have to hoist your horizontal pretty high to
bring the phase gains into play.

73's
Richard Clark, KB7QHC

1825. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 00:35:15 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <jr1j901j3kmfn9jjkr3nskuvm9mjoaqhmj@4ax.com>
Source record: 95574

On Wed, 5 May 2004 19:02:32 +0000 (UTC), gsm@mendelson.com (Geoffrey
S. Mendelson) wrote:

>In article <371i905qt2tm1ndnlu6ki8pchjj632dehu@4ax.com>, Larry Gagnon wrote:
>> I need to solder a new section of 14 gauge copper antenna wire to a
>> very old section of wire that is highly tarnished and very old. Other
>> than pulling each strand apart and attempting to sand off the tarnish
>> is there an easier way to remove it so that I can solder it
>> effectively?
>
>Soak it in Coca-Cola.

I used to pour Coke on my corroded car battery terminals. Sure cleaned
'em up. Makes ya wonder, tho', what Coke must do to your stomach :-(

Bob
k5qwg

>
>Geoff.

1826. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 00:53:11 UTC
From: fractenna@aol.com
Message-ID: <20040505205311.08524.00000949@mb-m02.aol.com>
Source record: 95575

>Once again, I CAN'T get that
>price until I am ready to sign and I can't be ready to sign until I
>get that price.
>
>K.

Well, I did my duty.

Nope; I won't resend the e-mail. It was labelled 'RE: PCB' costs so it shouldn't have been counted as spam. I tried to help. That's enough.

If you start getting spam with PCB titles, you really do have some problems I can't assist with.

Best of luck.

74,
Chip N1IR

1827. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 01:05:25 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <pbgmc.42377$Xj6.715984@bgtnsc04-news.ops.worldnet.att.net>
Source record: 95576

Richard,

Is that you, or did your evil twin steal your role on RRAA?

Try reading my comment again. If you still disagree, then perhaps you
should crack open any elementary physics or optics textbook.

I did not mention antennas or lobes. I was commenting on your assertion
that the horizontal polarization is "shorted out" at a conducting
surface. Utter nonsense.

73,
Gene
W4SZ

Richard Clark wrote:
> On Wed, 05 May 2004 22:38:06 GMT, Gene Fuller <W4SZzzzzzz@att.net>
> wrote:
>
>
>>Richard,
>>
>>Are you sure you meant the statements quoted below?
>>
>>Horizontal polarization bounces just fine from "horizontally conducting
>>surfaces". Indeed, when a mixed polarization wave hits a conducting
>>surface the horizontal polarization in the reflected wave is enhanced,
>>not "short-circuited". This is the same phenomenon that is the related
>>to Brewster's angle.
>>
>>Perhaps you really meant to say that a special guided wave mode, namely
>>the ground wave, does not support horizontal polarization.
>>
>>73,
>>Gene
>>W4SZ
>>
>>Richard Clark wrote:
>>
>>[Lots of more or less correct stuff snipped]
>>
>>
>>>>A horizontally polarized antenna seeing a horizontally conducting
>>>>surface is a scenario that describes a self-short-circuit.
>>>>Horizontally polarized waves meeting the earth (a conductive one)
>>>>immediately snuff themselves (how long would your car battery last

>>>with a screwdriver held across its poles?).
>>>
>
>
> Hi Gene,
>
> Vertical polarization is the only mode that the Brewster Angle works
> for (that's why polarized sunglasses work so well, they are
> contra-polarized for what DOES reflect).
>
> To test your hypothesis, use EZNEC over a perfect ground and note the
> distinct difference at low angles (less than 5 degrees). The
> horizontal radiation lobe is an example of Lambertian (another Optics
> term) distribution where the maximal gain is observed directly
> overhead, and only when phases positively combine (due to the high
> surface conduction presenting a second source). Other phases give
> rise to this Lambertian distribution which is much like the lobe
> characteristics of a headlight glowing in the fog.
>
> 73's
> Richard Clark, KB7QHC

1828. Need Radial Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 01:22:19 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <frgmc.6173$8S1.208@newsread2.news.atl.earthlink.net>
Source record: 95577

I'm looking for a deal on some wire to use for radials on a
80m vertical. I'd like #18 or so and need about 3,000
ft. Will take less to get started. Bare or covered ok.

Doug, N4IJ
Carson, VA

1829. Re: Need Radial Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 01:38:39 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <4099971F.4253A043@cwis.net>
Source record: 95578

Doug,
How about 'electric fence' wire from the hardware
store?
'Doc

1830. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 02:22:09 UTC
From: richardharrison@webtv.net
Message-ID: <25203-4099A151-661@storefull-3258.bay.webtv.net>
Source record: 95579

Richard Clark wrote:
"Salt water is miserable as a conductor, and its special place in the pantheon of noble applications has little to do with conductivity."

I praise the god of conductivity for the ocean`s behavior as a beniign enabler of medium wave propagation over extraordinary distances as compared with ordinary earth. The reason the ocean`s surface allows long distance propagation is explained in part on page 15 by Ed Laport in "Radio Antenna Engineering":

"Nothing can be done about the electrical characteristics of the grouind or topography between transmitting and receiving antennas. By choice, it is possible to locate the antennas in areas of the best available soil conductivity, thus to increase the terminal efficiency to some extent, and to increase this efficiency still further by proper design of the grounding system. (For ground waves vertical systems are imperative as there is zero horizontally polarized ground wave propagation.)

Optimum ground-wave propagation is obtained over salt water because of its conductivity (many times that of the best soils to be found on the land) and uniform topography."

Laport has a ground-wave propagation table on page 17 of "Radio Antenna Engineering". It is for low frequencies which best exploit ground-waves.

At 1000 miles over seawater, a wave at 400 KHz is attenuated by 98 dB. Over good soil, 111 dB. Over poor soil, 160 dB.

Soil resistance determines penetration depth nto the soil and loss that the soil extracts from a wave, especially if the frequency isn`t too high. At 10 MHz and above, over real earth, the earth`s capacitance offers so much less opposition than the earth`s resistance that the earth`s resistive opposition really does have very little to do with conductivity. However low the soil conductivity is, it is effectively bypassed by the earth`s susceptance.

Sea water is so good at limiting medium-wave penetration and loss that broadcast stations can be heard far out at sea during daylight hours. This range is much greater than over any type of land. I recall hearing the steel guitars of Hawaiian music when we were approaching from the U.S.A. during WW-2. We were still days away and the sun could be high in the sky. It wasn`t all that far as we only traveled about 250 miles a day in good seas. Field strength increases by 6 dB every time you cut the remaining distamnce by half as you approach the station. At half the distance the volts per meter double.

Best regards, Richard Harrison, KB5WZI

1831. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 02:49:41 UTC
From: richardharrison@webtv.net
Message-ID: <25206-4099A7C5-17@storefull-3258.bay.webtv.net>
Source record: 95580

Gene, W4SZ wrote:
"---I was commenting on your assertion that the horizontal polarization is "shorted out" at a conductive surfacce."

Richard Clark`s description may be indelicate but as I recall, Terman says rouighly the same in several instances. Wish I had a copy at hand. Terman says that a horizontally polarized low-angle wave suffers a phase reversal upon reflection and as the difference in path length is negligible between incident and reflected waves at low angles, the waves being of opposite phase add to zero.

Best regards, Richard Harrison, KB5WZI

1832. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 03:24:18 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c7cb4k$24ri1$1@ID-225206.news.uni-berlin.de>
Source record: 95581

There are active Cell phone "repeaters" bricks, not sure what band though
(AMPS I'm sure of), and you would need power at either end.

"Scott Townley" <nx7u@arrl.net> wrote in message
news:40997ef4.3379734@news.west.cox.net...
> passive repeaters are a very specific application, that likely won't
> work in your case.
>
> Let's say you have a -70dBm signal at the hilltop (that's fairly
> strong for either analog or digital). Even with two 10dB gain yagis
> (one pointed at the cell site and the other pointed at your cabin),
> the signal sent down (from the "passive repeater" is starting out at
> -50dBm (-70+10+10, ignoring connecting cable loss). That's compared
> to a power radiated of +50dBm at the cell site.
> Anyhow, if the hill is 200' tall and 200' away, the space loss from
> your "passive repeater" to your cabin is another 70dB or so, for a
> final signal of -120dBm--too weak to be of any use.
>
> On the other hand, 100' of cheap RG-58 loses about 14dB/100ft at
> cellular, a 300' run would be -42dB, and if hooked to a yagi on a
> hilltop gives you -70+10-42=-102dBm at the end of the cable...weak but
> probably usable. Problem is, it would have to be connected directly
> to the phone. Not very mobile at that point :-) The instant you hook
> up an antenna (to reradiate) you will lose at least 10dB right off the
> bat (the first foot of distance from an antenna at cellular is -22dB
> space loss).
>
> You could get lucky though...if the hilltop signal were -50dBm (that's
> pretty damn strong) and you splurged on 15dB yagis, you'd end up with
> -50+15+15-70=-90dBm which would work fine.
>
>
>
>
>
>
> On 4 May 2004 17:57:01 -0700, coyotefred@hotmail.com (coyotefred)
> wrote:
>
> >Hello!
> >
> >I'm trying to improve the reception of my cellphone (LG LX5450) on the
> >alltel network in northwest Nebraska to a remote cabin. Within the
> >cabin itself I can only get weak analog reception with frequent call

> >drops. 'Hike up a nearby hill about 200 feet from the cabin, however,
> >and I can a very strong digital signal (the hillside faces the roof of
> >the cabin).
> >
> >It may be that a decent yagi antenna, aimed properly and mounted on
> >the cabin roof, will be sufficient to get me a good signal. If not,
> >however, I'm looking for options. I could mount the yagi up on that
> >hillside, but the resulting coax run (200' or so) would, I imagine,
> >have me losing more signal than I gain.
> >
> >I was intrigued by a couple of posts on this group as far as
> >reflectors, "passive repeaters," etc. I'm not exactly sure where my
> >signal is coming from up on that hillside, however...it could be east
> >or north. I guess a little experimentation/aiming with one of these
> >setups would be the key.
> >
> >But if anyone has been in a similar situation to what I'm describing
> >here and discovered a decent solution, I'd sure appreciate hearing
> >from you.
> >
> >Thank you for your time.
> >coyotefred
>

1833. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 03:38:45 UTC
From: ahkit1021@yahoo.com
Message-ID: <74bb84c0.0405051938.2c2cbe36@posting.google.com>
Source record: 95582

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:<jfmdnYfvcrqgkg7dRVn-jw@comcast.com>...
> "Dummy" <ahkit1021@yahoo.com> wrote in message
> news:74bb84c0.0404291705.142d20c5@posting.google.com...
> > Roy Lewallen <w7el@eznec.com> wrote in message
> news:<1092fge1cdssua2@corp.supernews.com>...
> > > More thoughts along the lines of John's comments, 32 kHz is about twice
> > > the frequency of the horizontal line component of TV video. Do you have
> > > any TV transmitters reasonably close by?
> > >
> > > I've had problems with detected video on a couple of occasions, getting
> > > into audio circuits. After I redesigned the audio circuits to look more
> > > like VHF/UHF circuits -- laid out, bypassed, and filtered for VHF/UHF --
> > > the problems disappeared. A working hypothesis is that there's a strong
> > > TV transmitter getting into your transmitter via the antenna and/or its
> > > transmission line, then getting detected and modulating your
> > > transmitter. In the case of my audio problems, the vertical scan
> > > component was worse, resulting in a "hum" that varied with the picture
> > > of the offending TV station. You might take a close look at the spurs
> > > and see if they vary with a local station's picture.
> > >
> > > Roy Lewallen, W7EL
> > >
> > > John Smith wrote:
> > > > Your spurs sound very strange, too close in 32 kHz, 62KHz, normally
> they are
> > > > further out several MHz if generated by the RF chain. That is like an
> audio
> > > > part/circuit getting into the transmit RF. Try rearranging or
> twisting up
> > > > the power cables to the radio.
> > > > If spurs are low, not much power is there, so little damage to radio
> > > > rts. -65dBc sounds good for a CB. The farther you look down the more
> spurs
> > > > there. The antenna could be reradiating RF power back onto circuit
> > > > components, which could be a cause too.
> > >
> > The antenna was pointing to any angle and direction randomly while
> > transmitting. One strange behaviour observed. The spurs could only be
> > seen at certain angles of transmission only.
> >
> > Spurs at 32khz and 62khz away from carrier would cause an interference
> > at adjacent frequencies. A simple test was being carried out. Two
> > radios. First radio had 502.025MHz as Tx and Rx frequency. While

> > second radio had 502.057MHz as Tx and Rx frequency. Transmitting at
> > 502.025MHz would cause a interference on second radio, in which we
> > could hypothesize that spurs at 32kHz away was too high in amplitude
> > and thus causing interference to other frequency. So, the spurs were
> > real! It wasn't some kind of 'illusions' produced by spectrum
> > analyzer. I guess this is highly undesirable.
> >
> > Besides, I'm sure those spurs weren't produced by radio internal
> > circuit as I couldn't see any spurs if radios were being transmitted
> > into spectrum analyzer directly using 50 Ohm coaxial RF cable. Even
> > with 4:1 and 8:1 VSWR load, there's no existence of spurs. Could the
> > antenna's match worse than VSWR 8:1? Perhaps the spurs were part of
> > the intrinsic characteristic of any antennas?
> >
> > Maybe the culprit was TV transmitter nearby. I have yet to look into
> > that. Another test that can be done is to do transmission in a sealed,
> > interference-free room. If spurs still could be seen, I would say it's
> > the antenna's imperfection that produced the spurs. If spurs gone,
> > it's a good news that the spurs were coming from outer space, Mars
> > maybe.
> >
> > I would be grateful if somebody could check this out on few radios to
> > see if this problem exists.
>
> I think somebody else mentioned this in passing, but it is worth considering
> whether RF is getting into the radio via the microphone cable, or whatever
> the driving source is. You say the spurs change when you rotate the antenna.
> Do they go away when the radio is at an antenna nul? Can you key the radio
> with the microphone unplugged? If not, have somebody look at the spectrum
> analyzer while somebody else is moving the mic cable around.
>
> This might be grasping at straws, but worth copnsidering.
>
> Tam/WB2TT

Even with microphone unplugged, the spurs still could be seen. At
certain angle of transmission, the spurs would seem to be disappeared.
I have no idea where the spurs came from.

1834. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 03:43:47 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <4099b66f_4@news1.prserv.net>
Source record: 95583

Fred:

Make a corner reflector screen. Nothing fancy, for this frequency a couple of square screens a foot or so in size. Put them together at right angles, put the cell phone at a point which is a quarter wave from both surfaces (dimension depends on band), and point the whole mess toward where the signal might be coming from. Watching the "service available" light should be informative for initial tests.

--
Crazy George
Remove N O and S P A M imbedded in return address

1835. Re: Need Radial Wire

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 03:57:27 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <cpdj9054pqkb07pucpfa7polmeb1h8ajeb@4ax.com>
Source record: 95584

On Thu, 06 May 2004 01:22:19 GMT, "Douglas Snowden"
<snowden@peoplepc.com> wrote:

>I'm looking for a deal on some wire to use for radials on a
>80m vertical. I'd like #18 or so and need about 3,000
>ft. Will take less to get started. Bare or covered ok.
>
>Doug, N4IJ
>Carson, VA
>
>

500' roll, stranded copper, 12 or 14 guage, insulated, at Lowe's Home
Improvement -- $15

bob
k5qwg

1836. rca 7213 tube

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 05:31:19 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <c7ciil$22nfu$1@ID-225206.news.uni-berlin.de>
Source record: 95585

I have a new old stock RCA 7213, which grouop should I try to sell it in? (kick ass tube @ 1300MHz 1500Wpower ceramic tube type useul at 50 Mhz and lower too. Found a spec sheet on it too. but that is about it. Can get one on line for $450.

Thanks

1837. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 06:50:31 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0405052250.7e98342b@posting.google.com>
Source record: 95586

fractenna@aol.com (Fractenna) wrote in message
news:<20040505205311.08524.00000949@mb-m02.aol.com>...
> >Once again, I CAN'T get that
> >price until I am ready to sign and I can't be ready to sign until I
> >get that price.
> >
> >K.
>
> Well, I did my duty.
>
> Nope; I won't resend the e-mail. It was labelled 'RE: PCB' costs so it
> shouldn't have been counted as spam. I tried to help. That's enough.
>
> If you start getting spam with PCB titles, you really do have some problems I
> can't assist with.
>
> Best of luck.
>
> 74,
> Chip N1IR

Best of luck to you. Both you and I know that you have NOT sent that
email in the first place.

1838. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 07:12:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hrmj9056le0bjf1d56nrjgal51tmvoeks2@4ax.com>
Source record: 95587

On Wed, 5 May 2004 21:49:41 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Gene, W4SZ wrote:
>"---I was commenting on your assertion that the horizontal polarization
>is "shorted out" at a conductive surfacce."
>
>Richard Clark`s description may be indelicate but as I recall, Terman
>says rouighly the same in several instances. Wish I had a copy at hand.
>Terman says that a horizontally polarized low-angle wave suffers a phase
>reversal upon reflection and as the difference in path length is
>negligible between incident and reflected waves at low angles, the waves
>being of opposite phase add to zero.

Indelicate or blunt, the results are the same. The Lambertian distribution of a characteristic that is painfully 30 dB down due to the presence of a perfect conductor plainly evidences severe loss. It can't be the ohmic loss of conduction as this would negate the premise of a perfect conductor, it can't be the dissipation factor of an insulator for the same reason.

The electric dipole moment is clearly bridged by a conductor, by definition. As such, at the interface, it must collapse completely into a current which gives rise to counter emf, the two waves cancel as a function of phase - the proof again is found in the Lambertian distribution that vanishes completely with the removal of ground (why horizontal antennas are held up in the air). The more remote the ground, the greater the variation of phase and the distribution, and yet the low angles never fully recover (the death embrace of ground is always there).

The ONLY deficit the vertical sees is in the characteristic Z of the interface presenting a Brewster Angle that allows unfettered passage of power through the interface and traps it. Again, it is the ratio of the characteristic Zs that account for this. If you could contrive to find an earth characteristic of 4000 Ohms instead of Salt Water's 40, then you would observe the EXACT SAME characteristics of propagation. The poorest earth almost looks like the Z of the ï¿½ther. This means that the power impinging upon it is trapped (because ray tracing would reveal it trying to penetrate the earth to re-emerge in the antipodes). Hence the conduction explanation is a contrivance that fits only through the imposition of a limited experience.

Replace the perfect conductor of an imaginary world with that of a realistic earth and the Horizontal's low angle response still sucks to the tune of 30dB down (for the terminally anal, perhaps closer to

-26dB). This says Horizontals suffer for the same reason irrespective of earth conductivity (unless perhaps you are on a mile high mountain of glass). In some sense, this suggests that at least you don't have to worry about it too much because there is nothing you can do about it (although I have disproved this too).

On the other hand, for verticals, the variation of earth characteristics gives rise to a wide variation in low angle response. And for some earth characteristics, the vertical is clearly the winner by an order of magnitude (dare I say in excess of one S-Unit?).

Is this boon conduction borne? If Salt water with a pathetic conductivity orders of magnitude beneath nichrome wire is superb, then by the facile logic of conductivity, we should see remarkable performance boosts for a plain of silver. No, the conductivity argument is simply the tales we tell frightened children who awake from DX nightmares. ;-)

73's
Richard Clark, KB7QHC

1839. Stacking Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 09:21:37 UTC
From: Win <winlyn@winlyn.us>
Message-ID: <dj0k901ie114u8dshejoqr8lpf8h428frq@4ax.com>
Source record: 95588

I am considering stacking a 15 meter beam above a 20 meter beam. Does anyone have any idea what vertical separation I will need between the two? I would guess that they would not interact much.

Win W0LZ

1840. Re: Stacking Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 12:55:47 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040506085547.22796.00000717@mb-m27.aol.com>
Source record: 95589

>
>I am considering stacking a 15 meter beam above a 20 meter beam. Does
>anyone have any idea what vertical separation I will need between the
>two? I would guess that they would not interact much.
>
>Win W0LZ
>

MOUNTING those antennas spaced 8 to 10 feet is about right.
Stacking, applies more to two similar antennas for the same band and switching them for vertical pattern control.

Yuri, www.K3BU.us
see stacked Razors at www.computeradio.us

1841. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 13:24:50 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <C0rmc.25203$Ut1.735334@bgtnsc05-news.ops.worldnet.att.net>
Source record: 95590

Richard,

I am well aware of the properties of the phase reversal, cancellation of direct and reflected waves, and so on. I have no substantive disagreements with Terman.

I suspect Richard Clark was exercising a bit of poetic license by stating that the horizontal polarization was "shorted" at the conducting ground plane, perhaps in a vain attempt to simplify his explanation to the original poster.

However, this statement is simply wrong. If it were true there would be no NVIS nor any reflections at all from a normal incidence wave on a conducting surface. Radar would not work. Mirrors would not work.

Wave cancellation is not such a difficult topic (except on RRAA). There is no need to invoke phony arguments about waves "shorting".

73,
Gene
W4SZ

Richard Harrison wrote:
> Gene, W4SZ wrote:
> "---I was commenting on your assertion that the horizontal polarization
> is "shorted out" at a conductive surfacce."
>
> Richard Clark`s description may be indelicate but as I recall, Terman
> says rouighly the same in several instances. Wish I had a copy at hand.
> Terman says that a horizontally polarized low-angle wave suffers a phase
> reversal upon reflection and as the difference in path length is
> negligible between incident and reflected waves at low angles, the waves
> being of opposite phase add to zero.
>
> Best regards, Richard Harrison, KB5WZI
>

1842. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 13:59:00 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <Ewrmc.40377$lk.2661820@attbi_s53>
Source record: 95591

basketball_jones wrote:

SNIP

Once again, I CAN'T get that
> price until I am ready to sign and I can't be ready to sign until I
> get that price.
>
> K.

Isn't that the definition of Catch-22??

Seriously, you need a sit down negotiation session with your potential suppliers, AND HAVE YOUR PURCHASING AGENT/LAWYER PRESENT. Part of your strategy is to let your potential suppliers know right up front that it is a competitive procurement based on either lowest price or best value [whatever your criteria may be][The stated criteria is common to and binding on all potential suppliers [you can't change the rules without inviting a rebid from all suppliers]]. In my experience, once we moved from the technical issues I yielded all related business risk issues to the Purchasing Agent or Lawyers. Engineering should NEVER sign a purchasing contract. The US DOD and my company used legal professionals to definitize the purchasing agreements/contracts.

Review your potential supplier's quality programs, manufacturing capacity, inventory levels, their supplier vulnerabilities, [you don't want your long term sales jeopardized by a sub-supplier's strike etc.,], cash flow requirements [do you make a partial payment up front or is it post delivery billing], backlog [you don't want your schedules held hostage by a supplier's backlog issues]; these are business issues that exceed 'lowest price' criteria.

Negotiation is more a part of business than creative design. In many MBA programs there are courses in negotiation. Remember, your supplier NEEDs business; and, wants to MAXIMIZE their profit also.

Deacon Dave, W1MCE

1843. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 14:07:52 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <ZErmc.44194$NZ4.21819@lakeread05>
Source record: 95592

"Richard Clark" wrote

> The electric dipole moment is clearly bridged by a conductor, by
> definition. As such, at the interface, it must collapse completely
> into a current which gives rise to counter emf, the two waves cancel
> as a function of phase - the proof again is found in the Lambertian
> distribution that vanishes completely with the removal of ground (why
> horizontal antennas are held up in the air). The more remote the
> ground, the greater the variation of phase and the distribution, and
> yet the low angles never fully recover (the death embrace of ground is
> always there).

Richard, would the dipole's performance thus be improved by bedding the ground with sand, and hurt by adding ground radials? Same true if the dipole was at some compromise between 1/4 wave and the desired 1/2 wave above ground?

Regards,

Jack Painter
Virginia Beach, Va (where mostly sand exists anyway)

1844. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 15:04:27 UTC
From: fractenna@aol.com
Message-ID: <20040506110427.29348.00000634@mb-m25.aol.com>
Source record: 95593

>Best of luck to you. Both you and I know that you have NOT sent that
>email in the first place.
>
>

That is a false statement.

Kevin, acting this way is no way to win friends in this industry.

Cordially,

Chip N1IR

1845. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 15:21:16 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <409A57F7.75E207CC@shaw.ca>
Source record: 95594

Richard Harrison wrote:
>
> Richard Clark wrote:
> "Salt water is miserable as a conductor, ...
>
> I praise the god of conductivity for the ocean`s behavior as a beniign
> enabler of medium wave.....

Great info again Richard,
I recall during my early days in the Navy of
being able to listen to AM radio stations from Victoria B.C. all the way to
Hawaii. I always attributed it to the salt medium, but never really knew
enough about antennas and propagation other than to tell myself that salt
water was a better conductor.

When you think in terms of 'salt water because of its
conductivity (many times that of the best soils)' and then show the differences
in terms of Db attenuation it all makes sense.

This applies in many areas of discussion on this newsgroup. One worries
about ideal height above ground, transmission line losses, radiation pattern, etc,.
whereas the main objective is to get a signal out in the ether one way or
another, and damn the technical naysayers, full speed ahead.

Even with a limited knowledge of antennas and propagation, which thanks
to the knowledge gained on this newsgroup, I have always managed to get a signal
out of the shack and into the air without regard to the warnings of the pundits,
and thoroughly enjoyed making contacts -- many DX -- blissfully unaware of
how effective or efficient my antenna system may have been!

It frequently troubles me that when a novice asks a simple question
about antennas they are often distracted and possibly prevented from trying
something because of theoretical albeit often practical arguments against.
If you don't get the wire out there, you don't get the signals out either.
60db attenuation still beats infinity, and on a clear day you can hear
forever!

By golly, maybe I should rethink salting the back 40! :-)

Irv VE6BP

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

1846. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 15:58:05 UTC
From: june <junebug@nospam.net>
Message-ID: <409A608A.6B93D20C@nospam.net>
Source record: 95595

Hi
we learned in science class that the acid in our stomachs is very strong
so the stomach has a protective lining !

june

>
> >
> >Soak it in Coca-Cola.
>
> I used to pour Coke on my corroded car battery terminals. Sure cleaned
> 'em up. Makes ya wonder, tho', what Coke must do to your stomach :-(
>
> Bob
> k5qwg
>
> >
> >Geoff.

1847. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 16:47:58 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <2%tmc.44288$NZ4.29510@lakeread05>
Source record: 95596

"Richard Clark" <kb7qhc@comcast.net> wrote

> The electric dipole moment is clearly bridged by a conductor, by
> definition. As such, at the interface, it must collapse completely
> into a current which gives rise to counter emf, the two waves cancel
> as a function of phase - the proof again is found in the Lambertian
> distribution that vanishes completely with the removal of ground (why
> horizontal antennas are held up in the air). The more remote the
> ground, the greater the variation of phase and the distribution, and
> yet the low angles never fully recover (the death embrace of ground is
> always there).

Richard, would the dipole's performance thus be improved by bedding the ground with sand, and hurt by adding ground radials? Same true if the dipole was at some compromise between 1/4 wave and the desired 1/2 wave above ground?

Regards,

Jack Painter
Virginia Beach, Va (where mostly sand exists anyway)

1848. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 17:22:49 UTC
From: basketball_jones@hotmail.com
Message-ID: <50cbda94.0405060922.744bcbf9@posting.google.com>
Source record: 95597

basketball_jones@hotmail.com (basketball_jones) wrote in message
news:<50cbda94.0405052250.7e98342b@posting.google.com>...
> fractenna@aol.com (Fractenna) wrote in message
news:<20040505205311.08524.00000949@mb-m02.aol.com>...
> > >Once again, I CAN'T get that
> > >price until I am ready to sign and I can't be ready to sign until I
> > >get that price.
> > >
> > >K.
> >
> > Well, I did my duty.
> >
> > Nope; I won't resend the e-mail. It was labelled 'RE: PCB' costs so it
> > shouldn't have been counted as spam. I tried to help. That's enough.
> >
> > If you start getting spam with PCB titles, you really do have some problems I
> > can't assist with.
> >
> > Best of luck.
> >
> > 74,
> > Chip N1IR
>
> Best of luck to you. Both you and I know that you have NOT sent that
> email in the first place.

ps Mr. Fractenna, your motives are transparent and the games you are
playing are obvious to everybody. From your initial post it was clear
that you were going to be less than helpful. Now, I am asking you for
the SECOND time, please GET OUT OF THE WAY. That means kindly refrain
from further postings in this thread. Thank you.

In case for some reason you choose to continue this pissing contest
via email, wasting my time, I reserve the right to post your emails on
this board.

Best of luck.

1849. FDTD in Matlab or C

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 17:30:55 UTC
From: Arun S V <arunsv@hathway.com>
Message-ID: <2fvbbnF2mssdU1@uni-berlin.de>
Source record: 95598

Hello all the FDTD experts over there ,

I am starting out on my class project which requires me to write
a 2D FDTD code.I am thinking of doing it in Matlab or C.Matlab would offer
good user friendliness but I have heard that Matlab being an interpreted
language is quite slow when it comes to loops.My requirement is about 4000
cells utmost (200 x 200) and time step of the order of 1 Pico second.Will
Matlab be very slow that I should consider coding in C or will Matlab do
okay with respect to the execution time.

-Warm regards
--Arun S V

1850. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 18:20:48 UTC
From: coyotefred@hotmail.com
Message-ID: <b8883a35.0405061020.14710b2d@posting.google.com>
Source record: 95599

I see someone is selling some stronger yagis on eBay (40" (spec'd at 24dB) for $100 and 60" (36dB) for $130). Assuming those specs are reasonable, from your math here it sounds like I might end up "OK"...

My other problem is connecting any external antenna to the LX5450. Apparently the external antenna jack/port is so weak that people are breaking their 5450s (the internal soldered connection to the on-board stubby retractable antenna) when they try to plug in an adapter, that no one is making any adapters for this phone. I don't know if a "clip-on" adapter would work for something like this. It seems like someone could craft something that would work here...

Someone had also suggested I look into one of those "signal boosters" or "repeater amplifiers" sold by Wilson and others for $350-$500 (that apparently boost your signal to the max 3watts). 'Kind of expensive...and would the result be comparable to the external antenna options we're discussing here?

nx7u@arrl.net (Scott Townley) wrote in message
> On the other hand, 100' of cheap RG-58 loses about 14dB/100ft at
> cellular, a 300' run would be -42dB, and if hooked to a yagi on a
> hilltop gives you -70+10-42=-102dBm at the end of the cable...weak but
> probably usable. Problem is, it would have to be connected directly
> to the phone. Not very mobile at that point :-) The instant you hook
> up an antenna (to reradiate) you will lose at least 10dB right off the
> bat (the first foot of distance from an antenna at cellular is -22dB
> space loss).
>
> You could get lucky though...if the hilltop signal were -50dBm (that's
> pretty damn strong) and you splurged on 15dB yagis, you'd end up with
> -50+15+15-70=-90dBm which would work fine.

1851. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 18:30:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <84vk909lvsd3ocka81gplnmsm7bnh03ck7@4ax.com>
Source record: 95600

On Thu, 6 May 2004 12:47:58 -0400, "Jack Painter" <223bthp@cox.net>
wrote:

>"Richard Clark" <kb7qhc@comcast.net> wrote
>
> > The electric dipole moment is clearly bridged by a conductor, by
>> definition. As such, at the interface, it must collapse completely
>> into a current which gives rise to counter emf, the two waves cancel
>> as a function of phase - the proof again is found in the Lambertian
>> distribution that vanishes completely with the removal of ground (why
>> horizontal antennas are held up in the air). The more remote the
>> ground, the greater the variation of phase and the distribution, and
>> yet the low angles never fully recover (the death embrace of ground is
>> always there).
>
>Richard, would the dipole's performance thus be improved by bedding the
>ground with sand, and hurt by adding ground radials? Same true if the dipole
>was at some compromise between 1/4 wave and the desired 1/2 wave above
>ground?

Hi Jack,

A good question, and one that brings out the one of my elliptical
statements about having disproven you don't have to worry, because
there is nothing you can do.

In fact you can do something, however, it separates the discussion of
ground insofar as near field and far field issues.

IF you add a ground screen below a horizonal antenna, you CAN improve
your communications efficiency (your contact, with sufficient
resolution, could see an improved, stronger signal).

This, of course, has no strength in its argument in the far field, the
same problem exists of the complete collapse of the electric field
through its polarization giving rise to a canceling current. The near
field application (where the media does NOT exhibit a 377 Ohm
characteristic) is one of shielding the source from loss (which is
largely a dielectric loss, not a conductive, Ohmic loss).

Richard Harrison, KB5WZI, has already recalled Terman's treatment, but
having no reference handy, he hadn't really pulled it together.

The point of the matter is that for a conductive ground, the electric
fields are laid across a short. The obvious occurs and that electric
field collapses into a magnetic field (through the short circuit
current that necessarily follows) at the interface. This simple

statement is enough to evidence the reversal of fortune (magnetic replacing electric in the face of its initiating source spells short circuit city).

At a distance (along the magic 0ï¿½ DX launch angle), BOTH the source and its reflection (or image) in the ground below it, are at an equal distance to the observer. Thus the distant observers (if they could) see TWO sources that are 180ï¿½ out of phase. Thus everywhere along this meridian, those two signal completely cancel. With tongue in cheek, let's call this 100dB down. This happens ONLY for horizontal polarized signals. By shielding ground beneath the horizontal antenna, you are doing nothing to change this star fixed fate; but you are improving efficiency with a net positive gain, relatively speaking. You simply have two stronger signals canceling.

At higher angles, lets call them 5ï¿½ or higher (sometimes much higher) the path lengths of the two sources diverge from equality (a phase shift is introduced) as the signal strength attempts to pull toward the free space value, some 30dB higher. If you pull your attention successively higher, you eventual come to the point where the two path lengths introduce enough phase difference that they combine to a net signal that is greater than the free space value. This, by the way, does not constitute DX opportunity and is crowed about as the great NVIS advantage (in other words, the sufferer has no options and is content to make lemonade). This exercise describes the Lambertian distribution, a classic example of Optical sources.

Raising the horizontal is much the same gain story. It removes itself from the cold embrace of earth's loss, and it introduces a new phase combination. Thus the lobes may lower from the Zenith, but you will never see them pulled all the way down to the horizon, such is the fate of horizontality. ;-)

73's
Richard Clark, KB7QHC

1852. Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 21:04:39 UTC
From: Neil Gibson <Owner@pinochio.demon.co.uk>
Message-ID: <c7e98u$h1l$1$8300dec7@news.demon.co.uk>
Source record: 95601

I have a Hustler amateur mobile antenna model RM-80 for 80 Meter 25-30 KHz. Although it was designed as a mobile I want to use it as a portable, can anybody tell me the length of the counterpoise needed for this model? or can I just use an earth wire>

1853. Re: Stacking Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 21:05:46 UTC
From: Win <winlyn@winlyn.us>
Message-ID: <rm9l90hg9tenv17q8lrjqmaajrjnk5k5s8@4ax.com>
Source record: 95602

On 06 May 2004 12:55:47 GMT, k3bu@aol.comNoUsama (Yuri Blanarovich)
wrote:

>>
>>I am considering stacking a 15 meter beam above a 20 meter beam. Does
>>anyone have any idea what vertical separation I will need between the
>>two? I would guess that they would not interact much.
>>
>>Win W0LZ
>>
>
>MOUNTING those antennas spaced 8 to 10 feet is about right.
>Stacking, applies more to two similar antennas for the same band and switching
>them for vertical pattern control.
>
>Yuri, www.K3BU.us
>see stacked Razors at www.computeradio.us

Thanks, Yuri. Bad choice of words on my part. I intend to "stack" a
second 5 element 10 meter beam on an existing tower for the next sun
ptot cycle.

Win W0LZ

1854. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 22:54:17 UTC
From: fractenna@aol.com
Message-ID: <20040506185417.13296.00000001@mb-m06.aol.com>
Source record: 95605

>ps Mr. Fractenna, your motives are transparent ...

Gee, I sure hope so!

Transparency has been a driving factor for me for the last several years. I know that may be a bad pun to some:-)

Anyway, good luck Kevin.

73,
Chip N1IR

1855. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 22:55:32 UTC
From: jgboyles@aol.com
Message-ID: <20040506185532.22258.00000812@mb-m01.aol.com>
Source record: 95606

>I have a Hustler amateur mobile antenna model RM-80 for 80 Meter 25-30 KHz.
Can
anybody tell me the length of the counterpoise needed for this model?

A 1/4 wave counterpoise would be about 65 feet or 20 meters. Mobile antennas use the vehicle body as a counterpoise. Your 65' wire or a vehicle used as a counterpoise will not produce very good results, because the efficiency of the short radiator is only a couple of percent.
As an option, a really good performing portable 80m antenna that I have used many times is an inverted vee supported by one of those 33' fiberglass poles. It is fed with 450 ohm line and a tuner. The vee is 50' (15 meters) per leg. You will need about 80'-90' to spread the vee. That's a lot of space, but you will need 65' for the counterpoise for the Hustler. It will beat the Hustler-counterpoise idea significantly, and you can QSY all over the band. With a Hustler you have a narrow bandwidth.
Good luck and DX.

73 Gary N4AST

1856. SteppIR 3 el Yagi vs. Force 12 XR5

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-06 23:15:52 UTC
From: Rob <noemail@pse.com>
Message-ID: <FDzmc.57707$ZJ5.1729584@news20.bellglobal.com>
Source record: 95607

I am thinking of putting up a yagi antenna. I am considering putting up either the SteppIR 3 el yagi or the Force 12 XR5.

Does anyone have any opinions on which is the best antenna? Has anyone tried both?

Rob
P.S. I live up north where there is lots of snow and ice during the winter. Will the SteppIR antenna survive such weather?

1857. Re: PCB costs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 00:10:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rskl90holnnq6fhvljen4qusn79ke1kcpu@4ax.com>
Source record: 95608

On 6 May 2004 10:22:49 -0700, basketball_jones@hotmail.com
(basketball_jones) wrote:
>the games you are playing are obvious to everybody.
>From your initial post it was clear that you were going
>to be less than helpful.

Some things never change....

1858. Re: coax type traps

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 00:15:16 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109ll8js6vnuk3e@corp.supernews.com>
Source record: 95609

Shorted 1/4 wave coax (twin lead, strip line, ect) produces a HI -Z at
resonance
Shorted 1/4 wave coax (ect) produces a dead short at resonance
1/2 wave shorted coax (ect) produces dead short
1/2 wave open coax (ect produces HI-Z at resonance
This phonominom repeats every 1/4 wave (ad nausium)
If can find, look at July, 1965 edition of 73 magazine-- shows how to
calculate coaxial
striplines, ect for vhf/uhf circuits . if need (and these BIG files , 11
pgs) have in jpg, and some of it in word.

Jim NN7K

--
No trees were killed in the sending of this message. However, a large number
of electrons were terribly inconvenienced !

" People who never get carried away, should be! " --- Malcom Forbes

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0405051526.4682d356@posting.google.com...
> If you just want to pass your signal, what's wrong with just
> connecting the coax from the source to the load?
>
> Or do you also want some filtering? If that's what you want, consider
> two stubs. (Actually, a single stub is generally not a very good
> filter...) These two will be attached to your feedline at the same
> place. One will be shorted on the other end, and the other will be
> open on the other end. Their total length will be 1/4 wave
> (accounting for the line's propagation velocity). So you're feeding
> your line through a 1/4-wave resonator, tuned to your signal
> frequency. But the shorted part will reflect back a short at some
> frequency, and knock that one out. And the open part will do
> likewise. And you can so a similar thing, but with different notch
> frequencies, if you use a half-wave resonator open on both ends, or
> one shorted on both ends. The key is all these will pass the
> frequency the resonator is tuned to. Beware of resonator losses if
> you tap way down on it.
>
> RFSim99 is a good tool for playing with this sort of thing. You can
> readily see the inevitable harmonic responses that occur with stubs:
> things tend to repeat at even and odd multiples of lowest resonance
> frequencies. But you can get more accurate results by including the
> line loss in your calcs. There are generally only a few "intersting"
> frequencies to check, easy to do in a spreadsheet for example, using

> accurate line equations.
>
> There are lots of other configurations that can do interesting things,
> too...you can make a harmonic filter out of series pieces which
> alternate impedances above and below the main line's, for example.
> It's not very easy to insert a stub in series with a piece of coax,
> but I've seen examples of that with balanced line.
>
> Cheers,
> Tom
>
>
>
>
> pdrunen@aol.com (PDRUNEN) wrote in message
news:<20040504235242.25458.00000914@mb-m29.aol.com>...
> > Hi Group,
> >
> > Many thanks to the folks that posted a message for my FM trap question.
> >
> > I been studying the traps made out of coax for several years, they all
form a
> > parallel circuit.
> >
> > Is there any way I could connect the inner conductor and braid such that
I form
> > a series circuit. I want to pass my signal not keep it in.
> >
> > de KJ4UO

1859. Re: coax type traps--oops

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 00:21:32 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109llkb2tk4fs03@corp.supernews.com>
Source record: 95610

oops corrected post

"Jim" <NN7K@Reno.Rmci.Net> wrote in message
news:109ll8js6vnuk3e@corp.supernews.com...
> Shorted 1/4 wave coax (twin lead, strip line, ect) produces a HI -Z at
> resonance
> OPEN 1/4 wave coax (ect) produces a dead short at resonance
> SHORTED 1/2 wave coax (ect) produces dead short
> OPEN 1/2 wave coax (ect) produces HI-Z at resonance

> This phonominom repeats every 1/2 wave (ad nausium)

> If can find, look at July, 1965 edition of 73 magazine-- shows how to
> calculate coaxial
> striplines, ect for vhf/uhf circuits . if need (and these BIG files , 11
> pgs) have in jpg, and some of it in word.
>
> Jim NN7K

> "Tom Bruhns" <k7itm@aol.com> wrote in message
> news:3200347.0405051526.4682d356@posting.google.com...
> > If you just want to pass your signal, what's wrong with just
> > connecting the coax from the source to the load?
> >
> > Or do you also want some filtering? If that's what you want, consider
> > two stubs. (Actually, a single stub is generally not a very good
> > filter...) These two will be attached to your feedline at the same
> > place. One will be shorted on the other end, and the other will be
> > open on the other end. Their total length will be 1/4 wave
> > (accounting for the line's propagation velocity). So you're feeding
> > your line through a 1/4-wave resonator, tuned to your signal
> > frequency. But the shorted part will reflect back a short at some
> > frequency, and knock that one out. And the open part will do
> > likewise. And you can so a similar thing, but with different notch
> > frequencies, if you use a half-wave resonator open on both ends, or
> > one shorted on both ends. The key is all these will pass the
> > frequency the resonator is tuned to. Beware of resonator losses if
> > you tap way down on it.
> >
> > RFSim99 is a good tool for playing with this sort of thing. You can
> > readily see the inevitable harmonic responses that occur with stubs:
> > things tend to repeat at even and odd multiples of lowest resonance
> > frequencies. But you can get more accurate results by including the
> > line loss in your calcs. There are generally only a few "intersting"
> > frequencies to check, easy to do in a spreadsheet for example, using

> > accurate line equations.
> >
> > There are lots of other configurations that can do interesting things,
> > too...you can make a harmonic filter out of series pieces which
> > alternate impedances above and below the main line's, for example.
> > It's not very easy to insert a stub in series with a piece of coax,
> > but I've seen examples of that with balanced line.
> >
> > Cheers,
> > Tom
> >
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> >
> >
> > pdrunen@aol.com (PDRUNEN) wrote in message
> news:<20040504235242.25458.00000914@mb-m29.aol.com>...
> > > Hi Group,
> > >
> > > Many thanks to the folks that posted a message for my FM trap
question.
> > >
> > > I been studying the traps made out of coax for several years, they all
> form a
> > > parallel circuit.
> > >
> > > Is there any way I could connect the inner conductor and braid such
that
> I form
> > > a series circuit. I want to pass my signal not keep it in.
> > >
> > > de KJ4UO
>
>

1860. Re: FDTD in Matlab or C

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 01:18:18 UTC
From: dave d <no@sbcglobal.net>
Message-ID: <utBmc.24795$YJ3.23682@newssvr22.news.prodigy.com>
Source record: 95611

"Arun S V" <arunsv@hathway.com> wrote in message
news:2fvbbnF2mssdU1@uni-berlin.de...
> Hello all the FDTD experts over there ,
>
> I am starting out on my class project which requires me to
write
> a 2D FDTD code.I am thinking of doing it in Matlab or C.Matlab would offer
> good user friendliness but I have heard that Matlab being an interpreted
> language is quite slow when it comes to loops.My requirement is about 4000
> cells utmost (200 x 200) and time step of the order of 1 Pico
second.Will
> Matlab be very slow that I should consider coding in C or will Matlab do
> okay with respect to the execution time.
>
>
>
> -Warm regards
> --Arun S V
>
>

Don't think about it, do it. You'll find out soon enough if it's too slow.

I did one several years ago using the interpreted Visual Basic that comes with Excel, letting Excel do the plotting. It seemed to update pretty quickly. Matlab would probably be fine. C is great if you're comfortable with plotting, otherwise you might spend all your time fighting the interface. Here are some references, if you're interested:

References:

1. R. C. Booton, "Computational Methods for Electromagnetics and Microwaves" John Wiley & Sons, Inc. 1992. This text gives an uncommonly clear presentation of the basic theory, although it lacks enough detail to set up practical problems of the type that we selected. The FDTD section discusses primarily 1- and 2-dimensional problems.

2. K. S. Yee, "Numerical Solution of Initial Boundary Value Problems Involving Maxwell's Equations in Isotropic Media," IEEE AP-14, 1966. This is the classic paper to which all subsequent writers refer.

3. Sadiku, "Numerical Techniques in Electromagnetics." This book provided a good level of detail for setting up FDTD problems. It provides a good indexing scheme that makes for efficient implementation of Yee's algorithm. This book also gives a limited discussion of absorbing boundary conditions and briefly discusses options for feed waveforms. There is also a

brief note about reducing run times by filling the space with a low conductivity, therefore reducing the effects of multiple reflections.

4. Omiya et. al. "Design of Cavity-Backed Slot Antennas Using the Finite-Difference Time-Domain Technique," IEEE AP-46 Dec. 1998. This paper provided some more detail on the problem setup, showed sensitivity of accuracy to the number of time steps, and discussed a windowing technique that could be used to shorten run time. It seems that this windowing in the time domain ends up being quite similar to Sadiku's introduction of loss in the cavity. The mathematical operations are very similar, even though the justifications are different.

5. The Internet site "FTDT.org" has some good information and programming examples. The content matches the information in the above references, with more effort put into formatted output.

6. Jeong Phill Kim, "FDTD Basics and Programming Tips," March 22, 1999. This is a very clear, concise treatment of the subject with sufficient detail to begin a practical analysis.

7. R. J. Luebbers and H. S. Langdon, "A simple feed model that reduces time steps needed for FDTD antenna and microstrip calculations," IEEE AP-11, July 1996. This paper describes a feed loading technique, used by Kim in reference 6 that greatly reduces the convergence time.

8. Cheng, Dib, and Katehi, "Theoretical Modeling of Cavity-Backed Patch Antennas Using a Hybrid Technique. The configuration studied in this paper is similar to the one studied in the final configuration of this study.

9. Balanis text, "Antenna Theory Analysis and Design," 1982, Harper and Row. There is a good description of the application of Huygen's Principle on pages 447-456.

1861. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 01:36:40 UTC
From: nx7u@arrl.net
Message-ID: <409ae118.3385925@news.west.cox.net>
Source record: 95612

Anyone selling a 60" yagi with 36dB at 800MHz is a liar :-) It can't be done (5' tall panel antennas on top of the base stations are only 12dBi).

The "signal boosters" can work. But it still needs to go up top of the hill; if there isn't enough signal at your cabin for the phone, there isn't enough for the booster to start with. And then you'd need power and weatherproofing up there.

The signal boosters work great for AMPS, but not necessarily for CDMA (you mentioned Alltel so I am guessing that's their digital service in NE). In fact I don't believe the FCC has type-accepted any CDMA signal boosters for subscriber use.

On 6 May 2004 11:20:48 -0700, coyotefred@hotmail.com (coyotefred) wrote:

>I see someone is selling some stronger yagis on eBay (40" (spec'd at
>24dB) for $100 and 60" (36dB) for $130). Assuming those specs are
>reasonable, from your math here it sounds like I might end up "OK"...
>
>My other problem is connecting any external antenna to the LX5450.
>Apparently the external antenna jack/port is so weak that people are
>breaking their 5450s (the internal soldered connection to the on-board
>stubby retractable antenna) when they try to plug in an adapter, that
>no one is making any adapters for this phone. I don't know if a
>"clip-on" adapter would work for something like this. It seems like
>someone could craft something that would work here...
>
>Someone had also suggested I look into one of those "signal boosters"
>or "repeater amplifiers" sold by Wilson and others for $350-$500 (that
>apparently boost your signal to the max 3watts). 'Kind of
>expensive...and would the result be comparable to the external antenna
>options we're discussing here?
>
>nx7u@arrl.net (Scott Townley) wrote in message
>> On the other hand, 100' of cheap RG-58 loses about 14dB/100ft at
>> cellular, a 300' run would be -42dB, and if hooked to a yagi on a
>> hilltop gives you -70+10-42=-102dBm at the end of the cable...weak but
>> probably usable. Problem is, it would have to be connected directly
>> to the phone. Not very mobile at that point :-) The instant you hook
>> up an antenna (to reradiate) you will lose at least 10dB right off the
>> bat (the first foot of distance from an antenna at cellular is -22dB
>> space loss).
>>

>> You could get lucky though...if the hilltop signal were -50dBm (that's
>> pretty damn strong) and you splurged on 15dB yagis, you'd end up with
>> -50+15+15-70=-90dBm which would work fine.

1862. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 04:18:47 UTC
From: robin.cassidy@airservicesaustralia.com
Message-ID: <23676eaf.0405062018.2691125e@posting.google.com>
Source record: 95613

Are you using a switch mode power supply to run your radio's?

You can get modulation products produced by switching noise on the supply rail.

Regards

Robin Cassidy

1863. Re: FDTD in Matlab or C

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 07:10:04 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <Z00DXIBMZzmAFwbi@b-howie.demon.co.uk>
Source record: 95614

In message <2fvbbnF2mssdU1@uni-berlin.de>, Arun S V <arunsv@hathway.com>
writes
>Hello all the FDTD experts over there ,
>
> I am starting out on my class project which requires me to write
>a 2D FDTD code.I am thinking of doing it in Matlab or C.Matlab would offer
>good user friendliness but I have heard that Matlab being an interpreted
>language is quite slow when it comes to loops.My requirement is about 4000
>cells utmost (200 x 200) and time step of the order of 1 Pico second.Will
>Matlab be very slow that I should consider coding in C or will Matlab do
>okay with respect to the execution time.

You can compile Matlab code as one of the options at least in Version 6
That speeds it up considerably. You can handle matrix maths without
element by element addressing - I don't think C does that.
I'd use FORTRAN myself :p

Brian GM4DIJ
--
Brian Howie

1864. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 08:39:32 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <1XHmc.19673$fE.6293@fed1read02>
Source record: 95615

"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:jr1j901j3kmfn9jjkr3nskuvm9mjoaqhmj@4ax.com...
> On Wed, 5 May 2004 19:02:32 +0000 (UTC), gsm@mendelson.com (Geoffrey
> S. Mendelson) wrote:
>
> >In article <371i905qt2tm1ndnlu6ki8pchjj632dehu@4ax.com>, Larry Gagnon
wrote:
> >> I need to solder a new section of 14 gauge copper antenna wire to a
> >> very old section of wire that is highly tarnished and very old. Other
> >> than pulling each strand apart and attempting to sand off the tarnish
> >> is there an easier way to remove it so that I can solder it
> >> effectively?
> >
> >Soak it in Coca-Cola.
>
> I used to pour Coke on my corroded car battery terminals. Sure cleaned
> 'em up. Makes ya wonder, tho', what Coke must do to your stomach :-(
>
> Bob
> k5qwg
>
> >
> >Geoff.
>

Try throwing up on you battery terminals; I think you'll find that your gut contents are more acidic than Coke.

If you want some serious acidic cleaning, just buy some Muriatic acid at the local hardware store, typically only about $5 per gallon. This is really hydrochloric acid, and does a really great job removing rust from steel or corrosion from other metals. Be extremely careful, this is as active a cleaner as you can readily buy. Use it full strength. The fumes are dangerous, and it works fast, sometimes too fast. Get some old Pyrex trays and bowls to work in, and get a pair of long barbecue tongs to hold your items.

Not enough danger in HV or RF? Then expand into chemistry!

Ed
WB6WSN

1865. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 09:40:29 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405070140.2f9bbaa9@posting.google.com>
Source record: 95616

"Neil Gibson" <Owner@pinochio.demon.co.uk> wrote in message
news:<c7e98u$h1l$1$8300dec7@news.demon.co.uk>...
> I have a Hustler amateur mobile antenna model RM-80 for 80 Meter 25-30 KHz.
> Although it was designed as a mobile I want to use it as a portable,

You may think you do, but you really don't..:(Well, maybe if you like
radio torture sessions where 100w out works like 5w...:(Only if you
were at the beach on salt water, or had 60 or more radials under it
for a normal ground mount, would I give it an estimate of doing a half
decent job.

can
> anybody tell me the length of the counterpoise needed for this model? or can
> I just use an earth wire>

As noted, a 1/4 wave is appx 60 ft, but one radial is nearly useless
at reducing ground losses on a ground mount vertical. And being the
vertical is short, and fairly inefficient, the need of a *good* radial
or ground system is extra critical.
On a car, you just take the ground losses and deal with them, as there
is no real choice. But the hustler antenna in itself, is not the best
in the west. The coil is fairly lossy. But on the other hand, with one
radial, ground losses would likely overshadow coil losses, and it
wouldn't matter. :/ What is "portable" going to be? When I run
portable, I just string up a quicky dipole, or use my mobile antenna
thats on the truck. But my mobile antenna is a good bit better than
the hustler...Less coil loss. It's a fairly usable system even on 80m.
But I string a dipole in some trees if I want a *real* signal. I also
have two of those "drive on" mast holders that you park a wheel on. So
I can actually put up masts quite easily portable if no trees are
around.
I use those cheap 10 ft fence rail sections as mast. Two gives 20 ft,
and can be put up easily by one person. Three is too top heavy unless
you use extra guying precautions..I've tried lifting three together
once, 30 ft" and it was kind hairy...So I just stick with 20 ft
worth. It's good enough for the average NVIS stuff I usually work on
80m. MK

1866. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 09:41:49 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405070141.4944a663@posting.google.com>
Source record: 95617

"Neil Gibson" <Owner@pinochio.demon.co.uk> wrote in message
news:<c7e98u$h1l$1$8300dec7@news.demon.co.uk>...
> I have a Hustler amateur mobile antenna model RM-80 for 80 Meter 25-30 KHz.
> Although it was designed as a mobile I want to use it as a portable,

You may think you do, but you really don't..:(Well, maybe if you like
radio torture sessions where 100w out works like 5w...:(Only if you
were at the beach on salt water, or had 60 or more radials under it
for a normal ground mount, would I give it an estimate of doing a half
decent job.

can
> anybody tell me the length of the counterpoise needed for this model? or can
> I just use an earth wire>

As noted, a 1/4 wave is appx 60 ft, but one radial is nearly useless
at reducing ground losses on a ground mount vertical. And being the
vertical is short, and fairly inefficient, the need of a *good* radial
or ground system is extra critical.
On a car, you just take the ground losses and deal with them, as there
is no real choice. But the hustler antenna in itself, is not the best
in the west. The coil is fairly lossy. But on the other hand, with one
radial, ground losses would likely overshadow coil losses, and it
wouldn't matter. :/ What is "portable" going to be? When I run
portable, I just string up a quicky dipole, or use my mobile antenna
thats on the truck. But my mobile antenna is a good bit better than
the hustler...Less coil loss. It's a fairly usable system even on 80m.
But I string a dipole in some trees if I want a *real* signal. I also
have two of those "drive on" mast holders that you park a wheel on. So
I can actually put up masts quite easily portable if no trees are
around.
I use those cheap 10 ft fence rail sections as mast. Two gives 20 ft,
and can be put up easily by one person. Three is too top heavy unless
you use extra guying precautions..I've tried lifting three together
once, 30 ft" and it was kind hairy...So I just stick with 20 ft
worth. It's good enough for the average NVIS stuff I usually work on
80m. MK

1867. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 12:32:46 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <409B81EE.9792C924@cwis.net>
Source record: 95618

Neil,
By now, you have probably figured out that the 'Hustler'
antenna as a portable isn't exactly the best idea without
a very good ground system. But, it will work with a
counterpoise. Not well, but it will work. Something in
the near 'neighborhood' of a 1/4 wave for the counterpoise's
length should make the transmitter 'see' a load it can work
into (depending on how that counterpoise is 'laid out').
There are other options for a portable antenna that may
work better than an extremely shortened mobile antenna...
'Doc

1868. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 13:54:11 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <_JidnVjTbO7GCAbdRVn-jg@comcast.com>
Source record: 95519

"Robin Cassidy VK3AYZ" <robin.cassidy@airservicesaustralia.com> wrote in message news:23676eaf.0405062018.2691125e@posting.google.com...
> Are you using a switch mode power supply to run your radio's?
>
> You can get modulation products produced by switching noise on the supply rail.

Why do switchers have such a reputation in ham radio?

I realize it's possible to hose up a switcher design pretty thoroughly, (you can also make a 7805 into about a 2W transmitter on 160M if you're not careful), but I've never seen the sorts of problems that I keep hearing associated with them..

BTW, I design switchers, and use them for power supplies in low noise systems, without shielding or other expensive "voodoo" of any kind.

When designed properly, they are very efficient, and very nearly "silent".

1869. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 14:22:46 UTC
From: Bill Turner <noway@nohow.com>
Message-ID: <mr6n90hkseim81cm4l877pm6bpsrq1qsro@4ax.com>
Source record: 95520

On Fri, 7 May 2004 01:39:32 -0700, "Ed Price" <edprice@cox.net> wrote:

>Try throwing up on you [sic] battery terminals

Just when I think I've heard everything...

--
Bill, W6WRT
QSLs via LoTW

1870. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 15:25:48 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <0UNmc.36506$Ia6.6315220@attbi_s03>
Source record: 95521

Dave VanHorn wrote:

> "Robin Cassidy VK3AYZ" <robin.cassidy@airservicesaustralia.com> wrote in
> message news:23676eaf.0405062018.2691125e@posting.google.com...
>
>>Are you using a switch mode power supply to run your radio's?
>>
>>You can get modulation products produced by switching noise on the supply
>
> rail.
>
> Why do switchers have such a reputation in ham radio?
>
> I realize it's possible to hose up a switcher design pretty thoroughly, (you
> can also make a 7805 into about a 2W transmitter on 160M if you're not
> careful), but I've never seen the sorts of problems that I keep hearing
> associated with them..
>
> BTW, I design switchers, and use them for power supplies in low noise
> systems, without shielding or other expensive "voodoo" of any kind.
>
> When designed properly, they are very efficient, and very nearly "silent".

1) Leakage Inductance from the core allows a small magnetic field to be
radiated.

2) By their nature they require a 'small' ripple voltage to exist on the
output as a consequence of the switching principle.

3) The input power, the raw power, is being modulated by the switching
cycle. This generates a transient pulse power on the input lines that
easily couples noise via various susceptibilities into the receivers.

4) The variable switching cycle, or the varying switching duty cycle,
creates broadband noise.

5) All of which are potential sources of trouble in a communications
receiver that wants to find a 0.16 uV/meter signal in the presence of noise.

As a designer of switchers, have you ever had to Qualify a switcher to
MIL-STD-461 and 462?. There is a conducted interference test on the
input power lines to the switcher that is brutal. The ripple on the
output fails the requirement of MIL-STD-462. The radiated emissions have
to be controlled, etc. The switching transients from ALL sources cause
EM Susceptibility in related equipment.

It's not impossible to design switchers for a quiet environment, but
I've spent $millions on getting them quiet enough to meet
MIL-STD-461/462 requirements.
>
>

1871. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 15:55:36 UTC
From: coyotefred@hotmail.com
Message-ID: <b8883a35.0405070755.ec256fc@posting.google.com>
Source record: 95522

So what would the gain be with that 60" antenna? I see 20-24" or so yagis being sold all over with gains of 12-14dB or so. But from what you're saying maybe these figures aren't accurate either? I guess I'm just wondering whether it is worth it to spend an extra $60 for the 60" yagi rather than the more "standard" 20-24" size... ?

nx7u@arrl.net (Scott Townley) wrote in message news:<409ae118.3385925@news.west.cox.net>...
> Anyone selling a 60" yagi with 36dB at 800MHz is a liar :-) It can't
> be done (5' tall panel antennas on top of the base stations are only
> 12dBi).

1872. EZNEC v. 4.0 at Dayton

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 17:10:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <109ngo0dviskpa1@corp.supernews.com>
Source record: 95523

I'll be introducing EZNEC v. 4.0 at the Dayton Hamvention this year, and a new program type, EZNEC+.

Briefly, the main new features of EZNEC v. 4.0 are:

-- Unlimited undo/redo
-- Wire insulation
-- Geometry check (spots wires crossing, overlapping, etc.)
-- Faster calculations (20 to 400% or more, depending on model, machine)
-- Automated loop creation & resizing (for you quad fans)
-- Stack, copy, move, rotate groups of wires
-- 2D trace comparison (put cursor on added trace and see rel. gain)
-- Improved printing (access advanced printer options; default retained)

EZNEC+ has these additional features:

-- 1500 segment capability
-- Circular polarization
-- Double precision calculating engine
-- Direct import of NEC file GW coordinates

New programs will be $89 for EZNEC, $139 for EZNEC+ (web order/download; add $10 for CD, $3 for CD shipping outside U.S. and Canada). A substantial discount will be offered to current EZNEC (and even ELNEC) users. As has been my custom, I'll offer the CD at Dayton for the web download price (a $10 discount).

I'll be located at my usual spot at booth 514, near the Yaesu booth. I'll also have the demo version on mini-CDs to give away while they last.

I hope to have the web site up with the new version at about the same time as the Hamvention (May 14), but don't know if I'll quite make it. Upgrade notices will be mailed out to current EZNEC and ELNEC customers just as soon as I'm sure the web site is working properly. PLEASE DON'T CONTACT ME FOR A CUSTOMER ID. IT WILL BE PRINTED ON YOUR UPGRADE NOTICE. Current EZNEC customers will need the customer ID to get the upgrade discount at the web site.

EZNEC pro versions (EZNEC-M and EZNEC/4) also have the new features, plus they can now do 20,000 segments, and add GH (create helix) "cards" to the types they can read in an NEC-format file.

I'm sorry, I'm really up to my eyeballs getting everything done in time. So I won't respond to any individual questions now about the program. I will, however, try to check back here now and then, and answer questions that are posted.

See you at Dayton!

Roy Lewallen, W7EL

1873. Re: FDTD in Matlab or C

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 17:28:19 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405070928.6cdad28b@posting.google.com>
Source record: 95524

I'm not sure what calcs you need to run, but wouldn't it be trivial to
do a test of Matlab's speed with respect to the sorts of things you
need to do? It's one of the very nice things about an interpreted
matrix language. I use Scilab (freeware), and just ran a little test:
create a=rand(200,200), b=rand(200,200), c=a*b, ainv=inv(a), and then
evaluate ainv*c-b, to make sure it comes out close to zero. It did,
and the whole thing was fast enough that I couldn't time it accurately
till I put it in a loop to repeat ten times. It's about 1.4 seconds
per iteration. Guess I could have let it time itself, too. That's on
a 700MHz Pentium machine. (Considering the work I put into inverting
matrices in my linear algebra class years ago, the speed with which it
can invert a large matrix puts a wry smile on my face.) Scilab, as
Matlab, can compile functions, but if your math is very compact
because of the matrix notation, it may not really matter much; most of
the time is spent doing the matrix math anyway. And if the matrix
notation lets you do things in a way that's more readable, that's a
huge plus, and also consider the time you'll save programming (unless
you already have good matrix libraries available, I suppose).

(By the way, last time I checked, 200*200 = 40000, not 4000. ;-)

Cheers,
Tom

"Arun S V" <arunsv@hathway.com> wrote in message news:<2fvbbnF2mssdU1@uni-berlin.de>...
> Hello all the FDTD experts over there ,
>
> I am starting out on my class project which requires me to write
> a 2D FDTD code.I am thinking of doing it in Matlab or C.Matlab would offer
> good user friendliness but I have heard that Matlab being an interpreted
> language is quite slow when it comes to loops.My requirement is about 4000
> cells utmost (200 x 200) and time step of the order of 1 Pico second.Will
> Matlab be very slow that I should consider coding in C or will Matlab do
> okay with respect to the execution time.
>
>
>
> -Warm regards
> --Arun S V

1874. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 17:51:54 UTC
From: richardharrison@webtv.net
Message-ID: <28040-409BCCBA-313@storefull-3253.bay.webtv.net>
Source record: 95525

Gene, W4SZ wrote:
"There is no need to invoke phony arguments about waves "shorting"."

Shorting waves does not annihilate them. It merely reflects them. A short is a low-resistance conductor.

A transmission line short is a low-impedance U-turn for for the wave`s current which forces the voltage between conductors to zero. Cancellation of the electric field sends its energy for an instant to the magnetic field. As these two conjoined fields continuously regenerate each other, the electric field is immediately recreated by the enhanced magnetic field. The electric field goes from zero at the short to double the incidet just 1/4-wave back from the short due to addition of the incident and reflected wave vectors (phasors).

For a complete reflection in a short, you need zero resistance. Otherwise, resistance consumes some of the available energy.

When a radio wave strikes the ground, it is reflected. Angle of reflection equals the incidence angle but because the earth is an imperfect reflector the reflection is ncomplete. Reflection depends on incidence amgle, wave polarization, frequency, and type of earth. The reflection occurs as if the R-F wave were an optical wave.

NVIS is simple to do by using a horizontal dipole up 1/4-wave above the earth. The wave is delayed 90-degrees in travel to the earth. It is delayed 180-degrees by earth reflection. Then, another 90-degrees of delay is experienced in the reflected wave`s return to the vicinity of the dipole. The 360-degree total round-trip delay puts the reflected wave back in-phase with newly emerging radiation from the dipole in its travel toward the zenith. If the ionosphere can reflect this high-angle energy, it can cause reception fairly close to the transmitter.

Best regards, Richard Harrison, KB5WZI

1875. Re: coax type traps

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 18:06:50 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405071006.54a0ba62@posting.google.com>
Source record: 95526

A little more explanation about what I posted earlier about a single stub not in general being a very good filter...

Let's say you want to operate on 146MHz and want to get rid of a strong signal from a nearby 156MHz transmitter. So, you think, let's put a stub across the line which is shorted at the far end and is an electrical half-wave on 156MHz. Fine, it'll get rid of the 156MHz signal. -- And that's true enough. But what does it do on 146MHz?? If it's 50 ohm line, it will look like about -j10 ohms at 146! That's not a very friendly thing to drop across the line on our operating frequency. But there's a way around it. If you think of that 180-electrical-degrees on 156 as 180*146/156 = 168.5 degrees on 146, then just add another stub there, also shorted, and 180-168.5 = 11.5 degrees long on 146MHz. That stub cancels out the effect, on 146MHz, of the other stub, so there's essentially no effect at 146, but still the dead short at 156. All this is idealized, for lossless line. In such a case, where the rejection notch is close to the frequency you want to pass, be sure to use low loss line. For example, if the longer stub has 0.1dB loss and the shorter has 0.01dB loss, you'll reflect not a short but about 0.6 ohms on 156, and not an open but about 158 ohms resistive, representing considerable loss. That might be something like RG174 (didn't check the numbers, but ballpark). If you instead use some LMR600 line that has about 1/5 the loss, the resistances will also be in that 5:1 ratio: about 0.12 ohms for the short and a much nicer 780 for the open. Or you can make a really low loss stub (a resonator) from moderately large diameter copper pipe.

Also, you can put trimmer caps across the ends of stubs to make them much easier to tune than by using the "cut and re-solder" method.

If you thrive on just numbers, you can get freeware programs that will calculate all that sort of thing for you, or just do it yourself on a calculator or in a calculating program like Excel or Scilab. I much prefer graphical representations, and use a Smith chart program that does calcs that are just as good but displays the results graphically. I use WinSmith, but there are freeware ones that will do similar things. RFSim99 is just one of several.

Cheers,
Tom

(PS to Jim: NN7N is about a hundred feet away at the moment...)

"Jim" <NN7K@Reno.Rmci.Net> wrote in message news:<109ll8js6vnuk3e@corp.supernews.com>...
-->(Corrected per Jim's updated posting...)<--
> Shorted 1/4 wave coax (twin lead, strip line, ect) produces a HI -Z at

> resonance
> OPEN 1/4 wave coax (ect) produces a dead short at resonance
> SHORTED 1/2 wave coax (ect) produces dead short
> OPEN 1/2 wave coax (ect) produces HI-Z at resonance
> This phonominom repeats every 1/4 wave (ad nausium)
> If can find, look at July, 1965 edition of 73 magazine-- shows how to
> calculate coaxial
> striplines, ect for vhf/uhf circuits . if need (and these BIG files , 11
> pgs) have in jpg, and some of it in word.
>
> Jim NN7K
>
> --
> No trees were killed in the sending of this message. However, a large number
> of electrons were terribly inconvenienced !
>
> " People who never get carried away, should be! " --- Malcom Forbes
>
> "Tom Bruhns" <k7itm@aol.com> wrote in message
> news:3200347.0405051526.4682d356@posting.google.com...
> > If you just want to pass your signal, what's wrong with just
> > connecting the coax from the source to the load?
> >
> > Or do you also want some filtering? If that's what you want, consider
> > two stubs. (Actually, a single stub is generally not a very good
> > filter...) These two will be attached to your feedline at the same
> > place. One will be shorted on the other end, and the other will be
> > open on the other end. Their total length will be 1/4 wave
> > (accounting for the line's propagation velocity). So you're feeding
> > your line through a 1/4-wave resonator, tuned to your signal
> > frequency. But the shorted part will reflect back a short at some
> > frequency, and knock that one out. And the open part will do
> > likewise. And you can so a similar thing, but with different notch
> > frequencies, if you use a half-wave resonator open on both ends, or
> > one shorted on both ends. The key is all these will pass the
> > frequency the resonator is tuned to. Beware of resonator losses if
> > you tap way down on it.
> >
> > RFSim99 is a good tool for playing with this sort of thing. You can
> > readily see the inevitable harmonic responses that occur with stubs:
> > things tend to repeat at even and odd multiples of lowest resonance
> > frequencies. But you can get more accurate results by including the
> > line loss in your calcs. There are generally only a few "intersting"
> > frequencies to check, easy to do in a spreadsheet for example, using
> > accurate line equations.
> >
> > There are lots of other configurations that can do interesting things,
> > too...you can make a harmonic filter out of series pieces which
> > alternate impedances above and below the main line's, for example.
> > It's not very easy to insert a stub in series with a piece of coax,

> > but I've seen examples of that with balanced line.
> >
> > Cheers,
> > Tom
> >
> >
> >
> >
> > pdrunen@aol.com (PDRUNEN) wrote in message
> news:<20040504235242.25458.00000914@mb-m29.aol.com>...
> > > Hi Group,
> > >
> > > Many thanks to the folks that posted a message for my FM trap question.
> > >
> > > I been studying the traps made out of coax for several years, they all
> form a
> > > parallel circuit.
> > >
> > > Is there any way I could connect the inner conductor and braid such that
> I form
> > > a series circuit. I want to pass my signal not keep it in.
> > >
> > > de KJ4UO

1876. FS: JRC NJZ-915BA w/ manual (NEW) Japaneese version

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 18:17:35 UTC
From: Mitch Katz <mkatz8@cfl.rr.com>
Message-ID: <3pQmc.7622$2f6.308356@twister.tampabay.rr.com>
Source record: 95527
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.swap,rec.radio.swap

I have a NEW with manual, Japaneese version Coominications tester for cell phones. E-mail for more information or photos. Unit powers up and is flawless. Runs on AC/DC.

1877. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-07 23:04:25 UTC
From: SB <chicbearsmook@hotmail.com>
Message-ID: <ZBUmc.452817$2ol1.287303@twister01.bloor.is.net.cable.rogers.com>
Source record: 95528

I have a hard enough time throwing up in the toilet when the need
calls....it's like sneezing while urinating!!

"Ed Price" <edprice@cox.net> wrote in message
news:1XHmc.19673$fE.6293@fed1read02...
>
> "Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
> news:jr1j901j3kmfn9jjkr3nskuvm9mjoaqhmj@4ax.com...
> > On Wed, 5 May 2004 19:02:32 +0000 (UTC), gsm@mendelson.com (Geoffrey
> > S. Mendelson) wrote:
> >
> > >In article <371i905qt2tm1ndnlu6ki8pchjj632dehu@4ax.com>, Larry Gagnon
> wrote:
> > >> I need to solder a new section of 14 gauge copper antenna wire to a
> > >> very old section of wire that is highly tarnished and very old. Other
> > >> than pulling each strand apart and attempting to sand off the tarnish
> > >> is there an easier way to remove it so that I can solder it
> > >> effectively?
> > >
> > >Soak it in Coca-Cola.
> >
> > I used to pour Coke on my corroded car battery terminals. Sure cleaned
> > 'em up. Makes ya wonder, tho', what Coke must do to your stomach :-(
> >
> > Bob
> > k5qwg
> >
> > >
> > >Geoff.
> >
>
>
> Try throwing up on you battery terminals; I think you'll find that your
gut
> contents are more acidic than Coke.
>
> If you want some serious acidic cleaning, just buy some Muriatic acid at
the
> local hardware store, typically only about $5 per gallon. This is really
> hydrochloric acid, and does a really great job removing rust from steel or
> corrosion from other metals. Be extremely careful, this is as active a
> cleaner as you can readily buy. Use it full strength. The fumes are
> dangerous, and it works fast, sometimes too fast. Get some old Pyrex trays
> and bowls to work in, and get a pair of long barbecue tongs to hold your

> items.
>
> Not enough danger in HV or RF? Then expand into chemistry!
>
>
> Ed
> WB6WSN
>

1878. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 01:28:34 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <409c39f7_4@news1.prserv.net>
Source record: 95529

You know, one wonders what happens if you swap the Hustler and the counterpoise? Coax center to a quarter wave piece of wire, shield to a (ugh! I had one once) Hustler not too near the ground. Nothing different probably, but you never know.

--
Crazy George
Remove N O and S P A M imbedded in return address
"'Doc" <w5lz@cwis.net> wrote in message news:409B81EE.9792C924@cwis.net...
>
>
> Neil,
> By now, you have probably figured out that the 'Hustler'
> antenna as a portable isn't exactly the best idea without
> a very good ground system. But, it will work with a
> counterpoise. Not well, but it will work. Something in
> the near 'neighborhood' of a 1/4 wave for the counterpoise's
> length should make the transmitter 'see' a load it can work
> into (depending on how that counterpoise is 'laid out').
> There are other options for a portable antenna that may
> work better than an extremely shortened mobile antenna...
> 'Doc

1879. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 02:17:02 UTC
From: ahkit1021@yahoo.com
Message-ID: <74bb84c0.0405071817.6954d625@posting.google.com>
Source record: 95530

robin.cassidy@airservicesaustralia.com (Robin Cassidy VK3AYZ) wrote in message news:<23676eaf.0405062018.2691125e@posting.google.com>...
> Are you using a switch mode power supply to run your radio's?
>
> You can get modulation products produced by switching noise on the supply rail.
>
> Regards
>
> Robin Cassidy

I think there are no tests that can be conducted to determine the source of the spurs. RF radiated from antenna could cause interference and non-linearity at spectrum itself. Unless I could 100% shield the spectrum from RF, all tests would be invalid. Even if I stood faraway from spectrum, the spurs could also be observed. However, by transmitting into spectrum using 50 Ohm coaxial cable, no spurs were seen. Possibly because RF was transmitted into spectrum without any leakage which could have large effect in causing interference.

1880. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 03:44:27 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109olso5hd0um24@corp.supernews.com>
Source record: 95531

And can get EVEN WORSE! Tho realize that these type supplies seldom used,nowdays, back in dark ages, had SQUARE WAVES-- generate infinate order of (if memory serves me) odd harmonics!! when filters went bad, baseband looked like a picket fence on spectrum anaylizer! ant, at 600 channels, that loaded to about 2.5 MHz!! But you could hear these heck of a lot higher with low band rcvr!! Jim NN7K

"Dummy" <ahkit1021@yahoo.com> wrote in message news:74bb84c0.0405071817.6954d625@posting.google.com...
> robin.cassidy@airservicesaustralia.com (Robin Cassidy VK3AYZ) wrote in message news:<23676eaf.0405062018.2691125e@posting.google.com>...
> > Are you using a switch mode power supply to run your radio's?
> >
> > You can get modulation products produced by switching noise on the supply rail.
> >
> > Regards
> >
> > Robin Cassidy
>
> I think there are no tests that can be conducted to determine the
> source of the spurs. RF radiated from antenna could cause interference
> and non-linearity at spectrum itself. Unless I could 100% shield the
> spectrum from RF, all tests would be invalid. Even if I stood faraway
> from spectrum, the spurs could also be observed. However, by
> transmitting into spectrum using 50 Ohm coaxial cable, no spurs were
> seen. Possibly because RF was transmitted into spectrum without any
> leakage which could have large effect in causing interference.

1881. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 04:15:12 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109onmdkcge5c6b@corp.supernews.com>
Source record: 95532

And, one other idea !! (found on the bay of "e"), and available elsewhere-
a mount for 2 of these (or the hustler, and an Iron Horse, ect) "1/4" wave
antenna -- first antenna goes to center of coax, second goes to shield!!
makes a dipole, about 15 foot long, and can be mounted to mast (conductive,
or plastic, same diff! tho the impedence will be quite low (because of
these loaded
whips), and the effeciency will be also not the best, at least would be an
effective counterpoise!! and, to boot, parts available to build adaptor at
rip-off shack!! got whole thing off epay for about 50 bux, + shipping!!
Jim NN7K

"Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
news:409c39f7_4@news1.prserv.net...
> You know, one wonders what happens if you swap the Hustler and the
> counterpoise? Coax center to a quarter wave piece of wire, shield to a
> (ugh! I had one once) Hustler not too near the ground. Nothing different
> probably, but you never know.
>
> --
> Crazy George
> Remove N O and S P A M imbedded in return address
> "'Doc" <w5lz@cwis.net> wrote in message news:409B81EE.9792C924@cwis.net...
> >
> >
> > Neil,
> > By now, you have probably figured out that the 'Hustler'
> > antenna as a portable isn't exactly the best idea without
> > a very good ground system. But, it will work with a
> > counterpoise. Not well, but it will work. Something in
> > the near 'neighborhood' of a 1/4 wave for the counterpoise's
> > length should make the transmitter 'see' a load it can work
> > into (depending on how that counterpoise is 'laid out').
> > There are other options for a portable antenna that may
> > work better than an extremely shortened mobile antenna...
> > 'Doc
>
>

1882. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 04:23:22 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109oo5ngh3u50e0@corp.supernews.com>
Source record: 95533

BTW that is Both Antennas, and the adaptor- not too expensive- cheaper when need only one ant, and the adaptor.

"Jim" <NN7K@Reno.Rmci.Net> wrote in message news:109onmdkcge5c6b@corp.supernews.com...
>
>
> And, one other idea !! (found on the bay of "e"), and available elsewhere-
> a mount for 2 of these (or the hustler, and an Iron Horse, ect) "1/4" wave
> antenna -- first antenna goes to center of coax, second goes to shield!!
> makes a dipole, about 15 foot long, and can be mounted to mast (conductive,
> or plastic, same diff! tho the impedence will be quite low (because of
> these loaded
> whips), and the effeciency will be also not the best, at least would be an
> effective counterpoise!! and, to boot, parts available to build adaptor at
> rip-off shack!! got whole thing off epay for about 50 bux, + shipping!!
> Jim NN7K
>
>
> "Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
> news:409c39f7_4@news1.prserv.net...
> > You know, one wonders what happens if you swap the Hustler and the
> > counterpoise? Coax center to a quarter wave piece of wire, shield to a
> > (ugh! I had one once) Hustler not too near the ground. Nothing different
> > probably, but you never know.
> >
> > --
> > Crazy George
> > Remove N O and S P A M imbedded in return address
> > "'Doc" <w5lz@cwis.net> wrote in message news:409B81EE.9792C924@cwis.net...
> > >
> > >
> > > Neil,
> > > By now, you have probably figured out that the 'Hustler'
> > > antenna as a portable isn't exactly the best idea without
> > > a very good ground system. But, it will work with a
> > > counterpoise. Not well, but it will work. Something in
> > > the near 'neighborhood' of a 1/4 wave for the counterpoise's

> > > length should make the transmitter 'see' a load it can work
> > > into (depending on how that counterpoise is 'laid out').
> > > There are other options for a portable antenna that may
> > > work better than an extremely shortened mobile antenna...
> > > 'Doc
> >
> >
>
>

1883. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 04:53:18 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <409C67BE.1C57A3B1@cwis.net>
Source record: 95534

George,
It does that every half cycle...
'Doc

1884. Re: Antenna radiated spurs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 05:26:54 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <G9mdnRp3-e5y8gHdRVn-uQ@comcast.com>
Source record: 95535

> 3) The input power, the raw power, is being modulated by the switching
> cycle. This generates a transient pulse power on the input lines that
> easily couples noise via various susceptibilities into the receivers.

Only if you fail to decouple the input properly.

> 4) The variable switching cycle, or the varying switching duty cycle,
> creates broadband noise.
>
> 5) All of which are potential sources of trouble in a communications
> receiver that wants to find a 0.16 uV/meter signal in the presence of
noise.

Potential, yes I suppose.
As I said, I know you can make them perform badly, but it's just not that hard to make them perform well enough that they won't be noticed on your receiver, assuming you don't make it a practice to connect the power supply directly to the antenna inputs.

The receiver itself may create more noise than a properly designed switcher.

> As a designer of switchers, have you ever had to Qualify a switcher to
> MIL-STD-461 and 462?.

That one I haven't. My hamshack dosen't require MIL-STD-461 either. That's a large complicated battery of tests, that by it's very nature is expensive to test to, even if you were testing a D-Cell battery.

I have several switchers in use, all commercial designs, and they are barely detectable on my R-8500 or FT-847. I haven't had to go to any extremes (or even any measures at all) to quiet them.

My PCs are another matter, they have needed ferrites on the cables, and EMI absorption material inside the case, but that has proved to be managable.

1885. vertical dipole array

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 07:02:09 UTC
From: Angela & Gary <gmbelcas@charter.net>
Message-ID: <gmbelcas-AF4921.00020908052004@comcast.ash.giganews.com>
Source record: 95536

I'm looking for a little help in the physical design of a 20m vertical dipole. Specifically, I need advice on Al tubing sizes and preferred methods of connecting segments (hoseclamp ?, nut/bolt ?). Who's built something like this ??

Gary

1886. Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 08:25:31 UTC
From: Per Bekker-Madsen <per@oz1eqc.dk>
Message-ID: <c7i5ilchm1@news.cybercity.dk>
Source record: 95537

Hi All

Is there a web site where I can read about the relation between the thickness of the wire and the bandwith.

Thanks in advance

73 Per OZ1EQC

1887. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 08:38:01 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <CeMldGCpxJnAFwzT@b-howie.demon.co.uk>
Source record: 95538

In message <371i905qt2tm1ndnlu6ki8pchjj632dehu@4ax.com>, Larry Gagnon
<lagagnon@fakeuniserve.com> writes
>I need to solder a new section of 14 gauge copper antenna wire to a
>very old section of wire that is highly tarnished and very old. Other
>than pulling each strand apart and attempting to sand off the tarnish
>is there an easier way to remove it so that I can solder it
>effectively?

I used to use something known here in the UK as "Baker's Fluid" . It's a
mixture of zinc and ammonium chloride. The salt and vinegar trick
mentioned below works, but it depends how bad the tarnishing is.

Brian GM4DIJ
--
Brian Howie

1888. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 10:44:39 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <29ep905tl3b141iqr5pq7gk29jr4i5rgl9@4ax.com>
Source record: 95539

On Thu, 6 May 2004 22:04:39 +0100, "Neil Gibson"
<Owner@pinochio.demon.co.uk> wrote:

>I have a Hustler amateur mobile antenna model RM-80 for 80 Meter 25-30 KHz.
>Although it was designed as a mobile I want to use it as a portable, can
>anybody tell me the length of the counterpoise needed for this model? or can
>I just use an earth wire>
>

Use another RM-80 as the counterpoise.

Ron

1889. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 10:48:17 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7idth$416$1@sparta.btinternet.com>
Source record: 95540

> Is there a web site where I can read about the relation between the
> thickness of the wire and the bandwith.
==========

Antenna bandwidth changes very slowly relative to wire diameter. It is best considered in terms of antenna Q at 1/2-wave or 1/4-wave resonance.

Approximately -

Q = 1.7 * [Ln(Lambda / 2 / Diameter) - 1]

where Lambda is free-space wavelength and conductor diameter is in the same units. Ln is the logarithm to the base e.

The formula applies up the point where conductor diameter is about 1/6 of dipole antenna length.

Knowledge of antenna bandwidth is not of great practical use at HF because the Q of the feedline plus tuner has at least the same effect on the overall system bandwidth as the antenna.

Download program DIPCAGE2 from website below to see how bandwidth changes with effective diameter of a dipole cage antenna.

.....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
.....

1890. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 12:05:56 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <v24nc.23442$fE.12246@fed1read02>
Source record: 95541

"Bill Turner" <noway@nohow.com> wrote in message
news:mr6n90hkseim81cm4l877pm6bpsrq1qsro@4ax.com...
> On Fri, 7 May 2004 01:39:32 -0700, "Ed Price" <edprice@cox.net> wrote:
>
> >Try throwing up on you [sic] battery terminals
>
> --
>
> Just when I think I've heard everything...
>
> --
> Bill, W6WRT
> QSLs via LoTW
>

Hmmm, didn't mean to offend, nor to imply that this was the preferred method. However, my entire comment was "Try throwing up on your battery terminals; I think you'll find that your gut contents are more acidic than Coke."

This was an invitation to empirical inquiry, engendered by the original poster's tired old comment about how Coke must really do horrible things in your tummy, since it is also able to act as a metal cleaner.

Hams have no special dispensation to be ignorant about chemistry.

Ed
WB6WSN

1891. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 14:04:00 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409ce96f$1_7@corp.newsgroups.com>
Source record: 95542

Jim wrote:
> And, one other idea !! (found on the bay of "e"), and available elsewhere-
> a mount for 2 of these (or the hustler, and an Iron Horse, ect) "1/4" wave
> antenna -- first antenna goes to center of coax, second goes to shield!!
> makes a dipole, about 15 foot long, and can be mounted to mast (conductive,
> or plastic, same diff! tho the impedence will be quite low (because of
> these loaded
> whips), and the effeciency will be also not the best, at least would be an
> effective counterpoise!! and, to boot, parts available to build adaptor at
> rip-off shack!! got whole thing off epay for about 50 bux, + shipping!!
> Jim NN7K

What do you consider to be the purpose(s) of a counterpoise?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1892. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 14:05:42 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409ce9d5_7@corp.newsgroups.com>
Source record: 95543

Jim wrote:
> BTW that is Both Antennas, and the adaptor- not too expensive- cheaper when
> need only one ant, and the adaptor.

It works well enough above 14 MHz, but such an antenna for
75m is a real dog.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

1893. Re: vertical dipole array

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 14:09:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409ceac0$1_7@corp.newsgroups.com>
Source record: 95544

Angela & Gary wrote:
> I'm looking for a little help in the physical design of a 20m vertical
> dipole. Specifically, I need advice on Al tubing sizes and preferred
> methods of connecting segments (hoseclamp ?, nut/bolt ?). Who's built
> something like this ??

The ARRL Antenna Book has done all the work for us. I put
mine together with aluminum pop-rivets. Got the telescoping
aluminum 6 ft. pieces from Texas Towers who has a wind-
loading PC program to evaluate stress on the elements.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1894. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 14:12:50 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409ceb81_7@corp.newsgroups.com>
Source record: 95545

Ron wrote:
>>I have a Hustler amateur mobile antenna model RM-80 for 80 Meter 25-30 KHz.
>>Although it was designed as a mobile I want to use it as a portable, can
>>anybody tell me the length of the counterpoise needed for this model? or can
>>I just use an earth wire>
>
> Use another RM-80 as the counterpoise.

Hmmmmm, a 2% efficient antenna with a 2% efficient counterpoise. :-)
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1895. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 15:44:39 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405080744.4cd8201d@posting.google.com>
Source record: 95546

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:<c7idth$416$1@sparta.btinternet.com>...

> Knowledge of antenna bandwidth is not of great practical use at HF because
> the Q of the feedline plus tuner has at least the same effect on the overall
> system bandwidth as the antenna.

I'm sorry, you lost me there Reg. How does the Q of a modern
broadband amplifier feeding a nom. 75 ohm feedline contribute more to
system Q than an 80 meter 1/2 wave dipole made from 2mm wire -- or for
that matter even one that's a half-meter diameter cage (though by then
it doesn't much matter for ham use)?

Cheers,
Tom

1896. Wanted Info Antennas by Smithe 15m Broomstick

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 16:13:37 UTC
From: Randy and Cara Randall <crrandal@earthlink.net>
Message-ID: <RG7nc.9377$8S1.1495@newsread2.news.atl.earthlink.net>
Source record: 95547
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.swap

Hello. Anyone have any info or a copy of the instructions on a 15 meter broomstick antenna made by "Antennas by Smithe"? It is a model # 9BR15 approx 5' tall. Thanks, Randy AB9GO. crrandal@earthlink.net

1897. Re: FDTD in Matlab or C

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 16:47:28 UTC
From: Arun S V <arunsv@hathway.com>
Message-ID: <2g4hatF49hibU1@uni-berlin.de>
Source record: 95548

Thanks a lot to Dave Brian and Tom.I wrote out a simple 1D FDTD code with PEC boundary condition , Gaussian excitation in Matlab. (Well , I did not have to worry about multiplying the no. of cells in each dimension to get the total number of cells as Tom pointed out !! I will keep in mind that 200x200 is 40000 and not 4000 :-)). It came out rather nicely. .I guess I will try to develop my code in Matlab and try to port it to C for later versions , if needed.Thanks for your comments and Dave , thanks for suggesting the papers to study.

-Warm regards
-Arun S V

1898. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 16:49:05 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <409D0F81.23D1AB26@cwis.net>
Source record: 95549

Hey Cecil, 4% is better than 2%, and a 'hunerd'% increase
in efficiency!
(I agree with you anyway...)
'Doc

1899. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 17:31:57 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <X_OdnVl4RKcZhADdRVn-hw@comcast.com>
Source record: 95550

"Per Bekker-Madsen" <per@oz1eqc.dk> wrote in message
news:c7i5ilchm1@news.cybercity.dk...
> Hi All
>
> Is there a web site where I can read about the relation between the
> thickness of the wire and the bandwith.
>
> Thanks in advance
>
> 73 Per OZ1EQC
>
>
Per,

Going from 2 mm to 10 mm wire is not going to make a dramatic increase in bandwidth. If you are trying to cover all of 75/80 meters, for instance, with an SWR less than 2, you are better off having two parallel dipoles. You would have to play with EZNEC to get it right, but you need the dipoles to be resonant at roughly 3800 and 3600.

Tam/WB2TT

1900. Elementary question:

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 17:34:06 UTC
From: Dave Pitzer <dpitzer@sonic.net>
Message-ID: <iS8nc.10378$Fo4.131170@typhoon.sonic.net>
Source record: 95551

First of all, I'm a novice where taransmitting antennas are concerned.

It seems to me that many AM "broadcast band" antennas are four-footed towers. Do these towers merely serve to hold the actual antenna (a "wire") off the ground vertically. The "wire" runs up the center of the tower?

FM and TV (and some AM) towers tend to be slim "guyed" towers with some sort of antenna element(s) at the top. Is this correct? Is the actual tower ever a radiating element?

Also... Some tower structures (AM, FM & TV) tend to be cited on hight ground -- mountains or atop high buildings. Other antenna structures tend to be intentionally located on "low" flat ground. Why the difference?

Thanks,

Dave Pitzer
==========

1901. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 17:54:48 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7j6t8$5ej$1@titan.btinternet.com>
Source record: 95552

> > Knowledge of antenna bandwidth is not of great practical use at HF
because
> > the Q of the feedline plus tuner has at least the same effect on the
overall
> > system bandwidth as the antenna.
>
> I'm sorry, you lost me there Reg. How does the Q of a modern
> broadband amplifier feeding a nom. 75 ohm feedline contribute more to
> system Q than an 80 meter 1/2 wave dipole made from 2mm wire -- or for
> that matter even one that's a half-meter diameter cage (though by then
> it doesn't much matter for ham use)?
>
> Cheers,
> Tom
==========
Tom, who said anything about 75-ohm lines? And there's still a tuner, with FIXED settings, to contend with.

In any case an antenna can present a match to a line at only one frequency in the band. The transmission line transforms the mismatch at the antenna to something else at the tuner and something yet again at the transmitter.

Lines and tuners have lots of inductive reactance, lots of capacitative reactance, but not a lot of resistance. Which are just as much a part of the system as the antenna, if not the greater part. Q = reactance/resistance. Bandwidth is proportional to 1/Q

What the transmitter sees, even with a precisely known antenna bandwidth, is anybody's guess.

Reg, G4FGQ

1902. Re: Elementary question:

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 18:01:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ef7q9099g8omr0ififk5arnjrkeev553nf@4ax.com>
Source record: 95553

On Sat, 08 May 2004 17:34:06 GMT, "Dave Pitzer" <dpitzer@sonic.net>
wrote:

>First of all, I'm a novice where taransmitting antennas are concerned.
>
>It seems to me that many AM "broadcast band" antennas are four-footed
>towers. Do these towers merely serve to hold the actual antenna (a "wire")
>off the ground vertically. The "wire" runs up the center of the tower?

Hi Dave,

No, the physical structure, in this case, is also the radiating
structure. Some are isolated from ground (they sit on glass mounts)
or are grounded and fed by other means.

>FM and TV (and some AM) towers tend to be slim "guyed" towers with some sort
>of antenna element(s) at the top. Is this correct? Is the actual tower ever
>a radiating element?

Depends on the wavelength and the physical dimension and if the
structure is constructed with isolated elements (glass barriers along
its length to become a stacked, phased system). But by-and-large,
those that you see are holding up antennas for the height advantage.

This is not to say that BOTH could not be achieved. Here in Seattle,
we have phased AM towers holding up hundreds of VHF/UHF/SHF antennas.

>Also... Some tower structures (AM, FM & TV) tend to be cited on hight
>ground -- mountains or atop high buildings. Other antenna structures tend to
>be intentionally located on "low" flat ground. Why the difference?

Those same phased AM towers are in fact atop two of the city's largest
hills, Queen Anne and what we call Pill Hill (lots of hospitals
located there). We also have lots of lake country and estuaries
filled with AM stations. Economics of Real Estate and coverage drives
such things far, far more than engineering.

73's
Richard Clark, KB7QHC

1903. Re: Elementary question:

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 18:04:38 UTC
From: William Warren <william_warren_nonoise@comcast.net>
Message-ID: <Wi9nc.6228$z06.1201814@attbi_s01>
Source record: 95554

"Dave Pitzer" <dpitzer@sonic.net> wrote in message
news:iS8nc.10378$Fo4.131170@typhoon.sonic.net...
> First of all, I'm a novice where taransmitting antennas are concerned.
>
> It seems to me that many AM "broadcast band" antennas are four-footed
> towers. Do these towers merely serve to hold the actual antenna (a "wire")
> off the ground vertically. The "wire" runs up the center of the tower?
>
> FM and TV (and some AM) towers tend to be slim "guyed" towers with some
sort
> of antenna element(s) at the top. Is this correct? Is the actual tower
ever
> a radiating element?

The tower _IS_ the wire. Some towers have insulators at the base, some
don't, but the metal in the tower is what radiates. The guy wires might be a
part of the radiation system, but usually they're just anchors.

> Also... Some tower structures (AM, FM & TV) tend to be cited on hight
> ground -- mountains or atop high buildings. Other antenna structures tend
to
> be intentionally located on "low" flat ground. Why the difference?

FM and TV signals use frequencies that travel best in a straight "line of
sight" from the transmitting to the receiving antenna; ergo, they're high up
so that more receiving antenna can "see" them. AM stations benefit from
being near water, and since the frequencies used for AM don't need to be in
a line of sight from transmitter to receiver, they can be low down where the
water is. If a station is using its AM tower to hold an FM antenna, the
location is a compromise between height (for FM) and proximity to water (for
AM).

> Thanks,
>
> Dave Pitzer

You're welcome. Please tell your teacher that r.r.a.a. sends its regards.
;-J

Bill

1904. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 18:11:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8h8q90duuo78t2b55ps5j4p7cpqdv6l4dn@4ax.com>
Source record: 95555

On Sat, 8 May 2004 05:05:56 -0700, "Ed Price" <edprice@cox.net> wrote:

>This was an invitation to empirical inquiry, engendered by the original
>poster's tired old comment about how Coke must really do horrible things in
>your tummy, since it is also able to act as a metal cleaner.
>
>Hams have no special dispensation to be ignorant about chemistry.

Hi Ed,

Then the following instruction would be suitable:
http://www.realscience.breckschool.org/upper/johnson/Chem/ChemProj/caffeine5/Website.html
wherein it states:
"Parietal cells in the stomach lining secrete HCl. The pH level of
the stomach ranges from 1.5 to 3.5. The molarity of the HCl is then
approximately 0.01 M.
... "Coca Cola is acidic because the reaction between carbon
dioxide and the other ingredients of the soda produces carbonic acid.
Coca Cola Classic has a pH of 2.5..."

1905. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 18:51:15 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409d2cc3$1_2@corp.newsgroups.com>
Source record: 95556

'Doc wrote:
> Hey Cecil, 4% is better than 2%, and a 'hunerd'% increase
> in efficiency!
> (I agree with you anyway...)

A 2% efficient radiator and a 2% efficient counterpoise
doesn't add up to 4% total efficiency. :-)

Anyone who wants a portable rotatable dipole on 75m can
do much, much better than two Hustlers. Two SD-20 poles
with high-Q loading coils in the middle of each comes to
mind. And that's not much more trouble than two Hustlers.
The SD-20 approach is available at http://www.wr6w6.com
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

1906. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 20:01:19 UTC
From: AM200 <gt@am200.net>
Message-ID: <e0bnc.167$Gz6.76@newsfe5-gui.server.ntli.net>
Source record: 95557

Hello,

Can you tell me what "Q" stands for please?

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0405080744.4cd8201d@posting.google.com...
> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:<c7idth$416$1@sparta.btinternet.com>...
>
> > Knowledge of antenna bandwidth is not of great practical use at HF
because
> > the Q of the feedline plus tuner has at least the same effect on the
overall
> > system bandwidth as the antenna.
>
> I'm sorry, you lost me there Reg. How does the Q of a modern
> broadband amplifier feeding a nom. 75 ohm feedline contribute more to
> system Q than an 80 meter 1/2 wave dipole made from 2mm wire -- or for
> that matter even one that's a half-meter diameter cage (though by then
> it doesn't much matter for ham use)?
>
> Cheers,
> Tom

1907. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 20:01:48 UTC
From: AM200 <gt@am200.net>
Message-ID: <H0bnc.168$Gz6.19@newsfe5-gui.server.ntli.net>
Source record: 95558

Hello,

What does "Q" stand for or represent?

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c7idth$416$1@sparta.btinternet.com...
> > Is there a web site where I can read about the relation between the
> > thickness of the wire and the bandwith.
> ================================
>
> Antenna bandwidth changes very slowly relative to wire diameter. It is
best
> considered in terms of antenna Q at 1/2-wave or 1/4-wave resonance.
>
> Approximately -
>
> Q = 1.7 * [Ln(Lambda / 2 / Diameter) - 1]
>
> where Lambda is free-space wavelength and conductor diameter is in the
same
> units. Ln is the logarithm to the base e.
>
> The formula applies up the point where conductor diameter is about 1/6 of
> dipole antenna length.
>
> Knowledge of antenna bandwidth is not of great practical use at HF because
> the Q of the feedline plus tuner has at least the same effect on the
overall
> system bandwidth as the antenna.
>
> Download program DIPCAGE2 from website below to see how bandwidth changes
> with effective diameter of a dipole cage antenna.
> ----
> ....
> Regards from Reg, G4FGQ
> For Free Radio Design Software go to
> http://www.btinternet.com/~g4fgq.regp
> ....
>
>

1908. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 20:05:25 UTC
From: AM200 <gt@am200.net>
Message-ID: <44bnc.169$Gz6.11@newsfe5-gui.server.ntli.net>
Source record: 95559

Hello,

What does "Q" actually stand for as i can't find anyone that can explain
this. I know many people repeat paragraphs of books without understanding
them!
Are you stating "Q" is reactance divided by resistance or "Q" = reactance OR
resistance. You obviously know what you mean but it isn't too clear the way
you're explaining it.

What is "Q" ? So far on this group I have had many answers such as it means
"quality" "goodness" "resitance" etc, but no one can give a similar answer
to anyone else. Does anyone really know or is it a made up term.

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c7j6t8$5ej$1@titan.btinternet.com...
> > > Knowledge of antenna bandwidth is not of great practical use at HF
> because
> > > the Q of the feedline plus tuner has at least the same effect on the
> overall
> > > system bandwidth as the antenna.
> >
> > I'm sorry, you lost me there Reg. How does the Q of a modern
> > broadband amplifier feeding a nom. 75 ohm feedline contribute more to
> > system Q than an 80 meter 1/2 wave dipole made from 2mm wire -- or for
> > that matter even one that's a half-meter diameter cage (though by then
> > it doesn't much matter for ham use)?
> >
> > Cheers,
> > Tom
> ================================
> Tom, who said anything about 75-ohm lines? And there's still a tuner,
with
> FIXED settings, to contend with.
>
> In any case an antenna can present a match to a line at only one frequency
> in the band. The transmission line transforms the mismatch at the antenna
> to something else at the tuner and something yet again at the transmitter.
>
> Lines and tuners have lots of inductive reactance, lots of capacitative
> reactance, but not a lot of resistance. Which are just as much a part of
> the system as the antenna, if not the greater part. Q =
> reactance/resistance. Bandwidth is proportional to 1/Q
>
> What the transmitter sees, even with a precisely known antenna bandwidth,
is

> anybody's guess.
> ----
> Reg, G4FGQ
>
>
>
>

1909. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 21:40:44 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7jk4s$2nj$1@hercules.btinternet.com>
Source record: 95560

> What does "Q" stand for or represent?
==========

Q is a universal measure of the selectivity, the sharpness of tuning, of a tuned circuit at resonance.

It is also the ratio of reactance to loss resistance of a coil or capacitor which forms part of a tuned circuit. Numerically, it is the ratio Q = X ohms / R ohms. It is a measure of the "Quality" of an L or C component.

Values of low Q are 20 or less. Typical values of Q for HF tuning coils are 70 to 400. The physically large coils have the higher Q values. HF capacitors can have Q values as high as several thousands.

In the present context a radio antenna, having distributed inductance and capacitance, behaves as a tuned resonant circuit and has a low value of Q. The loss resistance is the radiation resistance.

A 160 meter dipole of thin wire will have a value of Q around 14.

A 2 meter dipole made of aluminium tubing will have a Q around 5.

The working bandwidth of an antenna can be defined in different ways. But it is always inversely proportional to Q. High selectivity = narrow bandwidth. Low selectivity = broad bandwidth, a desirable property of an antenna.

Reg, G4FGQ

1910. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 22:07:23 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2g540kF4igrkU1@uni-berlin.de>
Source record: 95561

"Reg Edwards" wrote
> In any case an antenna can present a match to a line at only one frequency
> in the band. The transmission line transforms the mismatch at the antenna
> to something else at the tuner and something yet again at the transmitter.

Correction: some FM broadcast transmit antennas have an input VSWR less than 1.15:1 from 88 to 108 MHz (50 ohm coaxial environment). There IS no significant mismatch at the antenna input requiring the use of a matching network there.

It depends on the application as to what VSWR bandwidth is necessary, but certainly it is not difficult or expensive in many antenna designs to span several hundred kilohertz with a good match to the transmission line.

RF

Visit http://rfry.org for FM broadcast RF system papers.

1911. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 23:00:21 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405081500.65da76d2@posting.google.com>
Source record: 95562

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:<c7j6t8$5ej$1@titan.btinternet.com>...
> > > Knowledge of antenna bandwidth is not of great practical use at HF
> because
> > > the Q of the feedline plus tuner has at least the same effect on the
> overall
> > > system bandwidth as the antenna.
> >
> > I'm sorry, you lost me there Reg. How does the Q of a modern
> > broadband amplifier feeding a nom. 75 ohm feedline contribute more to
> > system Q than an 80 meter 1/2 wave dipole made from 2mm wire -- or for
> > that matter even one that's a half-meter diameter cage (though by then
> > it doesn't much matter for ham use)?
> >
> > Cheers,
> > Tom
> ================================
> Tom, who said anything about 75-ohm lines? And there's still a tuner, with
> FIXED settings, to contend with.

I did, and in the scenario I proposed, there's a broadband amplifier,
but there IS no tuner (or if there is, it's set to a very low Q
anyway; the Q of an L network to match 75 to 50 ohms is far lower than
that of a single-wire antenna). There's no need for one if the
antenna is sufficiently broadband.

I thank you for the antenna-Q equation. But I disagree that "the Q of
the feedline plus tuner" always, or even very often, contributes more
to limiting the useful (single-setting) bandwidth of a nom. 75 ohm
half-wave dipole driven by a broadband amplifier than does the antenna
itself.

Cheers,
Tom

1912. Re: Elementary question:

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 23:33:16 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109qrhp70ehite0@corp.supernews.com>
Source record: 95563

Hi Dave, (and remember- There are never DUMB QUESTIONS!) The towers you see (even at low elevations) can be used for more than AM broadcast (and ath the frequencies for am, the WHOLE tower is used for the radiator- not the "wire" inside it.
in fact, under OSHA regulations, the "WIRE" you see (and probably associated with a ladder, tho not necessarily, may be "FALL PROTECTION" for those that must climb it to do repairs- what you DONT see is a device that will allow free travel one way (up), but unless a catch is depressed, will not travel down (in case a maintainence worker slips). You may also see smaller antennas (normally towards the top), for fm, 2 way, pageing, and even microwave-- occasionly you will even see metal plates, pich at a 45 degree angle- periscope reflectors for microwave- the dish feeding them sits on the base of the antenna. As stated, for AM, the antenna is USUALLY insulated from ground (the "counterpoise" can consist of wire netting, or individual radials running on top, or just below the surface of the soil surrounding the area.) . When was going to college, worked at a fm station in Portland, Or- that station had something like 8 - F.M stations, and 5 - two way radio stations on a 350 foot tower (Healey Heights) and the tower was probably 30-40 foot at the base! (coax for each of the broadcast antennas was about 8 inches in Diameter!!). Tho because of security problems in todays world, some of the Engineers at these instalations are quite proud to give a Guided Tour- might find it interesting to see just what makes them tick! Jim NN7K

"> > First of all, I'm a novice where taransmitting antennas are concerned.
> >
> > It seems to me that many AM "broadcast band" antennas are four-footed
> > towers. Do these towers merely serve to hold the actual antenna (a
"wire")
> > off the ground vertically. The "wire" runs up the center of the tower?
> >
> > FM and TV (and some AM) towers tend to be slim "guyed" towers with some
> sort
> > of antenna element(s) at the top. Is this correct? Is the actual tower
> ever
> > a radiating element?
>
> The tower _IS_ the wire. Some towers have insulators at the base, some
> don't, but the metal in the tower is what radiates. The guy wires might be
a
> part of the radiation system, but usually they're just anchors.
>
> > Also... Some tower structures (AM, FM & TV) tend to be cited on hight
> > ground -- mountains or atop high buildings. Other antenna structures
tend

> to
> > be intentionally located on "low" flat ground. Why the difference?
>
> FM and TV signals use frequencies that travel best in a straight "line of
> sight" from the transmitting to the receiving antenna; ergo, they're high
up
> so that more receiving antenna can "see" them. AM stations benefit from
> being near water, and since the frequencies used for AM don't need to be
in
> a line of sight from transmitter to receiver, they can be low down where
the
> water is. If a station is using its AM tower to hold an FM antenna, the
> location is a compromise between height (for FM) and proximity to water
(for
> AM).
>
> > Thanks,
> >
> > Dave Pitzer
>
> You're welcome. Please tell your teacher that r.r.a.a. sends its regards.
> ;-J
>
> Bill
>
>

1913. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 23:36:29 UTC
From: jgboyles@aol.com
Message-ID: <20040508193629.22456.00000152@mb-m29.aol.com>
Source record: 95564

>Correction: some FM broadcast transmit antennas have an input VSWR less than
>1.15:1 from 88 to 108 MHz (50 ohm coaxial environment).

I don't think a correction is necessary, comparing apples and oranges.

>It depends on the application as to what VSWR bandwidth is necessary, but
>certainly it is not difficult or expensive in many antenna designs to span
>several hundred kilohertz with a good match to the transmission line.
A 100mhz antenna has several hundred khz bandwidth using #8 wire, but try a
dipole on 1.8 mhz using #8 and you have 10-20 khz.
You are apparently an expert on VHF antennas. I am an Amateur. The antennas
discussed on this group are often 1.8-30 MHZ. HF and VHF antennas are just
alike, but they are different. Got any idea about 1.8 mhz bandwidth?

gto

73 Gary N4AST

1914. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 23:47:36 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109qscng2esag52@corp.supernews.com>
Source record: 95565

Counterpoise is required for most antennas to operate "effeciently" (have you ever tried to load a 1/4 wave whip (without one)? Makes great dummy load! Dont radiate worth a darn! Needs the full "1/2 wave" to radiate effectively say that as can be done with loading coils, ect to shorten the effective length, or a ground media for the 1/4 part to work against (tho, at vhf there are SOME 1/2 wave , base coupled antennas that need no counter poise-- but then talking 75 meters- 125 foot tower to do that!!

Cecil wrote:
> Jim wrote:
> > And, one other idea !! (found on the bay of "e"), and available elsewhere-
> > a mount for 2 of these (or the hustler, and an Iron Horse, ect) "1/4" wave
> > antenna -- first antenna goes to center of coax, second goes to shield!!
> > makes a dipole, about 15 foot long, and can be mounted to mast (conductive,
> > or plastic, same diff! tho the impedence will be quite low (because of
> > these loaded
> > whips), and the effeciency will be also not the best, at least would be an
> > effective counterpoise!! and, to boot, parts available to build adaptor at
> > rip-off shack!! got whole thing off epay for about 50 bux, + shipping!!
> > Jim NN7K
>
> What do you consider to be the purpose(s) of a counterpoise?
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
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1915. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-08 23:55:46 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109qsrv3umu4j5c@corp.supernews.com>
Source record: 95566

Oh, and BTW, never stated it would be the "Best" antenna, But, surely would be easier to pack, and set up, then packing a roll of wire , aprox. 67 feet long, and haveing to retrieve it later!! and, would be willing to bet, even as lousey is this is, would beat that one manufactured by a certain outfit that is about 3 foot high, and LOADS up your coax (ISO-T) to avoid lawsuits, like they involved 73 in years ago . Ron-er Jim NN7K

> Counterpoise is required for most antennas to operate "effeciently" (have
> you ever tried to load a 1/4 wave whip (without one)? Makes great dummy
> load! Dont radiate worth a darn! Needs the full "1/2 wave" to radiate
> effectively say that as can be done with loading coils, ect to shorten the
> effective length, or a ground media for the 1/4 part to work against (tho,
> at vhf there are SOME 1/2 wave , base coupled antennas that need no
counter
> poise-- but then talking 75 meters- 125 foot tower to do that!!
>
>
>
> Cecil wrote:
> > Jim wrote:
> > > And, one other idea !! (found on the bay of "e"), and available
> elsewhere-
> > > a mount for 2 of these (or the hustler, and an Iron Horse, ect)
"1/4"
> wave
> > > antenna -- first antenna goes to center of coax, second goes to
shield!!
> > > makes a dipole, about 15 foot long, and can be mounted to mast
> (conductive,
> > > or plastic, same diff! tho the impedence will be quite low (because
of
> > > these loaded
> > > whips), and the effeciency will be also not the best, at least would
be
> an
> > > effective counterpoise!! and, to boot, parts available to build
adaptor
> at
> > > rip-off shack!! got whole thing off epay for about 50 bux, +
> shipping!!
> > > Jim NN7K
> >
> > What do you consider to be the purpose(s) of a counterpoise?
> > --

> > 73, Cecil http://www.qsl.net/w5dxp
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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>
>

1916. Re: Elementary question: OOPS

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 00:05:30 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109qte5o9c8fla6@corp.supernews.com>
Source record: 95567

OOPS-- Tho because of security problems, many stations are off limits, but
Some of these engineers are quite proud to give you a guided tour to show
how they "tick"!! Jim

1917. Re: coax type traps

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 00:19:50 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <109qu93cc8673f3@corp.supernews.com>
Source record: 95568

' Corse one can also do similar, with couple coffee cans, and piece of copper pipe soldered to center, coax connectors on sides about 4 inchs from the bottom, same lengths for in and out, and a variable cap at the top to the center copper rod or (older) handbooks show 1/2 wave stripline filter- and these work quite well ! Quite hi "Q" , and hence, quite narrow band passthru. look
in handbooks thru at least 1977-- look in the chapter " Interference with other services"
and btw, yes suckout filters do work-- but, never have been big fan of stubs, rather use resonant cavities-- formula for resonance is Xc= Zo X tan(function of a1/4 wave (90degrees)) . Jim NN7K

"Tom Bruhns" <k7itm@aol.com> wrote in message news:3200347.0405071006.54a0ba62@posting.google.com...
> A little more explanation about what I posted earlier about a single
> stub not in general being a very good filter...
>
> Let's say you want to operate on 146MHz and want to get rid of a
> strong signal from a nearby 156MHz transmitter. So, you think, let's
> put a stub across the line which is shorted at the far end and is an
> electrical half-wave on 156MHz. Fine, it'll get rid of the 156MHz
> signal. -- And that's true enough. But what does it do on 146MHz??
> If it's 50 ohm line, it will look like about -j10 ohms at 146! That's
> not a very friendly thing to drop across the line on our operating
> frequency. But there's a way around it. If you think of that
> 180-electrical-degrees on 156 as 180*146/156 = 168.5 degrees on 146,
> then just add another stub there, also shorted, and 180-168.5 = 11.5
> degrees long on 146MHz. That stub cancels out the effect, on 146MHz,
> of the other stub, so there's essentially no effect at 146, but still
> the dead short at 156. All this is idealized, for lossless line. In
> such a case, where the rejection notch is close to the frequency you
> want to pass, be sure to use low loss line. For example, if the
> longer stub has 0.1dB loss and the shorter has 0.01dB loss, you'll
> reflect not a short but about 0.6 ohms on 156, and not an open but
> about 158 ohms resistive, representing considerable loss. That might
> be something like RG174 (didn't check the numbers, but ballpark). If
> you instead use some LMR600 line that has about 1/5 the loss, the
> resistances will also be in that 5:1 ratio: about 0.12 ohms for the
> short and a much nicer 780 for the open. Or you can make a really low
> loss stub (a resonator) from moderately large diameter copper pipe.
>
> Also, you can put trimmer caps across the ends of stubs to make them
> much easier to tune than by using the "cut and re-solder" method.
>

> If you thrive on just numbers, you can get freeware programs that will
> calculate all that sort of thing for you, or just do it yourself on a
> calculator or in a calculating program like Excel or Scilab. I much
> prefer graphical representations, and use a Smith chart program that
> does calcs that are just as good but displays the results graphically.
> I use WinSmith, but there are freeware ones that will do similar
> things. RFSim99 is just one of several.
>
> Cheers,
> Tom
>
> (PS to Jim: NN7N is about a hundred feet away at the moment...)
>
> "Jim" <NN7K@Reno.Rmci.Net> wrote in message
news:<109ll8js6vnuk3e@corp.supernews.com>...
> -->(Corrected per Jim's updated posting...)<--
> > Shorted 1/4 wave coax (twin lead, strip line, ect) produces a HI -Z at
> > resonance
> > OPEN 1/4 wave coax (ect) produces a dead short at resonance
> > SHORTED 1/2 wave coax (ect) produces dead short
> > OPEN 1/2 wave coax (ect) produces HI-Z at resonance
> > This phonominom repeats every 1/4 wave (ad nausium)
> > If can find, look at July, 1965 edition of 73 magazine-- shows how to
> > calculate coaxial
> > striplines, ect for vhf/uhf circuits . if need (and these BIG files , 11
> > pgs) have in jpg, and some of it in word.
> >
> > Jim NN7K
> >
> > --
> > No trees were killed in the sending of this message. However, a large
number
> > of electrons were terribly inconvenienced !
> >
> > " People who never get carried away, should be! " --- Malcom Forbes
> >
> > "Tom Bruhns" <k7itm@aol.com> wrote in message
> > news:3200347.0405051526.4682d356@posting.google.com...
> > > If you just want to pass your signal, what's wrong with just
> > > connecting the coax from the source to the load?
> > >
> > > Or do you also want some filtering? If that's what you want, consider
> > > two stubs. (Actually, a single stub is generally not a very good
> > > filter...) These two will be attached to your feedline at the same
> > > place. One will be shorted on the other end, and the other will be
> > > open on the other end. Their total length will be 1/4 wave
> > > (accounting for the line's propagation velocity). So you're feeding
> > > your line through a 1/4-wave resonator, tuned to your signal
> > > frequency. But the shorted part will reflect back a short at some
> > > frequency, and knock that one out. And the open part will do

> > > likewise. And you can so a similar thing, but with different notch
> > > frequencies, if you use a half-wave resonator open on both ends, or
> > > one shorted on both ends. The key is all these will pass the
> > > frequency the resonator is tuned to. Beware of resonator losses if
> > > you tap way down on it.
> > >
> > > RFSim99 is a good tool for playing with this sort of thing. You can
> > > readily see the inevitable harmonic responses that occur with stubs:
> > > things tend to repeat at even and odd multiples of lowest resonance
> > > frequencies. But you can get more accurate results by including the
> > > line loss in your calcs. There are generally only a few "intersting"
> > > frequencies to check, easy to do in a spreadsheet for example, using
> > > accurate line equations.
> > >
> > > There are lots of other configurations that can do interesting things,
> > > too...you can make a harmonic filter out of series pieces which
> > > alternate impedances above and below the main line's, for example.
> > > It's not very easy to insert a stub in series with a piece of coax,
> > > but I've seen examples of that with balanced line.
> > >
> > > Cheers,
> > > Tom
> > >
> > >
> > >
> > >
> > > pdrunen@aol.com (PDRUNEN) wrote in message
> > news:<20040504235242.25458.00000914@mb-m29.aol.com>...
> > > > Hi Group,
> > > >
> > > > Many thanks to the folks that posted a message for my FM trap
question.
> > > >
> > > > I been studying the traps made out of coax for several years, they
all
> > form a
> > > > parallel circuit.
> > > >
> > > > Is there any way I could connect the inner conductor and braid such
that
> > I form
> > > > a series circuit. I want to pass my signal not keep it in.
> > > >
> > > > de KJ4UO

1918. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 01:02:01 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <409d82ee$0$434$5cbedd26@news.real-time.com>
Source record: 95469

A 60 inch antenna at 800 megs is about 4.07 wavelengths. Plugging that
into the boomlength to practical gain formula gives 14.2 dBd. A super
tweaked one might give .2 or .3 more, but the bandwidth would be worse.

tom
K0TAR

coyotefred wrote:
> So what would the gain be with that 60" antenna? I see 20-24" or so
> yagis being sold all over with gains of 12-14dB or so. But from what
> you're saying maybe these figures aren't accurate either? I guess I'm
> just wondering whether it is worth it to spend an extra $60 for the
> 60" yagi rather than the more "standard" 20-24" size... ?
>
> nx7u@arrl.net (Scott Townley) wrote in message
news:<409ae118.3385925@news.west.cox.net>...
>
>>Anyone selling a 60" yagi with 36dB at 800MHz is a liar :-) It can't
>>be done (5' tall panel antennas on top of the base stations are only
>>12dBi).

1919. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 02:57:33 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <KM-dnfe4GYODAwDdRVn-jw@adelphia.com>
Source record: 95470

Brian Howie wrote:

> In message <371i905qt2tm1ndnlu6ki8pchjj632dehu@4ax.com>, Larry Gagnon
> <lagagnon@fakeuniserve.com> writes
>
>> I need to solder a new section of 14 gauge copper antenna wire to a
>> very old section of wire that is highly tarnished and very old. Other
>> than pulling each strand apart and attempting to sand off the tarnish
>> is there an easier way to remove it so that I can solder it
>> effectively?
>
>
> I used to use something known here in the UK as "Baker's Fluid" . It's a
> mixture of zinc and ammonium chloride. The salt and vinegar trick
> mentioned below works, but it depends how bad the tarnishing is.

Make sure to clean that wire off really well after soldering it. All
these suggestions are basically putting acid flux on the wires.

- Mike KB3EIA -

1920. Re: Screwdriver Antennas!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 03:21:15 UTC
From: Jerry <joxendi@bellsouth.net>
Message-ID: <Plhnc.63713$cb.10451@bignews1.bellsouth.net>
Source record: 95471

"Jeremy Salch" <salchNOSPAM@tblx.net> wrote in message
news:c7a2rt$1cl0f$1@ID-225834.news.uni-berlin.de...
> Jerry wrote:
>
> > I would just like to invite your attention to the Carolina Cyclone
> > screwdriver antenna at www.qsl.net/k4kwh . This mobile antenna packs a
> punch
> > without "punching" a hole in your wallet! It is made of the finest
> materials
> > available--such as the loading coil. It is made of black nylon and is
> > grooved to exactly fit the coil windings and
> > not "jump" out of place. Your loading coil will not wiggle
> > around inside the mast more than 1/32 of an inch; it is precisely
machined
> > to fit the mast even when fully extended. Check out those "flimsy"
> weather
> > covers that
> > flex with a squeeze. In a year, you'll be looking for another one
because
> it
> > will have split and cracked under the UV rays! The Carolina Cyclone
come
> > with covers made of 1/8" wall Lexan. NO cracking and splitting here!
> > It will last for many years.
> >
> > Don't be afraid to run 1000 watts SSB on Carolina Cyclone I, or 1500
watts
> > on CC II!
> >
> > Compare the price, too. Nowhere will you find this kind of value and
> > performance for the price!
> >
> > Visit www.qsl.net/k4kwh for photos and info.
> >
> >
> > 73
> >
> > Jerry
>
>
> I have a differeny "brand" of screwdriver that has a flexible weather
> cover that has been out in the sun for several years.. and its still as
> good as it was the day i bought it. AND for the price of the cyclone i
> could have bought the antenna I did.. and one of the new automated digital

> controllers for it.
>
>
> --
> Registered Linux User #346565
> http://www.tblx.net
> WA5K

Check out the prices of *some* screwdrivers that are over double the price of mine. I don't doubt you can
get the cheaper antennas and covers. The cheapest one I know of is the DK3 at $150 (last time I checked), and the antenna positioner is over $250. I GIVE away simple
little modules for tuning for 706 rigs that do the same thing
as the fancy "positioners". The only reason I haven't built them for Kenwoods (like TS50) is I can't find the plugs.
Part of the pins are round; part of them are round.

Also, the cheaper ones (usually) are made of PVC. Put
1000 watts AM on PVC and watch your coil become a
slinky toy. Some operators want more than that. Mine are rated at 1000 (recently updated) watts and 1500 watts respectively.

Finally, if your post is meant to insult or worry me, it has not succeeded. My livelihood doesn't depend on making
antennas; I do it for fun and making a bit of change. If I never made another one, it wouldn't hurt me at all. It is a
HOBBY and a way to occupy my time while retired. I have shipped antenna from here to Florida, from here to
Alaska, Texas and all over. It is like anything. I can buy gas at my local station, or I can cross the SC border and
buy it for .15 less. Why do they build Fords and Cadillacs? It ain't all about cost.

And *most* of the makers "skimp" on the covers by using Butyl. I use 1/8" wall Lexan tubes. Butyl WILL eventually crumble. I offer the covers because there is a demand for them. If that "offends" someone, too bad If yours works, that is fine with me--congratulations.

73

J

1921. Re: Screwdriver Antennas!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 03:23:18 UTC
From: Jerry <joxendi@bellsouth.net>
Message-ID: <Knhnc.63742$cb.35772@bignews1.bellsouth.net>
Source record: 95472

"Mikey" <ki6pr@arrl.net> wrote in message
news:4098ea3d_2@newsfeed.slurp.net...
> I would just like to invite you to SPAM elsewhere, and actually spend some
> advertising money instead of dropping your stuff on this group.
>
> BTW - Does Don Johnson know you're using the term "screwdriver antenna??
>
> - KI6PR

Yes, the last time I talked to him. Since when do you own this group. I am
not hurting you or anyone else. This is the only post I have made on the
subject in months.

(Has California become an island yet)

>
> "Jerry" <joxendi@bellsouth.net> wrote in message
> news:lxYlc.75192$oN1.22215@bignews5.bellsouth.net...
> > I would just like to invite your attention to the Carolina Cyclone
> > screwdriver antenna at www.qsl.net/k4kwh . This mobile antenna packs a
> punch
> > without "punching" a hole in your wallet! It is made of the finest
> materials
> > available--such as the loading coil. It is made of black nylon and is
> > grooved to exactly fit the coil windings and
> > not "jump" out of place. Your loading coil will not wiggle
> > around inside the mast more than 1/32 of an inch; it is precisely
machined
> > to fit the mast even when fully extended. Check out those "flimsy"
> weather
> > covers that
> > flex with a squeeze. In a year, you'll be looking for another one
because
> it
> > will have split and cracked under the UV rays! The Carolina Cyclone
come
> > with covers made of 1/8" wall Lexan. NO cracking and splitting here!
> > It will last for many years.
> >
> > Don't be afraid to run 1000 watts SSB on Carolina Cyclone I, or 1500
watts
> > on CC II!
> >
> > Compare the price, too. Nowhere will you find this kind of value and
> > performance for the price!

> >
> > Visit www.qsl.net/k4kwh for photos and info.
> >
> >
> > 73
> >
> > Jerry
> >
> >
>
>

1922. Re: Screwdriver Antennas!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 03:24:03 UTC
From: Jerry <joxendi@bellsouth.net>
Message-ID: <rohnc.63750$cb.28676@bignews1.bellsouth.net>
Source record: 95473

"phil" <Phil@screwdriver.com> wrote in message
news:4098FF37.BBBC4F1A@screwdriver.com...
> Hi,
>
> I like the tarheel and baby tarheel type of screwdriver antenna !
>
>
> I quick search on TESS shows no registered trademark for
>
> screwdriver antenna

That is because there IS none.
>
> http://www.uspto.gov/
>
> 73 phil
>
> Mikey wrote:
>
> > I would just like to invite you to SPAM elsewhere, and actually spend
some
> > advertising money instead of dropping your stuff on this group.
> >
> > BTW - Does Don Johnson know you're using the term "screwdriver antenna??
> >
> > - KI6PR
> >
> > "Jerry" <joxendi@bellsouth.net> wrote in message
> > news:lxYlc.75192$oN1.22215@bignews5.bellsouth.net...
> > > I would just like to invite your attention to the Carolina Cyclone
> > > screwdriver antenna at www.qsl.net/k4kwh . This mobile antenna packs a
> > punch
> > > without "punching" a hole in your wallet! It is made of the finest
> > materials
> > > available--such as the loading coil. It is made of black nylon and is
> > > grooved to exactly fit the coil windings and
> > > not "jump" out of place. Your loading coil will not wiggle
> > > around inside the mast more than 1/32 of an inch; it is precisely
machined
> > > to fit the mast even when fully extended. Check out those "flimsy"
> > weather
> > > covers that
> > > flex with a squeeze. In a year, you'll be looking for another one
because

> > it
> > > will have split and cracked under the UV rays! The Carolina Cyclone
come
> > > with covers made of 1/8" wall Lexan. NO cracking and splitting here!
> > > It will last for many years.
> > >
> > > Don't be afraid to run 1000 watts SSB on Carolina Cyclone I, or 1500
watts
> > > on CC II!
> > >
> > > Compare the price, too. Nowhere will you find this kind of value and
> > > performance for the price!
> > >
> > > Visit www.qsl.net/k4kwh for photos and info.
> > >
> > >
> > > 73
> > >
> > > Jerry
> > >
> > >
>

1923. Re: Elementary question:

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 03:32:14 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409DA63B.7462D85A@sonic.net>
Source record: 95474

Just in that last week I happened to notice two broadcasting antennas in the vacinity of where I live. In both cases it appears to be two towers about 100'+ tall which are about 100-200' apart. They are in a field with nothing else around except a small building. I see no wire strung between the towers. They are guyed and the guys are broken up with insulators. Are both towers driven or is one a (parsisitic) relflector? Is this generally what AM broadcast antennas look like?

Bill K6TAJ

1924. Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 04:13:55 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409DB001.C398A036@sonic.net>
Source record: 95475

This might be a question for one or another of the other radio amateur newsgroups, but I figured I kind of already know of some great engineering minds residing in antenna-land, so I would post the question here first.

When I was a kid back in the 50s I built my first novice transmitter with a one tube circuit using a 117N7 which put out a couple of watts on CW through my end fed random wire tuned with a tiny electric bulb and a single loop attached between the two terminals of the bulb.

Oddly enough this circuit only used the hot side of the AC outlet and a cold water pipe ground to the chassis of the transmitter. Our house was built in the early 40s if that tells you anything about how they wired outlets in those days.

I have since dug up a reference to this transmitter circuit in "Ham Radio Projects for Novice and Technician by Bert Simon -W2UUN". Even though this little book came out in 1968 I know that I found the circuit in some earlier publication because I built this thing in 1953. And I am alive to tell the story...eg. not electrocuted. It keyed to the cathode which was also tied to the top grid....kind of like a beam pentode(?). I think I owned one 80m xtal at the time and a Hallicrafters S-53A. [I got distracted from ham radio for 50 years, but I am back....with alot of catching up to do].

My question:
If I were to take a volt (amp) meter and put one probe in the hot side of an AC house outlet and the other probe to a metal rod stuck in the ground out in the middle of a field somewhere (presumably nowhere near a neutral leg), what would my meter read and why?
Deep electro-philosophical answers welcome as long as it is expressed in terms a child could understand. (It seems that this little odd transmitter circuit avoided the neutral leg altogether-- just used the hot side and a ground).

Bill K6TAJ

1925. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 04:30:47 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <Ytinc.31896$pJ1.6174@lakeread02>
Source record: 95476

"zeno" <zeno@sonic.net> wrote
> Oddly enough this circuit only used the hot side of the AC
> outlet and a cold water pipe ground to the chassis of the
> transmitter. Our house was built in the early 40s if that
> tells you anything about how they wired outlets in those
> days.
>
> My question:
> If I were to take a volt (amp) meter and put one probe in the
> hot side of an AC house outlet and the other probe to a metal
> rod stuck in the ground out in the middle of a field
> somewhere (presumably nowhere near a neutral leg), what would
> my meter read and why?
> Deep electro-philosophical answers welcome as long as it is
> expressed in terms a child could understand. (It seems that
> this little odd transmitter circuit avoided the neutral leg
> altogether-- just used the hot side and a ground).
> Bill K6TAJ

Hi Bill,

Ground is referenced at both the generating station and your home in order to complete the circuit. In your home's service mains panel, ground and neutral are bonded together. Before the days of the third wire, added purely for safety in the event of an equipment fault, a faulted piece of equipment still had a return path, just not the added measure we have today of a very short ground path (no pun intended) <G>

With a properly resistive load you could still perform your field exercise, but it would have nothing to do with avoiding a nearby neutral wire which serves the same function anyway. Neutral was always and still is, the return path of a parallel circuit, nothing more or less. It is cold when no load is connected to it and hot (minus the resistance-consumed current of a load applied) when a load is connected.

73's

Jack
Virginia Beach, VA

1926. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 06:08:20 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7khsk$d1f$1@titan.btinternet.com>
Source record: 95477

Further to antenna bandwidth.

The concept of Q = Inductive reactance / loss resistance applies equally to coil plus capacitor tuned circuits and to antennas.

Because capacitance loss is negligible, antenna Q depends only on loss resistance of the wire inductance. Loss resistance = uniformly distributed radiation resistance + wire resistance. Uniformly distributed radiation resistance for a half-wave dipole is exactly twice the centre-fed value, ie., approx 140 ohms.

Formula for the inductance of a straight length of wire can be found in Terman and many other places. It is then a simple matter to calculate dipole Q = inductive reactance / loss resistance.

Bandwidth can be described in terms of the 3dB points or in terms of the SWR = X points.

But, as stated earlier, what matters is radiating system bandwidth, antenna + transmission line + tuner. And doubling antenna wire diameter has no noticeable effect on operating bandwidth. Increasing wire diameter by 100 times may double bandwidth but is not worth the trouble and expense for only one band.

Discussion of antenna bandwidth at HF, always in non-numerical terms, is an overated topic.

Reg, G4FGQ

1927. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 06:09:51 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409DCB2D.67113063@sonic.net>
Source record: 95478

Hi Jack,

So could I light up a 100 watt light bulb with one terminal stuck in the earth out in the middle of a field and the other to the hot side of an AC circuit?...I guess so.

The Earth is the ultimate return path I guess. The neutral as I understand it is the center tap of the high voltage step down transformer which takes two hot leads from the high voltage line and steps it down to 240V with a center tap being the "neutral". The neutral is then grounded for extra safety. The neutral (center tap) does not need to be grounded to provide the return path, but what my question is why the Earth per se is also a return path? I guess being such a large mass it is theoretically a zero potential.

Would my theoretical light bulb get brighter as I drove the rod deeper into the earth?

Bill K6TAJ

Jack Painter wrote:

> "zeno" <zeno@sonic.net> wrote
> > Oddly enough this circuit only used the hot side of the AC
> > outlet and a cold water pipe ground to the chassis of the
> > transmitter. Our house was built in the early 40s if that
> > tells you anything about how they wired outlets in those
> > days.
> >
> > My question:
> > If I were to take a volt (amp) meter and put one probe in the
> > hot side of an AC house outlet and the other probe to a metal
> > rod stuck in the ground out in the middle of a field
> > somewhere (presumably nowhere near a neutral leg), what would
> > my meter read and why?
> > Deep electro-philosophical answers welcome as long as it is
> > expressed in terms a child could understand. (It seems that
> > this little odd transmitter circuit avoided the neutral leg
> > altogether-- just used the hot side and a ground).
> > Bill K6TAJ
>
> Hi Bill,
>
> Ground is referenced at both the generating station and your home in order
> to complete the circuit. In your home's service mains panel, ground and
> neutral are bonded together. Before the days of the third wire, added purely
> for safety in the event of an equipment fault, a faulted piece of equipment

> still had a return path, just not the added measure we have today of a very
> short ground path (no pun intended) <G>
>
> With a properly resistive load you could still perform your field exercise,
> but it would have nothing to do with avoiding a nearby neutral wire which
> serves the same function anyway. Neutral was always and still is, the return
> path of a parallel circuit, nothing more or less. It is cold when no load is
> connected to it and hot (minus the resistance-consumed current of a load
> applied) when a load is connected.
>
> 73's
>
> Jack
> Virginia Beach, VA

1928. Shorting the Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 06:23:56 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409DCE7A.9CEC9ABD@sonic.net>
Source record: 95479

I have seen mention the idea of shorting both ends of the loop and using this as a differnt kind of antenna. Anyone know about this idea. My 540' loop is still in the process of construction. How, why, and for what might I use this alternative rigging? How would I hook it up to the tuner or transmitter and what might it be good for. What would you call a loop shorted this way....I know "shorting" is not exactly the right word here.

Bill K6TAJ

1929. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 06:32:29 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <1gknc.32426$pJ1.10300@lakeread02>
Source record: 95480

"zeno" <zeno@sonic.net> wrote
> Hi Jack,
>
> So could I light up a 100 watt light bulb with one terminal stuck in the
earth
> out in the middle of a field and the other to the hot side of an AC
> circuit?...I guess so.

Bill,
Just before it blew up, it would light up, yes. Remember I said "With a properly resistive load" and that would be a very dangerous however possible experiment to attempt. The circuit breakers are set to prevent your haphazard determination of what current load is too much - the hot wire supply in should be matched with "cooler" (neutral) return, accounting for acceptable current usage by the load... up to the point where too much current generated heat trips the breaker. Nothing forces you (in your experiment) from keeping all of that available voltage (0v felt on neutral) as long as the current did not exceed 15a or whatever your breaker allows. Obviously a 100w light bulb shorted to ground would blow instantly, before the breaker could protect it..

>
> The Earth is the ultimate return path I guess. The neutral as I understand
it
> is the center tap of the high voltage step down transformer which takes
two hot
> leads from the high voltage line and steps it down to 240V with a center
tap
> being the "neutral". The neutral is then grounded for extra safety. The
neutral
> (center tap) does not need to be grounded to provide the return path, but
what
> my question is why the Earth per se is also a return path? I guess being
such a
> large mass it is theoretically a zero potential.
>
> Would my theoretical light bulb get brighter as I drove the rod deeper
into the
> earth?

Assuming a series of (18) 100w bulbs on a 15a circuit (120v), yes the ground rod's resistance (5-15 ohm depending on soil) would allow less than the full brightness of the bulbs, until or if you were able to reduce the impedance by using a larger surface area rod and drive it deeper into wet soil. This is the same principle of making the very best and lowest impedance ground

system you possibly can for lightning protection!

73's

Jack

>
>
> Bill K6TAJ
>
> Jack Painter wrote:
>
> > "zeno" <zeno@sonic.net> wrote
> > > Oddly enough this circuit only used the hot side of the AC
> > > outlet and a cold water pipe ground to the chassis of the
> > > transmitter. Our house was built in the early 40s if that
> > > tells you anything about how they wired outlets in those
> > > days.
> > >
> > > My question:
> > > If I were to take a volt (amp) meter and put one probe in the
> > > hot side of an AC house outlet and the other probe to a metal
> > > rod stuck in the ground out in the middle of a field
> > > somewhere (presumably nowhere near a neutral leg), what would
> > > my meter read and why?
> > > Deep electro-philosophical answers welcome as long as it is
> > > expressed in terms a child could understand. (It seems that
> > > this little odd transmitter circuit avoided the neutral leg
> > > altogether-- just used the hot side and a ground).
> > > Bill K6TAJ
> >
> > Hi Bill,
> >
> > Ground is referenced at both the generating station and your home in
order
> > to complete the circuit. In your home's service mains panel, ground and
> > neutral are bonded together. Before the days of the third wire, added
purely
> > for safety in the event of an equipment fault, a faulted piece of
equipment
> > still had a return path, just not the added measure we have today of a
very
> > short ground path (no pun intended) <G>
> >
> > With a properly resistive load you could still perform your field
exercise,
> > but it would have nothing to do with avoiding a nearby neutral wire
which
> > serves the same function anyway. Neutral was always and still is, the
return
> > path of a parallel circuit, nothing more or less. It is cold when no

load is
> > connected to it and hot (minus the resistance-consumed current of a load
> > applied) when a load is connected.
> >
> > 73's
> >
> > Jack
> > Virginia Beach, VA
>

1930. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 07:02:09 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405082302.e6997c7@posting.google.com>
Source record: 95481

"AM200" <gt@am200.net> wrote in message
news:<44bnc.169$Gz6.11@newsfe5-gui.server.ntli.net>...

> What does "Q" actually stand for as i can't find anyone that can explain
> this.

Q is generally taken to "stand for" quality factor. The definition I like to go back to when all else fails is "energy stored divided by energy dissipated per radian." Q really only makes sense when you are talking about single resonators. This definition of Q applies to LC tanks, coaxial cavities, hollow cavities, acoustic resonators, pendulums, or any other singly resonant structure.

High Q resonators "ring" for a long time, a lot of cycles. Low Q resonators dissipate energy rapidly and the ringing fades quickly.

Cheers,
Tom

1931. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 07:26:14 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405082326.4709b52b@posting.google.com>
Source record: 95482

jgboyles@aol.com (JGBOYLES) wrote in message
news:<20040508193629.22456.00000152@mb-m29.aol.com>...
...
> A 100mhz antenna has several hundred khz bandwidth using #8 wire, but try a
> dipole on 1.8 mhz using #8 and you have 10-20 khz.

1.8MHz dipole with 8AWG wire: just use three parallel pieces, spaced
about a foot apart...or make a "bowtie" out of the 8AWG. Or use a
steel cable center core and a cage of cheap 14AWG wires around it.
There ARE cures for narrow bandwidth in wire antennas. Of course, it
may be simpler to just use a matching network ("tuner"), since the
efficiency and pattern of even the simple single thin wire dipole
doesn't depend much of frequency within an HF band.

You have choices here, and I don't much care for generalities that
unnecessarily limit the choices. Just because one person wants to use
a tuner, and retune after any QSY greater than 20kHz doesn't mean
another who wants to use a broadband system should be discouraged from
doing so.

Cheers,
Tom

1932. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 10:41:25 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2g6g6cF4qfc9U1@uni-berlin.de>
Source record: 95483

RE: Tom's comment below -

For an example of the VSWR bandwidth achievable in an >> HF << design, check the antenna described at this link http://www.tcibr.com/PDFs/613tfwebs.pdf. Nominal input VSWR is 2:1 from 2-30MHz . No input tuner is used.

Good VSWR bandwidth in an antenna is not limited to VHF and above.

RF

Visit http://rfry.org for FM broadcast RF system papers.

"Tom Bruhns" wrote
>Just because one person wants to use a tuner, and
>retune after any QSY greater than 20kHz doesn't mean
>another who wants to use a broadband system should
>be discouraged from doing so.

1933. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 11:37:02 UTC
From: Per Bekker-Madsen <per@oz1eqc.dk>
Message-ID: <c7l557$1k16$1@news.cybercity.dk>
Source record: 95484

Hi All

Thanks to all, I have learned a lot reading your comments, was Interested in how much difference there is in bandwith between a dipole 2 mm thick wire and a coax antenne made of RG-213 :-)

73 to All of you

Per OZ1EQC

oz1eqc@arrl.net

1934. Re: Shorting the Loop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 12:34:28 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <409E2554.7F2F4FF8@cwis.net>
Source record: 95485

Bill,
I've 'shorted' an 80 meter loop to load it as a
'sort of' 1/4 wave wire on 160 meters. Disconnected
the 'ground' side of the ladder line and connected
it to the 'hot' side of the tuner (with the 'other'
side of the ladder line). Certainly nothing to brag
about in performance, but it did work. I said a
"sort of" 1/4 wave wire because it's length really
isn't a 1/4 wave long. (Maybe a very 'fat', but 'short'
1/4 wave wire?) Probably didn't work very well because
I don't have any radials in the ground, just a very good
safety ground.
I suspect your 540 foot loop won't load the easiest,
but should make for at least a 'fair' signal on 160 if
you 'shorted' it. But, at 540 feet, you shouldn't need
to 'short' it anyway...
'Doc

1935. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 12:54:16 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <409E29F8.6F67BE35@cwis.net>
Source record: 95486

Bill,
The voltage on the end of the wire will be something
between 120 vac and 0 vac. Depends on how long the wire
is and the resistance of your 'dirt'. I wouldn't expect
the light bulb to be as bright as it could be (back to the
resistance and length thingys again), but I would expect
it to have some 'glow' to it...
'Doc

PS - Rubber gloves and boots would be 'nice' if you try
that experiment.

1936. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 13:09:54 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <409e30b8_4@news1.prserv.net>
Source record: 95488

Zeno:

I think you are confusing cause and effect. There are many safety considerations in designing an electrical power distribution system. One consideration is this: Suppose some fault occurs which increases the leakage from the primary voltage (anywhere from 4 kV to 54 kV) of your distribution transformer to the secondary which supplies your home, and the secondary is ungrounded. Contrary to the way it would be portrayed on movie and TV programs, your light bulbs would still light normally, and appliances would work correctly (except grounded radios and TVs which actually would blow up) but if you touched anything connected to the secondary service, you would enjoy instant electrocution. So, the reference for the secondary, the center tap of the US 240 VAC system is connected to a ground rod(s) of a specified maximum resistance to earth (which tends to be the potential your body assumes while walking around your house). The design criteria for this fault condition is that the primary fuse will open before the secondary system voltage rises above a safe(?) level. So, neutral is grounded, to a relatively good extent.

Now, to further pursue this mind game, consider the earth to be a copper ball. Then, all of it that is nearby will be at the potential of your electric service neutral. And a sheet metal screw driven into it anywhere within reason would provide an adequate return path for AC drawn from either phase of the service. Real earth is more resistive, depending on soil content and moisture level, so one can approach the copper ball condition, but usually it is more like a bag of loose carbon particles. And, the more surface area of a driven rod exposed to the earth, the lower the resistance and the less voltage drop for a given current, or the more current for a given voltage drop. It seems to all follow Ohm's law, for some unknown reason.

A couple of caveats. One, modern wiring tends to include Ground Fault devices which measure differential current to a wiring device. If more current flows in the hot line then returns there to that neutral, it disconnects the device. So the connection you used would not operate. Two, none of this applies to RF, as in antenna grounds, because reactance must be considered in addition to pure resistance which dominates at 60 Hz. And another: Some to none of this applies in most other countries which use other standards and methods.

--
Crazy George
Remove N O and S P A M imbedded in return address

1937. Re: Thoughts on the use of water as ground screen

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 13:15:45 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <Adudna4LiI2csgPdRVn-hQ@comcast.com>
Source record: 95487

Every time I see a post that begins "-----BEGIN PGP SIGNED MESSAGE-----", I can't help but think of a kid saying "hey, you want to see my secret decoder ring?"

"Jack Twilley" <jmt+usenet@twilley.org> wrote in message news:86r7u0q8lh.fsf@duchess.twilley.org...
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> I have seen what appear to be AM broadcast towers in or on the edges
> of salt marshes, and it seems pretty obvious to me why that's a good
> place to go. However, the environmentalists being a little more
> noticeable than they were once upon a time, this particular method of
> siting is probably a little more challenging than it used to be.
>
> I recognize that salt water is far more conductive than fresh water,
> but fresh water's still superior to sand and the like. That being
> said, I am wondering about using a pond as a ground screen and
> mounting the antenna itself on an island (or a raft) in the middle of
> the pond.
>
> What I don't know is just how large a pond do I need in order for
> something like this to work? Obviously it depends on type of antenna
> and band and a bunch of other things, but even a wild-ass guess (with
> some math or physics behind it) will help make the difference between
> whether I bother trying or not.
>
> For those who absolutely require less variables in their equations,
> imagine a standard dipole tuned for 20m strung roughly 45 feet above
> ground level between two trees, one on either side of a fresh water
> pond. How wide does the pond have to be at that point (and others)
> for it to work right? Even answers like "the pond will have to be
> wider than the dipole is long" or "there will be no noticeable impact
> on performance" are fine if they're based in reality, and ideally in
> math and physics I can understand.
>
> Oh, and another question: what difference, if any, would frozen
> versus liquid water make in this situation?
>
> Jack.
> (exploring new antenna options.)
> - --
> Jack Twilley
> jmt at twilley dot org

> http colon slash slash www dot twilley dot org slash tilde jmt slash
> -----BEGIN PGP SIGNATURE-----
> Version: GnuPG v1.2.4 (FreeBSD)
>
> iD8DBQFAl/MBGPFSfAB/ezgRAo5pAKD35cRH0XFUz7p/uqBwbj3SNRP69QCfaz5C
> 6he5FgG+/q767KjX9g9T75A=
> =j1k0
> -----END PGP SIGNATURE-----

1938. Re: Elementary question:

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 14:00:59 UTC
From: William Warren <william_warren_nonoise@comcast.net>
Message-ID: <vQqnc.12095$xw3.818809@attbi_s04>
Source record: 95489

"zeno" <zeno@sonic.net> wrote in message news:409DA63B.7462D85A@sonic.net...
> Just in that last week I happened to notice two broadcasting antennas in
the
> vacinity of where I live. In both cases it appears to be two towers about
100'+
> tall which are about 100-200' apart. They are in a field with nothing else
> around except a small building. I see no wire strung between the towers.
They
> are guyed and the guys are broken up with insulators. Are both towers
driven or
> is one a (parsisitic) relflector? Is this generally what AM broadcast
antennas
> look like?

The usual practice is to drive both towers. Parasitic reflectors don't give sharp nulls, and broadcast stations are usually "protecting" another licensee on the same frequency, so the array will be designed to put a notch in the signal toward the other "priviledged" station, while still assuring the maximum possible coverage in the local area. That means driving both towers.

The guys are broken with insulators in order to prevent the guy wires from becoming parasitic elements, which could weaken the null(s).

This is generally what AM antennas look like if the station in question wasn't licensed a long time back: some "clear channel" stations have non-directional antennas, but that's rare, and some "sundowner" (i.e., daytime-only) stations are non-directional because they have low power and aren't on at night.

HTH.

Bill

1939. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 14:38:07 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <84gs90tl05m19jon0rs1m2tg56bll2dg20@4ax.com>
Source record: 95490

On Sat, 08 May 2004 09:12:50 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Ron wrote:
>>>I have a Hustler amateur mobile antenna model RM-80 for 80 Meter 25-30 KHz.
>>>Although it was designed as a mobile I want to use it as a portable, can
>>>anybody tell me the length of the counterpoise needed for this model? or can
>>>I just use an earth wire>
>>
>> Use another RM-80 as the counterpoise.
>
>Hmmmmm, a 2% efficient antenna with a 2% efficient counterpoise. :-)

Hmmmm, I wonder what 2% efficient means. 2% radiated power with 98%
reflected back into the radio? Ability to contact only 2% of the
stations that you can receive? What?

Ron, W1WBV

1940. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 14:58:07 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <cvgs90ph5qisfin6b1ddg7t2sc8bg1hkf0@4ax.com>
Source record: 95491

On Sat, 08 May 2004 13:51:15 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>'Doc wrote:
>> Hey Cecil, 4% is better than 2%, and a 'hunerd'% increase
>> in efficiency!
>> (I agree with you anyway...)
>
>A 2% efficient radiator and a 2% efficient counterpoise
>doesn't add up to 4% total efficiency. :-)
>
>Anyone who wants a portable rotatable dipole on 75m can
>do much, much better than two Hustlers. Two SD-20 poles
>with high-Q loading coils in the middle of each comes to
>mind. And that's not much more trouble than two Hustlers.
>The SD-20 approach is available at http://www.wr6w6.com

The question was the length of a counterpoise, not a rotatable dipole.
I figured another Hustler sure beats running radials out in a portable
situation.

If someone was to ask you how to make their Chevy run better would you
tell him to get a Ford? ;-)

Ron

1941. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 15:07:25 UTC
From: Bill Turner <noway@nohow.com>
Message-ID: <v4is90hmvg74i41nhq3d0d90dnlpbu44h9@4ax.com>
Source record: 95492

On Sun, 09 May 2004 04:13:55 GMT, zeno <zeno@sonic.net> wrote:

>My question:
>If I were to take a volt (amp) meter and put one probe in the
>hot side of an AC house outlet and the other probe to a metal
>rod stuck in the ground out in the middle of a field
>somewhere (presumably nowhere near a neutral leg), what would
>my meter read and why?

It would read very close to your full line voltage. If you tried to
draw any significant amount of current however, the voltage read by the
meter would drop. The reason is the earth acts like a resistor of some
unknown (but relatively large) value inserted in series with your
circuit. Basic Ohm's law.

--
Bill, W6WRT
QSLs via LoTW

1942. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 15:26:08 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <60is90hhcjt63ovvmsj5cnr89jp96dbir8@4ax.com>
Source record: 95493

On Sun, 09 May 2004 04:13:55 GMT, zeno <zeno@sonic.net> wrote:

>My question:
>If I were to take a volt (amp) meter and put one probe in the
>hot side of an AC house outlet and the other probe to a metal
>rod stuck in the ground out in the middle of a field
>somewhere (presumably nowhere near a neutral leg), what would
>my meter read and why?
>Deep electro-philosophical answers welcome as long as it is
>expressed in terms a child could understand. (It seems that
>this little odd transmitter circuit avoided the neutral leg
>altogether-- just used the hot side and a ground).
>
>
>
>Bill K6TAJ

Bill,

Assuming that the transformer on the pole supplying the power to your house has a grounded neutral, an "infinitely" high impedance voltmeter will read total applied voltage across an open circuit, and so your meter will read 110/120 volts.

If your voltmeter does not have an infinitely high impedance, the internal impedance of the meter will be in series with the line/meter lead/ground impedance and will read a portion of the applied voltage equal to the voltage drop across it's internal impedance.

Ron, W1WBV

1943. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 15:52:32 UTC
From: William Warren <william_warren_nonoise@comcast.net>
Message-ID: <4tsnc.12831$xw3.862723@attbi_s04>
Source record: 95494

"zeno" <zeno@sonic.net> wrote in message news:409DB001.C398A036@sonic.net...
[snip]
> When I was a kid back in the 50s I built my first novice
> transmitter with a one tube circuit using a 117N7 which put
> out a couple of watts on CW through my end fed random wire
> tuned with a tiny electric bulb and a single loop attached
> between the two terminals of the bulb.
>
> Oddly enough this circuit only used the hot side of the AC
> outlet and a cold water pipe ground to the chassis of the
> transmitter. Our house was built in the early 40s if that
> tells you anything about how they wired outlets in those
> days.
>
> I have since dug up a reference to this transmitter circuit
> in "Ham Radio Projects for Novice and Technician by Bert
> Simon -W2UUN". Even though this little book came out in 1968
> I know that I found the circuit in some earlier publication
> because I built this thing in 1953. And I am alive to tell
> the story...eg. not electrocuted. It keyed to the cathode
> which was also tied to the top grid....kind of like a beam
> pentode(?). I think I owned one 80m xtal at the time and a
> Hallicrafters S-53A. [I got distracted from ham radio for 50
> years, but I am back....with alot of catching up to do].
>
> My question:
> If I were to take a volt (amp) meter and put one probe in the
> hot side of an AC house outlet and the other probe to a metal
> rod stuck in the ground out in the middle of a field
> somewhere (presumably nowhere near a neutral leg), what would
> my meter read and why?

Althought we talk about "220 volt" supplies in our houses, we mostly just use 1/2 of the pole transformer for each load, i.e., we connect light bulbs, toasters, and refrigerators between one "hot" lead and a "Neutral" wire _WHICH IS CONNECTED TO GROUND_ as well as to the center tap of the pole transformer secondary. So your meter would read 110 volts, unless it's a very old meter with a very low internal resistance. Something like a Simpson 260, which has an internal resistance of 20,000 ohms/volt, would show the line voltage, because the added resistance of the path from your rod "out in the middle of a field" back to the (grounded) center-tap of the pole transformer would be negligible compared to the meter's internal resistance.

> Deep electro-philosophical answers welcome as long as it is
> expressed in terms a child could understand. (It seems that

> this little odd transmitter circuit avoided the neutral leg
> altogether-- just used the hot side and a ground).

Since the house was wired in the 40's, it probably had metal pipe in it, which means that your transmitter used the pipe as the return part of the circuit instead of the Neutral wire connected to the outlet. It was, and still is, common for your electrician to bond the Neutral to the water pipe at (or close to) the service entry point, and since water meter cases are usually brass, that meant that the connection to your water pipe may have had a lower-impedance path back to the pole transformer than the Neutral wire in the outlet your transmitter was connected to. After all, household plumbing supply pipes are usually 1/2 inch, so you got (assuming good bonding at all the joints) the equivelent of about "four ott", or 0000 gauge wire for your return path.

Connecting a one-tube rig between the hot and ground actually had some advantages for RF: no rf currents flowing in the Neutral, for example, and a little bit of a counterpoise for your antenna. You didn't use "just the hot side and a ground" - you used your plumbing pipes as a substitute for the Neutral conductor, which is always connected to ground anyway. (1)

This might make more sense if I explain some of the history of electrical use in the U.S. The original "Edison" plant produced 110 volts _DC_, and used ground returns extensively, mostly by relying on the metal pipes in the street and in homes. It's for that reason that our "household" current is a nominal 110 volt AC - the RMS, or effective, value of AC required to light an old 110 volt toaster or spin a 110 volt DC motor. (2)

The use of utility pipes as ground return paths between generating stations and homes had predictable consequences, with utility workers getting shocked and injured. Not only that, but it introduced incredibly high "noise" into the ground - not a problem for light bulbs, but a nightmare for the early ground-return telephones - and so the transition to AC was accompanied by extensive efforts to ground all services independently of the utility pipes. You'll notice ground rods at most poles where there's a transformer, and the high-tension wires at the top of utility poles work against a ground which is bonded to the center tap of the transformer secondary, both for safety and to reduce stray currents by distributing ground loads throughout the system (3).

So, long story short, your transmitter was working from hot to ground, just like every other 110 volt device in your home (4).

Bill

(Nother I say is to be considered as competent electrical advice. If you get electrocuted, have your heirs blame Ohm, not me.)

(1) However, this is a good example of how what used to be true is no longer so: plastic pipe is now common, and although I hope a young ham would not consider a plastic pipe to be a "ground", (s)he might assume that an old metal pipe _is_, even though the water feed might have been patched with plastic at some point. Most electrical inspectors now disdain water pipes as

ground electrodes, and require at least one, and sometimes several, ground rods to obtain a low-impedance ground connection for the service equipment in addition to the traditional utility bond.

(2) Edison, who saw his status as Ghod of Electricity eroded by Tesla's more efficient and less costly system, tried to frighten the public away from Alternating Current service by arranging to have condemned criminals electrocuted with AC, thus hoping to demonstrate how dangerous the new technology was. The Wizard of Menlo Park once said that the only way to move electricity from town to town was to charge up batteries and put them on railroad flatcars.

(3) The actual load for the three-phase "high" wires is a Wye connected series of transformers, each (hopefully) distributed and loaded so as to minimize ground currents. On streets with a single high wire, the other two phases are balanced by equivalent runs (using different phases) in nearby streets, unless the load imbalance is negligible. The ground path is a combination of the ground wires strung from pole-to-pole, the pole ground electrodes, the service ground rods at each house, ties to the utility pipes, and the occasional tree limb. The objective is to have a non-fatal voltage between two sides of any severed ground conductor that the public might come into contact with.

(4) If your electrician did his job well, your house's circuits and loads will be arranged so that the net ground current is close to zero, i.e., each 110 volt load on the "black" wire will be "in series" with an equivalent load on the "red" wire, so that the Neutral carries only the difference currents. YMMV.

1944. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 15:52:48 UTC
From: coyotefred@hotmail.com
Message-ID: <b8883a35.0405090752.7356d1c7@posting.google.com>
Source record: 95495

Wow...so those smaller yagis in the 20-24" length would, despite being advertised as giving you 12-14dB gain, would likely only be giving you 4-5dB?

Tom Ring <tarnews@taring.org> wrote in message news:<409d82ee$0$434$5cbedd26@news.real-time.com>...
> A 60 inch antenna at 800 megs is about 4.07 wavelengths. Plugging that
> into the boomlength to practical gain formula gives 14.2 dBd. A super
> tweaked one might give .2 or .3 more, but the bandwidth would be worse.

1945. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:27:27 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409e5c93_7@corp.newsgroups.com>
Source record: 95496

Ron wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Hmmmmm, a 2% efficient antenna with a 2% efficient counterpoise. :-)
>
> Hmmmm, I wonder what 2% efficient means. 2% radiated power with 98%
> reflected back into the radio? Ability to contact only 2% of the
> stations that you can receive? What?

It's a ballpark estimate and means for every 100 watts going
into the antenna, two watts are radiated. If the feedpoint
impedance is 50 ohms, 98 watts are dissipated as heat in
the antenna, primarily in the coil(s). (Try transmitting 100w
into a 75m hamstick for one minute and then grabbing the coil.)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

1946. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:35:39 UTC
From: YODAR <yodar1@cfl.rr.com>
Message-ID: <v5tnc.574468$Po1.74992@twister.tampabay.rr.com>
Source record: 95497

Richard Clark wrote:
> On Sat, 8 May 2004 05:05:56 -0700, "Ed Price" <edprice@cox.net> wrote:
>
>
>>This was an invitation to empirical inquiry, engendered by the original
>>poster's tired old comment about how Coke must really do horrible things in
>>your tummy, since it is also able to act as a metal cleaner.
>>
>>Hams have no special dispensation to be ignorant about chemistry.
>
>
> Hi Ed,
>
> Then the following instruction would be suitable:
>
http://www.realscience.breckschool.org/upper/johnson/Chem/ChemProj/caffeine5/Website.html
> wherein it states:
> "Parietal cells in the stomach lining secrete HCl. The pH level of
> the stomach ranges from 1.5 to 3.5. The molarity of the HCl is then
> approximately 0.01 M.
> ... "Coca Cola is acidic because the reaction between carbon
> dioxide and the other ingredients of the soda produces carbonic acid.
> Coca Cola Classic has a pH of 2.5..."

coca cola also has phosphoric acid in it

yodar

1947. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:35:42 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409e5e82$1_7@corp.newsgroups.com>
Source record: 95499

Ron wrote:
> I figured another Hustler sure beats running radials out in a portable
> situation.

Maybe so, and I figured a slightly different approach would
triple the radiated power. Anyone who uses a mobile antenna
for portable operation on 75m is simply wasting power since
portable antennas invariably can be longer/higher.

> If someone was to ask you how to make their Chevy run better would you
> tell him to get a Ford? ;-)

No, but if someone asks me how to make their Ford run better,
I would tell him to get a Chevy. :-)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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1948. Re: SteppIR 3 el Yagi vs. Force 12 XR5

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:36:54 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <109sngq3fts1v49@corp.supernews.com>
Source record: 95498

Dear Rob (unknown call; unknown location; no E-mail address):
Your questions are unanswerable.
What constitutes the "best" antenna depends on many factors. You
have only provided the information that you are "up north" and that you
wish an antenna to survive Winter weather.
It is unlikely that someone has "tried" both of the antennas you
mention. If they had gone to that expense it would be to write a
paper/book or because one of the antennas died.
Winter survival depends on a number of factors (including luck).
What is a reasonable design to place at 40 feet in an old, wooded
subdivision is likely to be outrageous at 200 feet in open country.
The ARRL has sold a book on the mechanical design of beams. It is a
good reference to study. The mechanical standard for towers and
antennas is 222F. It too should be consulted.
It will be a few more years before the survival characteristics of
the Step products starts to have statistical significance. I have heard
from riggers that the F12 products do not do well in severe wind/weather
conditions. (You may well not have such severe conditions.)
A search using Google, or the like, will turn up more information.
Be cautious of statements that contend that their antenna survived last
Winter's storm. The writer's location may have shielded the antenna.
I hope that this is of assistance.
Regards, Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Rob" <noemail@pse.com> wrote in message
news:FDzmc.57707$ZJ5.1729584@news20.bellglobal.com...
> I am thinking of putting up a yagi antenna. I am considering putting
up
> either the SteppIR 3 el yagi or the Force 12 XR5.
>
> Does anyone have any opinions on which is the best antenna? Has
anyone
> tried both?
>
> Rob
> P.S. I live up north where there is lots of snow and ice during the
winter.
> Will the SteppIR antenna survive such weather?
>
>

1949. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:38:09 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409e5f14$1_7@corp.newsgroups.com>
Source record: 95500

YODAR wrote:
> coca cola also has phosphoric acid in it

Used to etch glass?

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
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1950. bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:40:10 UTC
From: Eric Oyen - N7ZZT <n7zzt@127.0.0.1>
Message-ID: <pan.2004.05.09.16.40.10.230329@127.0.0.1>
Source record: 95501

ok,
I recently built an inverted-v antenna out of 2 lengths of copper pipe.
I centered it at 26.000 Mhz. it seems to have a 3:1 SWR bandwidth of 6 Mhz
(23-29 Mhz). is this typical for this type of antenna?

construction details:
2 lengths of .5 inch copper pipe at 108 inches in length:
4.5 feet of RG-8x coax wrapped in a tight loop (8 turns on 4 2 inch
diameter form as a 1:1 current balun), 100 feet of rg-8x coax to station
(in this case, an FRG-7 SW receiver).

I used an MFJ antenna analyzer to determine the BW of the antenna.

does this look koshur to anyyone here?

DE N7ZZT
Phoenix, Arizona

--
the difference between intelligence and stupidity is that intelligence
has its limits.

1951. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:45:59 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c7ln87$42k$1@mail.specsol.com>
Source record: 95502

YODAR <yodar1@cfl.rr.com> wrote:
> Richard Clark wrote:
> > On Sat, 8 May 2004 05:05:56 -0700, "Ed Price" <edprice@cox.net> wrote:
> >
> >
> >>This was an invitation to empirical inquiry, engendered by the original
> >>poster's tired old comment about how Coke must really do horrible things in
> >>your tummy, since it is also able to act as a metal cleaner.
> >>
> >>Hams have no special dispensation to be ignorant about chemistry.
> >
> >
> > Hi Ed,
> >
> > Then the following instruction would be suitable:
> >
http://www.realscience.breckschool.org/upper/johnson/Chem/ChemProj/caffeine5/Website.html
> > wherein it states:
> > "Parietal cells in the stomach lining secrete HCl. The pH level of
> > the stomach ranges from 1.5 to 3.5. The molarity of the HCl is then
> > approximately 0.01 M.
> > ... "Coca Cola is acidic because the reaction between carbon
> > dioxide and the other ingredients of the soda produces carbonic acid.
> > Coca Cola Classic has a pH of 2.5..."

> coca cola also has phosphoric acid in it

> yodar

So do beer, jams and jellies, and cheeses.

Pphosphoric acid is a week acid, and the pH of Coca Cola is still 2.5.

What's your point?

--
Jim Pennino

Remove -spam-sux to reply.

1952. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:49:03 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c7lndv$42k$2@mail.specsol.com>
Source record: 95503

Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
> YODAR wrote:
> > coca cola also has phosphoric acid in it

> Used to etch glass?

You're probably thinking of hydrofluoric acid.

Phosphoric acid is a rather common food flavoring agent.

--
Jim Pennino

Remove -spam-sux to reply.

1953. Re: bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:54:29 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c7lno5$42k$3@mail.specsol.com>
Source record: 95504

Eric Oyen - N7ZZT <n7zzt@127.0.0.1> wrote:
> ok,
> I recently built an inverted-v antenna out of 2 lengths of copper pipe.
> I centered it at 26.000 Mhz. it seems to have a 3:1 SWR bandwidth of 6 Mhz
> (23-29 Mhz). is this typical for this type of antenna?

> construction details:
> 2 lengths of .5 inch copper pipe at 108 inches in length:
> 4.5 feet of RG-8x coax wrapped in a tight loop (8 turns on 4 2 inch
> diameter form as a 1:1 current balun), 100 feet of rg-8x coax to station
> (in this case, an FRG-7 SW receiver).

> I used an MFJ antenna analyzer to determine the BW of the antenna.

> does this look koshur to anyyone here?

> DE N7ZZT
> Phoenix, Arizona

> --
> the difference between intelligence and stupidity is that intelligence
> has its limits.

100 feet of coax will make it look a little better than it really is,
but the the bandwidth doesn't sound out of line.

Why don't you download the demo eznec (www.eznec.com) and model it with
various thickness of elements and see what happens?

--
Jim Pennino

Remove -spam-sux to reply.

1954. Re: newbie question, grounding

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 16:55:38 UTC
From: Thierry <"Use http">
Message-ID: <409e6287$1@news.vo.lu>
Source record: 95505

Hi,

Some useful information maybe :
http://www.astrosurf.com/lombry/menu-qsl.htm
section "Antenna systems"
Several articles answer to your questions, I hope so.

73
Thierry, ON4SKY, LX3SKY

"joe" <radioham@nospam.com> wrote in message
news:10958j0hohko8ea@corp.supernews.com...
> I am thinking of buying a beam antenna for HF.
> I have been told that some antennas have earthing straps and some dont.
>
> The antenna I have seen is a tribander with traps for 10-15-20. It has no
> earthing strap on.
> If I were to put an earthing strap on to the braid side first to the pole
> then earth the pole.
>
> Will this A, give me protection against lightning and B, improve signals
> recieved.
> Will there be any other effect. ie: swr etc.
>
> I understand the middle element is a driven element, with an insulator on
> and there is a director and reflector.
>
> sorry if its a stupid question !!!
>
>
>
>
>
>

1955. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 17:26:05 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <NQtnc.13331$z06.2251394@attbi_s01>
Source record: 95506

Taking Cecil's example a step further. The radiation resistance [Rr] of
an 8 foot antenna at 3.9 MHz is in the range of 1 to 2 ohms depending
upon coil location. The antenna losses, I^2*R, can be in the range of 10
to 20 ohms [Ra], and the ground losses can be in the range of 10 to 20
ohms {Rg]. So, your nominal '50 ohm load' is comprised of Rr + Ra + Rg = RL.

Efficiency is (Rr/RL)*100%. So, 2/50 = 4% or 1/50 = 2%. Take your pick!

The energy is NOT reflected back. It is wasted as heat in the antenna
and ground losses!

Deacon Dave, W1MCE
+ + +

Ron wrote:

> On Sat, 08 May 2004 09:12:50 -0500, Cecil Moore
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Ron wrote:
>>
>>>>I have a Hustler amateur mobile antenna model RM-80 for 80 Meter 25-30 KHz.
>>>>Although it was designed as a mobile I want to use it as a portable, can
>>>>anybody tell me the length of the counterpoise needed for this model? or can
>>>>I just use an earth wire>
>>>
>>>Use another RM-80 as the counterpoise.
>>
>>Hmmmmm, a 2% efficient antenna with a 2% efficient counterpoise. :-)
>
>
>
> Hmmmm, I wonder what 2% efficient means. 2% radiated power with 98%
> reflected back into the radio? Ability to contact only 2% of the
> stations that you can receive? What?
>
> Ron, W1WBV
>

1956. Re: easy way to refurbish tarnished copper wire?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 17:59:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <u2ss901upjqqgn0e4r6c4ljnpdbq2p1fa3@4ax.com>
Source record: 95507

On Sun, 09 May 2004 16:35:39 GMT, YODAR <yodar1@cfl.rr.com> wrote:
>> ... "Coca Cola is acidic because the reaction between carbon
>> dioxide and the other ingredients of the soda produces carbonic acid.
>> Coca Cola Classic has a pH of 2.5..."
>coca cola also has phosphoric acid in it

Hi OM,

I was going to point that out, but hit the send button while fumbling
among the keys.

Phosphoric acid is a very good metal brightener. I used it when
cleaning shipboard equipment for Gov. contracts. I recall one fellow
in our group who picked up a coffee cup to use it as a solvent holder,
poured some in, and immediately dissolved the bottom right out. It
was as though he poured it straight through a sleeve.

73's
Richard Clark, KB7QHC

1957. Re: bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 18:04:55 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409e736c_1@corp.newsgroups.com>
Source record: 95508

Eric Oyen - N7ZZT wrote:
> I recently built an inverted-v antenna out of 2 lengths of copper pipe.
> I centered it at 26.000 Mhz. it seems to have a 3:1 SWR bandwidth of 6 Mhz
> (23-29 Mhz). is this typical for this type of antenna?

Everything else being equal, the bandwidth in MHz increases with
frequency. A better indication would be a normalized bandwidth,
in your case 6/26 = 23% which is pretty good. A 75m antenna with
a bandwidth like that would cover the entire 80m band. Of course,
re-scaling would require it to be two pieces of copper pipe 65 feet
long and more than three inches in diameter. :-)
--
73, Cecil http://www.qsl.net/w5dxp

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1958. Re: bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 18:13:26 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409e756b_1@corp.newsgroups.com>
Source record: 95509

Cecil Moore wrote:
> Everything else being equal, the bandwidth in MHz increases with
> frequency. A better indication would be a normalized bandwidth,
> in your case 6/26 = 23% which is pretty good. A 75m antenna with
> a bandwidth like that would cover the entire 80m band. Of course,
> re-scaling would require it to be two pieces of copper pipe 65 feet
> long and more than three inches in diameter. :-)

That irrigation pipe comes to mind. Would two 65 foot sections
with a 90 degree angle between them be self-supporting in two
directions? Guy the other two directions?
--
73, Cecil http://www.qsl.net/w5dxp

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1959. Re: Elementary question:

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 18:24:15 UTC
From: Dave Pitzer <dpitzer@sonic.net>
Message-ID: <jHunc.10482$Fo4.133010@typhoon.sonic.net>
Source record: 95510

Thanks everyone!!

DP

"Dave Pitzer" <dpitzer@sonic.net> wrote in message
news:iS8nc.10378$Fo4.131170@typhoon.sonic.net...
> First of all, I'm a novice where taransmitting antennas are concerned.
>
> It seems to me that many AM "broadcast band" antennas are four-footed
> towers. Do these towers merely serve to hold the actual antenna (a "wire")
> off the ground vertically. The "wire" runs up the center of the tower?
>
> FM and TV (and some AM) towers tend to be slim "guyed" towers with some
sort
> of antenna element(s) at the top. Is this correct? Is the actual tower
ever
> a radiating element?
>
> Also... Some tower structures (AM, FM & TV) tend to be cited on hight
> ground -- mountains or atop high buildings. Other antenna structures tend
to
> be intentionally located on "low" flat ground. Why the difference?
>
> Thanks,
>
> Dave Pitzer
> ==========
>
>

1960. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 18:45:24 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409E7C41.CE685AC0@sonic.net>
Source record: 95511

Interesting responses. This is a great group.

Theoretically, if "neutrals" (eg. the center taps of the step down transformer's secondary) were not grounded anywhere on the Earth, would the Earth still act as the return path?

My intuition says yes simply because of the mass of the Earth. If you have a static charge, for example, it discharges to the ground (or any body of mass) it comes in contact with. So if I had a static charge I can get that current to flow to the Earth or any body of a lower potential. So the "return path" of the Earth, in the strictest theoretical sense does not depend on the "neutrals" being grounded, it is just the fact that the Earth is this large mass at a lower potential. That the "neutrals" are grounded is an additional safety factor. In the era of knob and tube wiring I cannot remember neutrals being grounded the way they are today. There were just two wires going to the outlets. Later it was determined that this was not always safe. This is my simple understanding at the moment, but I am still digesting all the responses here.

remember those funny little straps we attached under our cars supposedly to eliminate those "zaps" from sliding over the car seats? hi hi

Bill K6TAJ

1961. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 20:13:37 UTC
From: Michael <Michael-donotspam@bigpond.net.au>
Message-ID: <Rhwnc.29854$TT.29368@news-server.bigpond.net.au>
Source record: 95512

"Marc Battyani" <Marc.Battyani@fractalconcept.com> wrote in message
news:c7bn90$eed@library1.airnews.net...
> Hello,
>
> I've made a Class-E amplifier which works rather well as I get 25VRMS into
a
> 50 Ohm resistor.
> But heating a resistor is not really want I do ;-)
>
> I want to send this power into a loop antenna to transmit power by
induction
> to another aantenna 10 to 20 mm away.
> The transmit loop antenna is in series with a capacitor and the receive
> antenna is in parallel with a capacitor. Both antennas are tuned to the
> correct frequency.
>
> The problem is that though I have 125Vpkpk at the transistor drain, I only
> have 15Vpkpk at my loop antenna and also 15Vpkpk in the receive antenna
(not
> loaded)
> I guess I need to to some impedance matching but how do I compute the
> impedance of those loops antennas (is it just the L//C ?) and how do I
> compute the output impedance of the class-E amplifier ?
>
> Any suggestion, URL etc ?

It sounds to me like you are talking about audio (or low) frequencies?

I think you are correct in that you need some impedance matching. The
impedance of your antenna is lower than 50 ohms so does not develop as much
voltage.

The best way to work out the impedance of the loop is to measure it. If you
are absolutely sure it is at resonance then it will be purely resistive and
you can measure the impedance of the loop with the equipment you have - if
it is not at resonance there will be phase errors in the following
measurement.

Connect your 50 ohm resister in series with your loop and then connect this
to the output of the amplifier. Measure the voltage across the output of
the amplifier. If it is reading over 100v pk2pk turn the drive down so it
does not saturate the output transistors.

Next disconnect the voltmeter and connect it across the 50 ohm resistor and
note the voltage (Vr). Disconnect the voltmeter and connect it across the
loop and note the voltage (Vl). You know one resistance Rr = 50 ohms.

Since the current is the same in both loads and they are in phase you can use ohms law.

Vr/Rr = Vl/Rl

rearranging you get

R_loop = (E_loop * 50ohms) / E_resistor

it doesn't really matter if you measure RMS or pk2pk

good luck and let us know how you go.

> Thanks,
>
> Marc Battyani

1962. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 20:23:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cc2t90do18suoh6nttccknfnr4epbdnbjp@4ax.com>
Source record: 95513

On Sun, 09 May 2004 18:45:24 GMT, zeno <zeno@sonic.net> wrote:
>Theoretically, if "neutrals" (eg. the center taps of the step down
>transformer's secondary) were not grounded anywhere on the Earth, would the
>Earth still act as the return path?

Hi Bill,

"Theoretically" if the neutral has no ground anywhere on the Earth,
then the Hot lead has no potential to anywhere on the Earth. This
theory (being perfect) must of necessity invoke no linkage nor leakage
too.

If you hold a metal cylinder flashlight, how much of the battery
potential is draining through your hand to ground? On OR off? Earth
and the battery still have this vast reservoir of electrons, does that
matter in this case?
>
>My intuition says yes simply because of the mass of the Earth. If you have a
>static charge, for example, it discharges to the ground (or any body of mass)
>it comes in contact with.

The premise of the static charge presumes that the charge was applied
there by reference to another charge (electrons moved from one site to
another). This violates the premise of "not grounded to Earth" as
there must be a complete circuit to perform this act and Earth does,
and always had acted as the reference/reservoir.

Hence your example is mixing two conditions to one argument (the
violation of the original premise).

>So if I had a static charge I can get that current to
>flow to the Earth or any body of a lower potential. So the "return path" of the
>Earth, in the strictest theoretical sense does not depend on the "neutrals"
>being grounded

It never did, the "return path" of the hot lead is always the neutral
lead in whatever form suitable to the current demand. It is a
convention to ground the neutral lead so that the path resistance does
not present one standing at ground potential with a lethal voltage
drop. Earth, in whatever form, is a miserable conductor even if it
presents only one Ohm resistance. That same one Ohm to a 100A service
yields 100V potential at the outlet(s). Ground is ground, and this
guarantees "some" current will seek a path through you if you happen
to hold this blighted, neutral lead. If your path resistance to
ground (much less efficient) offers 10K Ohms (mostly confined to the
dermal layer of dead skin cells, roughly a tenth to a hundredth of

this resistance that beneath this 100ï¿½M barrier); then Ohms law will guarantee a lethal current. But wait! There is an special added bonus!

That same barrier supports a network of ducts for perspiration. Those ducts, under the excitement of an AC current find muscles contracting and relaxing at a 60HZ rate causing them to secrete fluid which in turn lowers the dermal resistance. This is called a positive coefficient wherein more current demands more current. Well, you are already dead, this only serves to cook and baste you.

73's
Richard Clark, KB7QHC

1963. Titan Vrs Gap Sigma 5 Multiband

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 20:24:23 UTC
From: Joe Aurelio <n@aurelio-usa.com>
Message-ID: <n-0B140D.15242109052004@news.verizon.net>
Source record: 95514

I am inerested in purchasing one of these anennas. I would like to hear from operators who have used them. Also from those who have assembled them.

I want to know how hard it is to assemble the Titan. How they mounted it (I am looking at pole mount at 10 ft.?) Did you decide to guy it. If so why?

Same kinds of questions for the Sigma 5 or 5-GT.

for both-do they work well enough for DX from the central part of the US to Europ/Japan/Australia etc.

Thanks de ND2E

1964. Re: Titan Vrs Gap Sigma 5 Multiband

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 21:20:45 UTC
From: Mike <km6ab@pacbell.net>
Message-ID: <Ngxnc.65562$HG7.13535@newssvr25.news.prodigy.com>
Source record: 95515

I had a GAP Titan. Easy to assemble, easy to erect, good match most
everywhere except 80m. Performance was poor on all bands compared to a
40m inverted V dipole fed with 450ohm line and tuner and an SGC-230
autotuner with about 35ft of wire in an end fed inverted V shape. I
bought it thinking DX would be better compared to several horizontal
antennas at my location. It seems to defy the laws of propagation, low
horizontal NVIS antennas were noticeably better at extreme distances.
The GAP salesperson at Dayton lied. If you find someone who raves about
one ask what they are comparing it to. If someone simply states it
talked great DX to Europe/Asia from the US, so what. What did they
compare it to??? My opinion is itï¿½s a compromise antenna with
compromised performance and I have tried a LOT of antennas.
Mike KM6AB

Joe Aurelio wrote:
> I am inerested in purchasing one of these anennas. I would like to hear
> from operators who have used them. Also from those who have assembled
> them.
>
> I want to know how hard it is to assemble the Titan. How they mounted it
> (I am looking at pole mount at 10 ft.?) Did you decide to guy it. If so
> why?
>
> Same kinds of questions for the Sigma 5 or 5-GT.
>
> for both-do they work well enough for DX from the central part of the US
> to Europ/Japan/Australia etc.
>
>
> Thanks de ND2E

1965. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 22:02:29 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <kaat901u8r0gk7aoju6rapbu20r9k9alm7@4ax.com>
Source record: 95516

On Sun, 09 May 2004 11:35:42 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Ron wrote:
>> I figured another Hustler sure beats running radials out in a portable
>> situation.
>
>Maybe so, and I figured a slightly different approach would
>triple the radiated power. Anyone who uses a mobile antenna
>for portable operation on 75m is simply wasting power since
>portable antennas invariably can be longer/higher.
>
>> If someone was to ask you how to make their Chevy run better would you
>> tell him to get a Ford? ;-)
>
>No, but if someone asks me how to make their Ford run better,
>I would tell him to get a Chevy. :-)

Well, now, that's more like it :-)

Ron

1966. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 22:14:42 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <tpat90tkbl7g4eka3crofmp0jgs6v78h2j@4ax.com>
Source record: 95517

On Sun, 09 May 2004 17:26:05 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Taking Cecil's example a step further. The radiation resistance [Rr] of
>an 8 foot antenna at 3.9 MHz is in the range of 1 to 2 ohms depending
>upon coil location. The antenna losses, I^2*R, can be in the range of 10
>to 20 ohms [Ra], and the ground losses can be in the range of 10 to 20
>ohms {Rg]. So, your nominal '50 ohm load' is comprised of Rr + Ra + Rg = RL.

So you can use the formula I^2*R (which is for finding P) without
knowing the variable "I" to find the resistance (Ra)?

I don't think so. Unless you have a magic wand, Harry Potter :-)

Ron

>
>Efficiency is (Rr/RL)*100%. So, 2/50 = 4% or 1/50 = 2%. Take your pick!
>
>The energy is NOT reflected back. It is wasted as heat in the antenna
>and ground losses!
>
>Deacon Dave, W1MCE
> + + +

1967. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-09 23:17:07 UTC
From: jgboyles@aol.com
Message-ID: <20040509191707.04129.00001133@mb-m16.aol.com>
Source record: 95518

>You have choices here, and I don't much care for generalities that
>unnecessarily limit the choices. Just because one person wants to use
>a tuner, and retune after any QSY greater than 20kHz doesn't mean
>another who wants to use a broadband system should be discouraged from
>doing so.
Hi Tom,
The thread was "wire thickness versus bandwidth" As you know, to scale an antenna from one frequency to another, you need to scale the wire diameter as well. This will keep the bandwidth pretty much the same.
I thought I was commenting on the bandwidth as one changes the frequency and length of an antenna, but keep the effective wire diameter constant. Of course if you vary the effective diameter, 3 parallel pieces of #8 a foot apart on 1.8 mhz, you change the effective bandwidth.

>you have choices here, and I don't much care for generalities that
>unnecessarily limit the choices.
I did not mean to be general and limit choices, sorry.

73 Gary N4AST

1968. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 00:20:55 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <HVznc.15789$z06.2686840@attbi_s01>
Source record: 95419

Ron wrote:

> On Sun, 09 May 2004 17:26:05 GMT, Dave Shrader
> <david.shrader@comcast.net> wrote:
>
SNIP
>
> So you can use the formula I^2*R (which is for finding P) without
> knowing the variable "I" to find the resistance (Ra)?
>
> I don't think so. Unless you have a magic wand, Harry Potter :-)
>
> Ron

You certainly can!!

Total power to the antenna SYSTEM = I^2*(Rr + Ra + Rg).

Total power radiated = I^2*(Rr).

When you divide the two terms to get efficiency the I^2 term cancels.
This leaves Rr/(Rr + Ra + Rg). The current terms drops right out!!

DD

1969. Re: cell antenna options for remote area???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 00:33:34 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <409ecdbf$0$432$5cbedd26@news.real-time.com>
Source record: 95420

20 inches is about 1.36 wavelengths, which gives 10.6 dBd.
24 inches is about 1.63 wavelengths, which gives 11.2 dBd.

These numbers are specifically for yagis, not quads, quagis, or loop
yagis, but should be pretty close regardless of type as booms get long.

tom
K0TAR

coyotefred wrote:

> Wow...so those smaller yagis in the 20-24" length would, despite being
> advertised as giving you 12-14dB gain, would likely only be giving you
> 4-5dB?
>
> Tom Ring <tarnews@taring.org> wrote in message
news:<409d82ee$0$434$5cbedd26@news.real-time.com>...
>
>>A 60 inch antenna at 800 megs is about 4.07 wavelengths. Plugging that
>>into the boomlength to practical gain formula gives 14.2 dBd. A super
>>tweaked one might give .2 or .3 more, but the bandwidth would be worse.

1970. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 00:37:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <109tjltrkvv2fb4@corp.supernews.com>
Source record: 95421

JGBOYLES wrote:
> The thread was "wire thickness versus bandwidth" As you know, to scale an
> antenna from one frequency to another, you need to scale the wire diameter as
> well. This will keep the bandwidth pretty much the same. . .

When you scale an antenna's dimensions, including the wire diameter, the *fractional* bandwidth remains the same. So if you scale it for twice the frequency, the bandwidth doubles.

This is assuming that loss is negligible. If loss is appreciable, it becomes a factor in determining the bandwidth. And in order to preserve the loss characteristics when scaling, you've also got to scale the conductivity (as the square root of frequency). This is generally impossible or at best highly impractical, so the bandwidth of a lossy antenna won't scale like it will for a low-loss one.

Roy Lewallen, W7EL

1971. Antenna bandwidth and learners.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 02:08:31 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7mo6v$5lg$1@sparta.btinternet.com>
Source record: 95422

Antenna bandwidth is usually expressed in terms of the limits of SWR such as 1.5 to 1, or 2.0 to 1.

It can be calculated, or otherwise derived, on the assumption that at some frequency in ONE band the SWR is EXACTLY 1 to 1.

But it never is exactly 1 to 1. The transmission line impedance Zo is never exactly equal to the resistive component of antenna input resistance at resonance. It is usually well away from it. So in practice the actual SWR bandwidth is always broader than the predicted, or stated, or claimed as the best possible value.

Purchasers should be wary of curves provided by antenna manufacturers (or in published articles) purporting to show SWR versus frequency which have a perfect match to the line at some central point along a curve.

Although it should be stated there is much more importance attached to SWR at HF than is warranted by the practical effects of SWR on system peration - particularly in these days of almost universal use of antenna tuners.

Perhaps undue importance arises because the SWR meter is the very last indicating instrument to be found associated with transmitters. It is quite reassuring to see a needle jumping about as one gabbles into the mike.

But will the ubiquitous SWR meter eventually disappear as the automatic tuner becomes the vogue? That will be a sad day.

Incidentally, sorry to be so disappointing, the SWR meter does NOT indicate SWR on the transmission line anyway.

I'm on Spanish red tonight.

Reg, G4FGQ

1972. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 02:16:54 UTC
From: Ken Fowler <ko6no@yahoo.com>
Message-ID: <jZWdnUpIyNGFewPd4p2dnA@comcast.com>
Source record: 95423

On 8-May-2004, "Jack Painter" <223bthp@cox.net> wrote:

> experiment) from keeping all of that available voltage (0v felt on neutral)
> as long as the current did not exceed 15a or whatever your breaker allows.
> Obviously a 100w light bulb shorted to ground would blow instantly, before
> the breaker could protect it..

Uhhhh, No! The most voltage from either wire of a 117 Volt household circuit to any other wire or
to any made ground is 117 Volts. The light bulb would be quite happy to glow at something up to its
normal brightness for as long as you wanted. Now if the grounded conductor was somewhere out in a
field instead of being the local house ground, then the light bulb would not receive the full 117
Volts, because of the resistance of the intervening earth, and would be unhappily dim.

As for the Original Poster's question about the 117N7 transmitter, they were inherently unsafe
unless built on a chassis insulated from the antenna and ground. The usual method was to use a
floating negative (not connected to the metal chassis) inside the transmitter. The antenna was
isolated from the 117 VAC circuit by the DC blocking capacitor to the pi network. The external
antenna ground connected to the chassis. The cathode of the tube and the negative side of the DC
Power Supply had to be bypassed to the chassis through a large capacitor for an RF ground. In no
case should the neutral conductor be left unconnected, even if a water pipe ground could carry the
neutral current. That would leave 117 VAC on the chassis (and the metal shafts of tuning
capacitors.. and the ON/OFF toggle switch) if the ground wire came loose.

I grew up in that era too and got many shocks from AC-DC radios.

Ken Fowler

1973. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 02:17:28 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7monoihd1@titan.btinternet.com>
Source record: 95424

At HF, increasing wire diameter has an absolute negligible effect on antenna bandwidth. Multiply effective conductor diameter by 100 or 1000 and you are getting somewhere on one band only.

But it can be completely spoiled by use of a tuner.

Reg, G4FGQ

1974. Re: Elementary question: OOPS

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 02:20:36 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <UFBnc.16443$z06.2779984@attbi_s01>
Source record: 95425

Another point is since the entire tower is RF hot not only must it stand on an insulator at the bottom it also needs a way to get the tower lighting voltage to it. This is done w/ "Austin Rings" basicly a pair of interlocked toroids or rings. In addition, for lightning protection they have "johnny balls" a pair of air spaced balls to form a spark gap.

Do a google search for these and you should find pictures. http://hawkins.pair.com/atcitynj.shtml is one such site, just scroll to near the bottom of the page.

"Jim" <NN7K@Reno.Rmci.Net> wrote in message news:109qte5o9c8fla6@corp.supernews.com...
> OOPS-- Tho because of security problems, many stations are off limits, but
> Some of these engineers are quite proud to give you a guided tour to show
> how they "tick"!! Jim
>
>
>

1975. 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 03:12:05 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <9qCnc.55621$sK3.2971@nwrddc03.gnilink.net>
Source record: 95426

I'm condidering building a slotted line for measuring impedance at 137 MHz. I find no referances to home made lines thru my quick Google search. Does anyone know of any publication that show how someone has already worked out the problems of contructing one?

Jerry

1976. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 03:51:03 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409efccd$1_5@corp.newsgroups.com>
Source record: 95427

Jerry Martes wrote:
> I'm condidering building a slotted line for measuring impedance at 137
> MHz. I find no referances to home made lines thru my quick Google search.
> Does anyone know of any publication that show how someone has already worked
> out the problems of contructing one?

Try a Lecher wire system described in 50's ARRL Handbooks.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1977. Re: Elementary question: OOPS

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 03:52:45 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409efd32$1_5@corp.newsgroups.com>
Source record: 95428

The Masked Marvel wrote:
> Another point is since the entire tower is RF hot not only must it stand on
> an insulator at the bottom ...

I don't know much about commercial AM transmitting systems.
Why not feed the towers with a gamma match?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

1978. Re: bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 04:06:08 UTC
From: Eric Oyen - N7ZZT <n7zzt@127.0.0.1>
Message-ID: <pan.2004.05.10.04.06.08.39835@127.0.0.1>
Source record: 95429

On Sun, 09 May 2004 13:04:55 -0500, Cecil Moore wrote:

> Eric Oyen - N7ZZT wrote:
>> I recently built an inverted-v antenna out of 2 lengths of copper pipe.
>> I centered it at 26.000 Mhz. it seems to have a 3:1 SWR bandwidth of 6
>> Mhz (23-29 Mhz). is this typical for this type of antenna?
>
> Everything else being equal, the bandwidth in MHz increases with
> frequency. A better indication would be a normalized bandwidth, in your
> case 6/26 = 23% which is pretty good. A 75m antenna with a bandwidth like
> that would cover the entire 80m band. Of course, re-scaling would require
> it to be two pieces of copper pipe 65 feet long and more than three inches
> in diameter. :-) --
> 73, Cecil http://www.qsl.net/w5dxp

Cecil,
that makes more sense to me now that I think about it.
its a nice antenna too. had a General come by with his 10 meter rig and
test it out. good coverage throughout 10 meters. a little high on the
upper end but still usable. same response on 12 meters too and the HF rig
he had didn't like it much on 15 (needed to use the auto-tuner).

rather surprised this thing works as well as it does considering its
direct fed by coax (though at least a fair number of feet are twined in a
tight-would coil 4 inches south of the feedpoint).

DE N7ZZT
Phoenix, Arizona

--
the difference between intelligence and stupidity is that intelligence
has its limits.

1979. Re: bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 04:07:45 UTC
From: Eric Oyen - N7ZZT <n7zzt@127.0.0.1>
Message-ID: <pan.2004.05.10.04.07.42.137253@127.0.0.1>
Source record: 95430

On Sun, 09 May 2004 16:54:29 +0000, jim wrote:

> Eric Oyen - N7ZZT <n7zzt@127.0.0.1> wrote:
>> ok,
>> I recently built an inverted-v antenna out of 2 lengths of copper pipe.
>> I centered it at 26.000 Mhz. it seems to have a 3:1 SWR bandwidth of 6
>> Mhz (23-29 Mhz). is this typical for this type of antenna?
>
>> construction details:
>> 2 lengths of .5 inch copper pipe at 108 inches in length: 4.5 feet of
>> RG-8x coax wrapped in a tight loop (8 turns on 4 2 inch diameter form as
>> a 1:1 current balun), 100 feet of rg-8x coax to station (in this case,
>> an FRG-7 SW receiver).
>
>> I used an MFJ antenna analyzer to determine the BW of the antenna.
>
>> does this look koshur to anyyone here?
>
>> DE N7ZZT
>> Phoenix, Arizona
>
>> --
>> the difference between intelligence and stupidity is that intelligence
>> has its limits.
>
> 100 feet of coax will make it look a little better than it really is, but
> the the bandwidth doesn't sound out of line.
>
> Why don't you download the demo eznec (www.eznec.com) and model it with
> various thickness of elements and see what happens?
I would, but I don't run windows (or MSDOS) here.
I am strictly a unix man.

unless, of course, there is a version for linux/unix I could use.

DE N7ZZT
Phoenix, Arizona

--
the difference between intelligence and stupidity is that intelligence
has its limits.

1980. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 04:26:45 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <9wDnc.35002$pJ1.28598@lakeread02>
Source record: 95431

Thanks Ken, you're right. I was thinking that without current-sensing abilities on the neutral side of the circuit that it might allow the full available current, but of course a light bulb would just work as a light bulb, drawing no more power than it was designed for! I feel a little dim myself right now ;-(

Jack

"Ken Fowler" <ko6no@yahoo.com> wrote in message news:jZWdnUpIyNGFewPd4p2dnA@comcast.com...
>
> On 8-May-2004, "Jack Painter" <223bthp@cox.net> wrote:
>
> > experiment) from keeping all of that available voltage (0v felt on neutral)
> > as long as the current did not exceed 15a or whatever your breaker allows.
> > Obviously a 100w light bulb shorted to ground would blow instantly, before
> > the breaker could protect it..
>
> Uhhhh, No! The most voltage from either wire of a 117 Volt household circuit to any other wire or
> to any made ground is 117 Volts. The light bulb would be quite happy to glow at something up to its
> normal brightness for as long as you wanted. Now if the grounded conductor was somewhere out in a
> field instead of being the local house ground, then the light bulb would not receive the full 117
> Volts, because of the resistance of the intervening earth, and would be unhappily dim.

1981. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 04:38:45 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <pHDnc.55796$sK3.46459@nwrddc03.gnilink.net>
Source record: 95432

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:409efccd$1_5@corp.newsgroups.com...
> Jerry Martes wrote:
> > I'm condidering building a slotted line for measuring impedance at 137
> > MHz. I find no referances to home made lines thru my quick Google
search.
> > Does anyone know of any publication that show how someone has already
worked
> > out the problems of contructing one?
>
> Try a Lecher wire system described in 50's ARRL Handbooks.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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Cecil
I thought lecher line measurements used a balanced line.
I'm not smart enough to know how to compensate for any irregulariities
associated with open wire measurements of an unbalanced load. And, it seems
that it would be easy enoughto make a 'good enough' slotted line. But,
since I havent found referance to any home built coaxial slotted lines,
maybe its not as easy as I think.

Jerry

1982. Re: Antenna bandwidth and learners.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 04:41:45 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <dKDnc.35088$pJ1.11269@lakeread02>
Source record: 95433

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c7mo6v$5lg$1@sparta.btinternet.com...
> Antenna bandwidth is usually expressed in terms of the limits of SWR such
as
> 1.5 to 1, or 2.0 to 1.
>
> It can be calculated, or otherwise derived, on the assumption that at some
> frequency in ONE band the SWR is EXACTLY 1 to 1.
>
> But it never is exactly 1 to 1. The transmission line impedance Zo is
never
> exactly equal to the resistive component of antenna input resistance at
> resonance. It is usually well away from it. So in practice the actual SWR
> bandwidth is always broader than the predicted, or stated, or claimed as
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> best possible value.
>
> Purchasers should be wary of curves provided by antenna manufacturers (or
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> published articles) purporting to show SWR versus frequency which have a
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>
> Although it should be stated there is much more importance attached to SWR
> at HF than is warranted by the practical effects of SWR on system
> peration - particularly in these days of almost universal use of antenna
> tuners.
>
> Perhaps undue importance arises because the SWR meter is the very last
> indicating instrument to be found associated with transmitters. It is
quite
> reassuring to see a needle jumping about as one gabbles into the mike.
>
> But will the ubiquitous SWR meter eventually disappear as the automatic
> tuner becomes the vogue? That will be a sad day.
>
> Incidentally, sorry to be so disappointing, the SWR meter does NOT
indicate
> SWR on the transmission line anyway.
>
> I'm on Spanish red tonight.
> ----
> Reg, G4FGQ

Hi Reg,

That's good to remember, thanks. When setting up a specific frequency dipole (intending no tuner required for two frequencies, the main dipole and a shorter dipole "fan" under it), the only logical place to test with the bird-meter seemed to be at the transmitter output. Certainly that swr changes as it gets to the radiator, as you say. But once the antenna was trimmed to as near perfect swr as possible, what else would you do? Where else would it be meaningful to measure the swr and best power output, and then make wire length changes accordingly? It seems to work wonderfully as trimmed to 1:1 (best you can read on the tuner anyway) from the tx output. Both the bird and the MFJ-962D and tx meters all seemed to agree they liked that setting.

73's

Jack
Virginia Beach Va

1983. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 04:55:48 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c7n20kbhp1@mail.specsol.com>
Source record: 95434

Jerry Martes <j.jmartes@verizon.net> wrote:

> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> news:409efccd$1_5@corp.newsgroups.com...
> > Jerry Martes wrote:
> > > I'm condidering building a slotted line for measuring impedance at 137
> > > MHz. I find no referances to home made lines thru my quick Google
> search.
> > > Does anyone know of any publication that show how someone has already
> worked
> > > out the problems of contructing one?
> >
> > Try a Lecher wire system described in 50's ARRL Handbooks.
> > --
> > 73, Cecil http://www.qsl.net/w5dxp
> >
> >
> >
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> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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> Cecil
> I thought lecher line measurements used a balanced line.
> I'm not smart enough to know how to compensate for any irregulariities
> associated with open wire measurements of an unbalanced load. And, it seems
> that it would be easy enoughto make a 'good enough' slotted line. But,
> since I havent found referance to any home built coaxial slotted lines,
> maybe its not as easy as I think.

> Jerry

About the only difficulty in doing it (besides cost) I can think of is it would be hard to find a 5 foot long tube you could cut a slot in and not have it distort due to relieved stress.

Use a square U channel for a bottom and 2 pieces of L to make the top.

Look up the equation for the impedance of square coax, get brass tubing (which comes in increaments of 1/32") for the center conductor, make 2 end plates for connectors, screw the thing together. Probably should use plastic screws for the top so they don't have to be flush on the inside.

Thought about making one myself for grins and giggles, but bought a MFJ analyzer instead; lot more portable.

--
Jim Pennino

Remove -spam-sux to reply.

1984. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 05:09:08 UTC
From: Ken Fowler <ko6no@yahoo.com>
Message-ID: <xf-dnV_X3vrrkwLdRVn_iw@comcast.com>
Source record: 95435

On 9-May-2004, "Jack Painter" <223bthp@cox.net> wrote:

> Thanks Ken, you're right. I was thinking that without current-sensing
> abilities on the neutral side of the circuit that it might allow the full
> available current, but of course a light bulb would just work as a light
> bulb, drawing no more power than it was designed for! I feel a little dim
> myself right now ;-(
>
> Jack

No Problem. It's a good thing to point out that a light bulb with short leads can be used as a good
test device for the effectiveness of a circuit ground or to identify the hot (ungrounded conductor)
from the neutral (grounded conductor).
-ken-

1985. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 05:40:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7d3u90pudua5vbi7v575b6og4p5qblal3t@4ax.com>
Source record: 95436

On Mon, 10 May 2004 03:12:05 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:

> I'm condidering building a slotted line for measuring impedance at 137
>MHz. I find no referances to home made lines thru my quick Google search.
>Does anyone know of any publication that show how someone has already worked
>out the problems of contructing one?
>
> Jerry

Hi Jerry,

It is not all that hard to do in fact. HP solved that problem long
ago by thinking outside of the box by thinking box. As with other
test equipment issues, it is simply a matter of planning and testing
with very simple methods. For those whose greatest physical effort in
Ham radio is sliding a credit card across the showroom display
counter, this is called "work."

Basically you construct your coaxial line with the usual interior
line, but unlike the conventional expectations, you do not try to
emulate the outer portion as a cylinder. You construct the outer
portion as two parallel conductive planes (appropriately shorted to
the connector shells at each end (hence the allusion to box):

view HP 805C Slotted Line picture on ebay at:
http://web.ask.com/redir?bpg=http%3a%2f%2fweb.ask.com%2fweb%3fq%3dHP%2bslotted%2bline%26o%
3d0%26page%3d1&q=HP+slotted+line&u=http%3a%2f%2ftm.wc.ask.com%2fr%3ft%3dan%26s%3da%26uid%3
d218132df118132df1%26sid%3d318132df118132df1%26qid%3d84EF05A9A6090F47B1CEF08664244A1B%26io
%3d1%26sv%3dza5cb0d8f%26o%3d0%26ask%3dHP%2bslotted%2bline%26uip%3d18132df1%26en%3dte%26eo%
3d-100%26pt%3dN4430A%2bRF%2bE-Cal%2bModule%26ac%3d28%26qs%3d0%26pg%3d1%26ep%3d1%26te_par%3
d244%26te_id%3d%26u%3dhttp%3a%2f%2fwww.commentality.com%2fN4430A_RF_E_Cal_Module_5988.html
&s=a&bu=http%3a%2f%2fwww.commentality.com%2fN4430A_RF_E_Cal_Module_5988.html&qte=0&o=0

Where the two planes stand apart, you insert a probe to measure the
potential along the line. The depth of the line within and in between
the two parallel surfaces insures the line isolation (no leakage) as
well as preserving the line characteristic Z.

However, anyway that you look at it (even the lecher line suffers from
this) you run the risk of over coupling and throwing the measurement
into confusion (very simple to make errors). The problem is the probe
will introduce its own SWR and gum up the works if it lacks
sensitivity. I won't bother too much with dimensions here, but
instead offer a formula for such a structure:
Zc = (138/sqrt(e))ï¿½log(4h/piï¿½d)

where
e: dielectric constant (= 1 for air)
d: interior line diameter
h: wall separation

You will want to build it long enough to be more than a wavelength of course.

You will also need to calibrate it to determine the residual SWR it presents to the system (this will reveal construction errors). Off hand, I would suggest that the walls be roughly a 2 to 4 cm apart and at least a 20 cm wide (larger wouldn't hurt).

Build one quick and dirty to get your gross mistakes out of the way without spending too much time on them. I can guarantee no one here could build it right the first time (including yours truly). Once you've got the first pass attempt on the bench, then we can talk about how to use it right. ;-)

73's
Richard Clark, KB7QHC

1986. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 06:22:29 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <FcFnc.106574$G_.61570@nwrddc02.gnilink.net>
Source record: 95437

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:7d3u90pudua5vbi7v575b6og4p5qblal3t@4ax.com...
> On Mon, 10 May 2004 03:12:05 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
>
> > I'm condidering building a slotted line for measuring impedance at 137
> >MHz. I find no referances to home made lines thru my quick Google
search.
> >Does anyone know of any publication that show how someone has already
worked
> >out the problems of contructing one?
> >
> > Jerry
>
> Hi Jerry,
>
> It is not all that hard to do in fact. HP solved that problem long
> ago by thinking outside of the box by thinking box. As with other
> test equipment issues, it is simply a matter of planning and testing
> with very simple methods. For those whose greatest physical effort in
> Ham radio is sliding a credit card across the showroom display
> counter, this is called "work."
>
> Basically you construct your coaxial line with the usual interior
> line, but unlike the conventional expectations, you do not try to
> emulate the outer portion as a cylinder. You construct the outer
> portion as two parallel conductive planes (appropriately shorted to
> the connector shells at each end (hence the allusion to box):
>
> view HP 805C Slotted Line picture on ebay at:
>
http://web.ask.com/redir?bpg=http%3a%2f%2fweb.ask.com%2fweb%3fq%3dHP%2bslotted%2bline%26o%3d0%26page%3d1&q=HP+slotted+line&u=http%3a%2f%2ftm.wc.ask.com%2fr%3ft%3dan%26s%3da%26uid%3d218132df118132df1%26sid%3d318132df118132df1%26qid%3d84EF05A9A6090F47B1CEF08664244A1B%26io%3d1%26sv%3dza5cb0d8f%26o%3d0%26ask%3dHP%2bslotted%2bline%26uip%3d18132df1%26en%3dte%26eo%3d-100%26pt%3dN4430A%2bRF%2bE-Cal%2bModule%26ac%3d28%26qs%3d0%26pg%3d1%26ep%3d1%26te_par%3d244%26te_id%3d%26u%3dhttp%3a%2f%2fwww.commentality.com%2fN4430A_RF_E_Cal_Module_5988.html&s=a&bu=http%3a%2f%2fwww.commentality.com%2fN4430A_RF_E_Cal_Module_5988.html&qte=0&o=0
>
> Where the two planes stand apart, you insert a probe to measure the
> potential along the line. The depth of the line within and in between
> the two parallel surfaces insures the line isolation (no leakage) as
> well as preserving the line characteristic Z.

>
> However, anyway that you look at it (even the lecher line suffers from
> this) you run the risk of over coupling and throwing the measurement
> into confusion (very simple to make errors). The problem is the probe
> will introduce its own SWR and gum up the works if it lacks
> sensitivity. I won't bother too much with dimensions here, but
> instead offer a formula for such a structure:
> Zc = (138/sqrt(e))*log(4h/pi*d)
> where
> e: dielectric constant (= 1 for air)
> d: interior line diameter
> h: wall separation
>
> You will want to build it long enough to be more than a wavelength of
> course.
>
> You will also need to calibrate it to determine the residual SWR it
> presents to the system (this will reveal construction errors). Off
> hand, I would suggest that the walls be roughly a 2 to 4 cm apart and
> at least a 20 cm wide (larger wouldn't hurt).
>
> Build one quick and dirty to get your gross mistakes out of the way
> without spending too much time on them. I can guarantee no one here
> could build it right the first time (including yours truly). Once
> you've got the first pass attempt on the bench, then we can talk about
> how to use it right. ;-)
>
> 73's
> Richard Clark, KB7QHC

Richard

I'm pretty sure I'll try to make it coax instead of "slab" like HP does it. I saw some 2 inch copper pipe at Home Depot today. They sell it in 5 foot lengths for about $22.00. I'm OK with using only 1/2 wavelength for the slotted coax. I thought I might be able to 'get away with' using my scope for detecting the line voltages. I am wide open for learning that my approach has extremely difficult to solve problems. It all seems fairly easy right now.
I was hoping to get a response from someone who either had built a line or knew of a publication on the pitfalls associated with making a slotted line.

Jerry

1987. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 07:15:19 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409F2C05.79AE449@sonic.net>
Source record: 95438

Maybe it is time for the experiment.

Bill

Ken Fowler wrote:

> On 9-May-2004, "Jack Painter" <223bthp@cox.net> wrote:
>
> > Thanks Ken, you're right. I was thinking that without current-sensing
> > abilities on the neutral side of the circuit that it might allow the full
> > available current, but of course a light bulb would just work as a light
> > bulb, drawing no more power than it was designed for! I feel a little dim
> > myself right now ;-(
> >
> > Jack
>
> No Problem. It's a good thing to point out that a light bulb with short leads can be used as a good
> test device for the effectiveness of a circuit ground or to identify the hot (ungrounded conductor)
> from the neutral (grounded conductor).
> -ken-

1988. Re: Antenna bandwidth and learners.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 07:52:12 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7ncbccul1@hercules.btinternet.com>
Source record: 95439

Jack, I think you know what you are about. But you may be doing the right things for the wrong reasons.

The ONE and ONLY purpose of the SWR meter is to facilitate the antenna-plus-line (plus tuner if you use one) to be adjusted such that the transmitter is loaded with its design impedance of 50 ohms, plus or minus 20 percent or thereabouts.

What the SWR on the line may be is not relevant. It can be anything you like! It doesn't matter insofar as the adjusting process itself is concerned. And it is not of great consequence anyway.

The meter, Bird or MFJ or otherwise, does NOT indicate SWR on the feedline. This is a popular misconception - a very old Old Wives' tale. It merely indicates whether or not the impedance looking into the transmitter end of the line is 50 ohms or is not 50 ohms. If it is not 50 ohms it won't even tell you what it actually is.

So after adjusting line input impedance to be 50 ohms by some means or other, you may be quite happy to retire under the impression the SWR is a nice 1-to-1 and the antenna input impedance is what you think it is. Whereas it very likely isn't.

But you will have achieved the true objective - the transmitter will be correctly loaded with 50 ohms within plus or minus 20 percent even after taking so-called SWR meter uncertainty into account.

Happy adjusting, Reg, G4FGQ

1989. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 09:27:53 UTC
From: Scott M <spamkiller@elp.rr.com>
Message-ID: <tWHnc.77583$Dn1.67771@fe2.texas.rr.com>
Source record: 95440
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

I HIGHLY doubt it's even possible. UHF is so far from 11 meters in the radio spectrum that aside from scrounging parts, one cannot simply convert a UHF x-cvr to 11 m or vise-versa.

"Gary hildebrand" <ghldbrd@ccp.com> wrote in message news:598dc4be.0405031436.6f51ff7f@posting.google.com...
> WA3MOJ <WA3MOJ@home.com> wrote in message news:<c60cuk02d43@drn.newsguy.com>...
> > Hi all, I'm looking for a good reference manual, pdf file, or web site's that
> > will assist me in converting used UHF gear to operate on 11 meters. I'm finding
> > there is a substantial market for such gear and I'll need some references for
> > various solid state and tube conversions.
> >
> > Thanks in advance for any help.
> >
> > WA3MOJ
>
> First, the circuit techniques for UHF receiver front ends and
> transmitter PA's are totally different than those on 11 meters.
> Conversion becomes wholesale replacement of about half of the radio.
>
> Second, <<`ALL'>> CB radios must be type-accepted by the FCC for use
> on the air. Unless you have the thousands of dollars for R&D, and
> legal assistance to complete this, forget the whole thing.
>
> What you are trying to do is tantamount to modifing a VCR into a
> satellite uplink to jam television satellites. Can't get there from
> here, No how, now way. Zip. Nada. The BIG goose egg.
>
> Now you could use UHF commercial radios on the GMRS (former Class A CB
> channels) with very little problem. Just change crystals or reprogram
> the synthesizer in the radio, tweak, and you're in business. Any
> competent two-way radio shop can do that.
>
> I'd suggest you study a LOT more on basic electronic theory, and
> circuit design before you post such an asinine question.
>
> Gary Hildebrand WA7KKP

1990. Tektronix oscilloscope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 09:33:59 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0405100133.793350e6@posting.google.com>
Source record: 95441

Hello....,

I know, it's very much off-topic, but as an antenna enthousiast I read this news group a lot, so I thought lets give it a try.

Some time ago I managed to blow-up the input-1 channel of my tektronix 2230 analog/digital oscilloscope. According the Service-manual and compared to the input-2 channel, probably one or more of the following parts are damaged:

Comp-Nr Tek-part-nr Name, description Manufact. Mfr-part-nr

A2Q13 151-1124-00 Trans: JFE, N-chan Siliconix inc. J-2400
A2Q15 151-0711-00 Trans: NPN, Si, TO-92b Tektronix 151-0711-00
A2Q18 151-0711-00 Trans: NPN, Si, TO-92b Tektronix 151-0711-00

A2U10 156-2469-00 Microckt,dgtl: op-amp Texas-Instr. TLC271ACP

Overhere in Europe (except for the TLC271) it seems almost impossible to get these parts. I also tried to contact Tekronix , but without much results.

Anybody with suggestions how to get one or more of these parts ?

Because all components on the (multi-layer?) channel-1 input board are soldered very close together the nicest thing would be if somebody had a replacement channel-1 (or -2) input board (tektronix 2230 or 2235) for sale.....

Or, should I post this message on any other newsgroup. If so, please let me know.

Thanks in advance,
Arie.

1991. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 11:24:00 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <e9nu90pv3k4lmnhirq99ehqqgoq01nt2o9@4ax.com>
Source record: 95442

Dave,

I didn't come here to fence with you guys. I know nothing about the
relative efficiency of antenna systems.

You could be right and the effiency of a tuned dipole "may" be 2%,
which in my mind means if it were replaced with a regular dipole, the
signal strength at a remote location would increase 50 times, but that
certainly cannot be determined that with that brand of math.

Sorry,

Ron

On Mon, 10 May 2004 00:20:55 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Ron wrote:
>
>> On Sun, 09 May 2004 17:26:05 GMT, Dave Shrader
>> <david.shrader@comcast.net> wrote:
>>
>SNIP
>>
>> So you can use the formula I^2*R (which is for finding P) without
>> knowing the variable "I" to find the resistance (Ra)?
>>
>> I don't think so. Unless you have a magic wand, Harry Potter :-)
>>
>> Ron
>
>You certainly can!!
>
>Total power to the antenna SYSTEM = I^2*(Rr + Ra + Rg).
>
>Total power radiated = I^2*(Rr).
>
>When you divide the two terms to get efficiency the I^2 term cancels.
>This leaves Rr/(Rr + Ra + Rg). The current terms drops right out!!
>
>DD

1992. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 11:41:10 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <pTJnc.62019$0H1.6042794@attbi_s54>
Source record: 95443

Yes it can! Gain improvement = 10*Log{50) = +16 dB or about 3 S-units.

Ron wrote:

> Dave,
>
> I didn't come here to fence with you guys. I know nothing about the
> relative efficiency of antenna systems.
>
> You could be right and the effiency of a tuned dipole "may" be 2%,
> which in my mind means if it were replaced with a regular dipole, the
> signal strength at a remote location would increase 50 times, but that
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> Sorry,
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>
> On Mon, 10 May 2004 00:20:55 GMT, Dave Shrader
> <david.shrader@comcast.net> wrote:
>
>
>>Ron wrote:
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>>Total power radiated = I^2*(Rr).
>>
>>When you divide the two terms to get efficiency the I^2 term cancels.

>>This leaves Rr/(Rr + Ra + Rg). The current terms drops right out!!
>>
>>DD
>
>

1993. Re: Antenna bandwidth and learners.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 11:49:10 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <W_Jnc.35242$pJ1.32144@lakeread02>
Source record: 95444

Thanks Reg. I only presumed that if my standing wave back at the transmitter was a good balance therefore best output from the antenna was possible. I did think that implies that even considering the somewhat long run to the balun, that reflected power was at a mimimum possible level because a resonant antenna condition (or as close as I was able to estimate) existed. Each time that meter readings were taken was after the whole antenna(s) were raised back up in the air, then lower to trim, raise and measure, etc. Starting with about 10% beyond formula length, it noetheless had to have some material added to one antenna and trimmed from another. From what I have learned from you guys, I attribute this to the varying and unique ground absorbtion variables of my particular installation. The help provided on this list is invaluable. Many thanks.

73's

Jack
Virginia Beach

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c7ncbccul1@hercules.btinternet.com...
> Jack, I think you know what you are about. But you may be doing the right
> things for the wrong reasons.
>
> The ONE and ONLY purpose of the SWR meter is to facilitate the
> antenna-plus-line (plus tuner if you use one) to be adjusted such that the
> transmitter is loaded with its design impedance of 50 ohms, plus or minus
20
> percent or thereabouts.
>
> What the SWR on the line may be is not relevant. It can be anything you
> like! It doesn't matter insofar as the adjusting process itself is
> concerned. And it is not of great consequence anyway.
>
> The meter, Bird or MFJ or otherwise, does NOT indicate SWR on the
feedline.
> This is a popular misconception - a very old Old Wives' tale. It merely
> indicates whether or not the impedance looking into the transmitter end of
> the line is 50 ohms or is not 50 ohms. If it is not 50 ohms it won't even
> tell you what it actually is.
>
> So after adjusting line input impedance to be 50 ohms by some means or
> other, you may be quite happy to retire under the impression the SWR is a
> nice 1-to-1 and the antenna input impedance is what you think it is.
Whereas
> it very likely isn't.

>
> But you will have achieved the true objective - the transmitter will be
> correctly loaded with 50 ohms within plus or minus 20 percent even after
> taking so-called SWR meter uncertainty into account.
> ----
> Happy adjusting, Reg, G4FGQ
>
>

1994. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 12:01:05 UTC
From: Steveo <moparholic@hotmail-nospam.com>
Message-ID: <20040510080105.200$yv@newsreader.com>
Source record: 95445
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"Scott M" <spamkiller@elp.rr.com> wrote:
> I HIGHLY doubt it's even possible. UHF is so far from 11 meters in the
> radio spectrum that aside from scrounging parts, one cannot simply
> convert a UHF x-cvr to 11 m or vise-versa.
>
That's what everyone has told wa3moj, but he insists it's possible.

--
I won't retire, but I might retread.

1995. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 12:29:24 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <FAKnc.25935$fE.7278@fed1read02>
Source record: 95446
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"Steveo" <moparholic@hotmail-nospam.com> wrote in message
news:20040510080105.200$yv@newsreader.com...
> "Scott M" <spamkiller@elp.rr.com> wrote:
> > I HIGHLY doubt it's even possible. UHF is so far from 11 meters in the
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> >
> That's what everyone has told wa3moj, but he insists it's possible.
>
> --
> I won't retire, but I might retread.

He's probably convinced that it's possible because he knows most CB sets
have UHF coax connectors.

Ed
WB6WSN

1996. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 12:50:48 UTC
From: Steveo <moparholic@hotmail-nospam.com>
Message-ID: <20040510085048.609$c7@newsreader.com>
Source record: 95447
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

```
"Ed Price" <edprice@cox.net> wrote:
> "Steveo" <moparholic@hotmail-nospam.com> wrote in message
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> > "Scott M" <spamkiller@elp.rr.com> wrote:
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> > > the radio spectrum that aside from scrounging parts, one cannot
> > > simply convert a UHF x-cvr to 11 m or vise-versa.
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> > That's what everyone has told wa3moj, but he insists it's possible.
> >
> > --
> > I won't retire, but I might retread.
>
> He's probably convinced that it's possible because he knows most CB sets
> have UHF coax connectors.
>
> Ed
> WB6WSN
>
Could be that the electric cord cornfuses him too, Ed. :)

--
I won't retire, but I might retread.
```

1997. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 12:58:56 UTC
From: Roger Conroy <rogerconroy@nospam.hotmail.com>
Message-ID: <c7nudo$2l0$1@ctb-nnrp2.saix.net>
Source record: 95448
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Snip....
>
> He's probably convinced that it's possible because he knows most CB sets
> have UHF coax connectors.
>
>
> Ed
> WB6WSN

It may interest some to know that the "UHF" coax connector does not mean Ultra High Frequency. It actually comes from the US Military (and probably NATO) designation: Universal High Frequency Coaxial Connector. In this sense "Universal" means it is found on "practically all" military HF rigs.

73
Roger ZR3RC

1998. Re: Antenna bandwidth and learners.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 13:39:45 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <109v1gkbt43c4b0@corp.supernews.com>
Source record: 95449

Antenna bandwidth (without the use of a "tuner":
A reminder that the BW of an antenna is not always determined by SWR limits. Practical antennas exist where the bandwidth is more reasonably limited by degradation of the antenna's pattern than by degradation of SWR. Antennas also exist where the BW might be specified in terms of limits on efficiency.
The 40 foot high TCI dipole (fat, resistively loaded dipole) might have its BW specified by SWR, pattern, or efficiency.
Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

1999. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 13:49:57 UTC
From: Barry OGrady <god_freee_jones@hotmail.com>
Message-ID: <332v90daq8tojvmanqv5ro0v0g8g8i8rde@4ax.com>
Source record: 95450
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

On 10 May 2004 12:01:05 GMT, Steveo <moparholic@hotmail-nospam.com> wrote:

>"Scott M" <spamkiller@elp.rr.com> wrote:
>> I HIGHLY doubt it's even possible. UHF is so far from 11 meters in the
>> radio spectrum that aside from scrounging parts, one cannot simply
>> convert a UHF x-cvr to 11 m or vise-versa.
>>
>That's what everyone has told wa3moj, but he insists it's possible.

Meters are no good. You need metres.

-Barry
========
Web page: http://members.optusnet.com.au/~barry.og
Atheist, radio scanner, LIPD information.

2000. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 13:57:07 UTC
From: Steveo <moparholic@hotmail-nospam.com>
Message-ID: <20040510095707.530$eA@newsreader.com>
Source record: 95451
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

```
Barry OGrady <god_freee_jones@hotmail.com> wrote:
> On 10 May 2004 12:01:05 GMT, Steveo <moparholic@hotmail-nospam.com>
> wrote:
>
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> >> radio spectrum that aside from scrounging parts, one cannot simply
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>
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>
> -Barry
> ========
> Web page: http://members.optusnet.com.au/~barry.og
> Atheist, radio scanner, LIPD information.
>
Imperial gallons.

--
I won't retire, but I might retread.
```

2001. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 14:00:13 UTC
From: Chuck Harris <cfharris@erols.com>
Message-ID: <409f8aee$0$3020$61fed72c@news.rcn.com>
Source record: 95452
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

References?

This sounds more like a retroactive acronym.

NATO didn't even exist when the UHF connector series
was first made.

The UHF connector was designed as a mate for RG-8 coax. It
was found on virtually all radios designed to drive RG-8
during that era. Typical examples of WWII vintage non HF
radios that used UHF connectors were the ARC-1 (120-150MHz),
SCR522(108-150MHz), BC-645 IFF (VHF/UHF) ... much later, the
UHF connector was used on the ARC-27(220-400MHz), URR-13/35(220-
400MHz), all two way base station radios in the 400-500MHz
bands...

I am inclined to go with the "they just didn't know any better"
explanation.

73,

Chuck Harris

Roger Conroy wrote:

> It may interest some to know that the "UHF" coax connector does not mean
> Ultra High Frequency. It actually comes from the US Military (and probably
> NATO) designation: Universal High Frequency Coaxial Connector. In this sense
> "Universal" means it is found on "practically all" military HF rigs.
>
> 73
> Roger ZR3RC
>
>

2002. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 14:01:51 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <bm2v90dsn7593audtagkmn3rptlao537nk@4ax.com>
Source record: 95453

On Mon, 10 May 2004 06:22:29 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:

[Richard's good stuff snipped]

You can lead 'em to water, but you can't make 'em drink.

|
| I'm pretty sure I'll try to make it coax instead of "slab" like HP does
|it. I saw some 2 inch copper pipe at Home Depot today. They sell it in 5
|foot lengths for about $22.00. I'm OK with using only 1/2 wavelength for
|the slotted coax. I thought I might be able to 'get away with' using my
|scope for detecting the line voltages. I am wide open for learning that my
|approach has extremely difficult to solve problems. It all seems fairly
|easy right now.
| I was hoping to get a response from someone who either had built a line or
|knew of a publication on the pitfalls associated with making a slotted line.

2003. Re: Tektronix oscilloscope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 14:07:37 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <g33v90dttugs1rgdtfe23oshn4koeen5sf@4ax.com>
Source record: 95454

On 10 May 2004 02:33:59 -0700, 4nec2@gmx.net wrote:

http://www.sphere.bc.ca/test/tek-parts/tekparts2.html

2004. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 14:20:32 UTC
From: kludge@panix.com
Message-ID: <c7o33goee1@panix2.panix.com>
Source record: 95455
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Roger Conroy wrote:
>
> It may interest some to know that the "UHF" coax connector does not mean
> Ultra High Frequency. It actually comes from the US Military (and probably
> NATO) designation: Universal High Frequency Coaxial Connector. In this sense
> "Universal" means it is found on "practically all" military HF rigs.

Of course. Also, the BNC connector was originally devised for military applications during the war because existing connectors would rust badly under field conditions. The improved BNC was called that because the Base Never Corrodes.

The SMA connector is just too small to be able to carry any reasonable power level, which is why it got that designation. SMA stands for Stops MicroAmps.

I'd tell you what the designation on the N connector stands for, but it's obscene.
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."

2005. Re: Tektronix oscilloscope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 14:39:12 UTC
From: Bill Turner <noway@nohow.com>
Message-ID: <tr4v905q9ct45vfrp991isd0kade5vni60@4ax.com>
Source record: 95456

On 10 May 2004 02:33:59 -0700, 4nec2@gmx.net wrote:

>Overhere in Europe (except for the TLC271) it seems almost impossible
>to get these parts. I also tried to contact Tekronix , but without
>much results.

I used to work for Tek many years ago and I'd suggest you not try to substitute parts from other sources unless you are willing to verify the scope performance meets specs afterwards. Tek parts are sometimes selected for a particular performance parameter and making substitutions can degrade performance.

Tek has world wide representatives. Have you contacted your local rep?

--
Bill, W6WRT
QSLs via LoTW

2006. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 14:44:06 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409f95de$1_3@corp.newsgroups.com>
Source record: 95457

Jerry Martes wrote:
> I thought lecher line measurements used a balanced line.

Yep, it does. I make all my measurements on the balanced
portion of my line and Smith Chart extrapolate to find out
what is going on in the coax. The approach depends on what
you need to accomplish.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2007. Re: Antenna bandwidth and learners.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 14:56:39 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409f98d0_3@corp.newsgroups.com>
Source record: 95458

Jack Painter wrote:
> That's good to remember, thanks. When setting up a specific frequency dipole
> (intending no tuner required for two frequencies, the main dipole and a
> shorter dipole "fan" under it), the only logical place to test with the
> bird-meter seemed to be at the transmitter output. Certainly that swr
> changes as it gets to the radiator, as you say. But once the antenna was
> trimmed to as near perfect swr as possible, what else would you do?

It depends on whether you are trying to characterize the antenna or
the antenna system. Characterizing the antenna system is useful
for an individual ham but is not very useful, for instance, for an
antenna manufacturer. Knowing the antenna system parameters and
the individual component specifications allows one to indirectly
calculate the antenna parameters to some degree of accuracy.

Seems to me it is reasonable to quote a 3:1 bandwidth even though
the SWR at the center frequency never goes to 1:1.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2008. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 15:07:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409f9b54$1_3@corp.newsgroups.com>
Source record: 95459
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Scott M wrote:
> I HIGHLY doubt it's even possible. UHF is so far from 11 meters in the radio
> spectrum that aside from scrounging parts, one cannot simply convert a UHF
> x-cvr to 11 m or vise-versa.

My 1956 ITT "Reference Data for Radio Engineers" lists
460-470 Mc as "Citizens radio" along with 27.225 Mc.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2009. N8WWM will not feed his kids

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 15:11:23 UTC
From: Bada Bing <BadaBing@implant.com>
Message-ID: <0ab18f87c10fcb8c7f5f71acde219b2e@news.teranews.com>
Source record: 95460
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.cb,rec.radio.swap

What a piece of human trash doud adair tuned out to be.

LUCAS COUNTY COURT OF COMMON PLEAS
J. BERNIE QUILTER, CLERK
700 ADAMS STREET
TOLEDO, OHIO TIME: 11:06:34 AM
DATE: 5/10/2004

CASE: G -4801 -CR -199606161
TITLE: S/O V DOUGLAS W ADAIR
JUDGE: JAMES D. JENSEN
FILING DATE: 6/12/1996 CASE TYPE: CR CRIMINAL

MONETARY AMOUNT: DOCKET/PAGE:
ORIGINAL COURT: TAX TYPE:
PREVIOUS CASE NUMBER: STATE OF OHIO NUMBER:

Party Counsel Prosecutor
Defendant 1:
ADAIR DOUGLAS W
5319 SECOR RD.
TOLEDO , OH 43623 MARY S. SWANSON
4199365120
411 N MICHIGAN
TOLEDO , OH 436241606

COUNT PARTY DESCRIPTION ABBREV.
1 (D -1)ADAIR DOUGLAS W NONSUPPORT OF DEPENDENTS F4

DATE SEQ EVENT
6/12/1996 1 Title : JRE:CASE ACTIVATION IN FACTS
PARTY : -
5/31/2000 1 Title : WAR:CAPIAS ORDERED PER LCAPD
803-00499 issued by PJ (CAPIAS REQUEST GRANTED)
Pursuant to the request of probation a capias is ordered
issued. Bond is set at $5,000.00 no 10%.

JUDGE JAMES D. JENSEN
PARTY : D1 - ADAIR DOUGLAS W
6/1/2000 1 Title : EVT:ORDER FILED & JOURNALIZED
CAPIAS C-174-842
PARTY : D1 - ADAIR DOUGLAS W
6/1/2000 2 Title : EVT:ORDER FILED & JOURNALIZED
CAPIAS C-174-843
PARTY : D1 - ADAIR DOUGLAS W
6/1/2000 3 Title : WAR:CAPIAS ISSUED BY CLERK
C01-02080 issued by 163 (8931) WAR:CAPIAS ISSUED BY CLERK
PARTY : D1 - ADAIR DOUGLAS W
11/13/2000 1 Title : WAR:DEFD'T ARREST WARR/CAPIAS
PARTY : D1 - ADAIR DOUGLAS W
11/13/2000 2 Title : WAR:CAPIAS SERVED ON DEFENDANT
PARTY : D1 - ADAIR DOUGLAS W
11/13/2000 3 Title : HRG:PV HEARING SET
November 17, 2000 at 8:30 a.m.
PARTY : D1 - ADAIR DOUGLAS W
11/13/2000 4 Title : WAR:CAPIAS RETURN FILED
SERVED ON 11/13/00
PARTY : D1 - ADAIR DOUGLAS W
11/13/2000 5 Title : WAR:CAPIAS RETURN FILED
SERVED ON 11/12/00
PARTY : D1 - ADAIR DOUGLAS W
11/17/2000 1 Title : BND:SUPERVISED OR BOND ISSUED
PARTY : D1 - ADAIR DOUGLAS W
11/17/2000 2 Title : MIS:CASE CONT AT DEF REQUEST
772-28458 issued by JTS (GENERAL CONTINUANCE FOR CRIMINAL CA
Dated November 15, 2000. Court Reporter SANDRA CORPE
ordered. State of Ohio: ANNE KIRKHOPE. Defendant, DOUGLAS
ADAIR present in court. Indigency Hearing held. MARY S.
SWANSON appointed as counsel.
Matter called for Probation Violation Hearing. Pursuant to
the request of Defendant, matter rescheduled for Probation
Violation Hearing on Friday, December 1, 2000 at 8:30 a.m.
Bond is reset at Supervised Own Recognizance.
JUDGE JAMES D. JENSEN
PARTY : D1 - ADAIR DOUGLAS W
11/22/2000 1 Title : ORD:ATTORNEY APPOINTED
Sue Swanson
PARTY : D1 - ADAIR DOUGLAS W
11/27/2000 1 Title : EVT:ORD FILE/JOUR$ THRU9/23/03
RESCHEDULED PV HEARING C-183-1483
PARTY : D1 - ADAIR DOUGLAS W
11/29/2000 1 Title : MIS:REC'D PSI/PV/CCV REPORT
PARTY : D1 - ADAIR DOUGLAS W
12/1/2000 1 Title : ORD: PV/PROBATION CONTINUED
671-01526 issued by JTS (PROBATION VIOL - PROBATION CONTINUE
Dated December 1, 2000. Court Reporter SANDRA CORPE
ordered. State of Ohio: ANNE KIRKHOPE. MARY S. SWANSON

present on behalf of the defendant. Defendant, DOUGLAS
ADAIR present in court.
Defendant having admitted to a probation violation, and
having waived oral hearing, defendant is found in violation
of probation.
Defendant having been convicted of the offense of Nonsupport
of Dependents, in violation of Revised Code Section
2919.21(A)(2), a felony of the 4TH degree.
Probation as ordered by this Court on April 11, 1997 is
ordered continued with the following added conditions: 1)
Seek and maintain gainful employment; 2) Defendant to seek
mental health counseling; 3) Execute wage withholding
agreement.
Defendant ordered to pay the costs of prosecution including
any fees associated with the appointment of counsel. It is
further ordered that the defendant pay any supervision fees
associated with being granted probation. Payment of
financial obligations shall be prioritized as restitution,
supervision fees, court costs, fines, and assigned counsel
fees.
JUDGE JAMES D. JENSEN
PARTY : D1 - ADAIR DOUGLAS W
12/5/2000 1 Title : EVT:JE FILE/JOUR $ THRU9/23/03
SENTENCE C-184-502
PARTY : D1 - ADAIR DOUGLAS W
3/15/2002 1 Title : COMMUNITY CONTROL TERMINATED
terminated unsuccesfully
PARTY : D1 - ADAIR DOUGLAS W

Just one look says it all.

http://us.share.geocities.com/picsrfun2003/upclosenfugly-dogie2.bmp

2010. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 15:20:11 UTC
From: Lou <FFSTA17NO@SPAMACCESS995.COM>
Message-ID: <L4Nnc.431$Jp.56142@ord-read.news.verio.net>
Source record: 95461
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:409f9b54$1_3@corp.newsgroups.com...
> Scott M wrote:
> > I HIGHLY doubt it's even possible. UHF is so far from 11 meters in the
radio
> > spectrum that aside from scrounging parts, one cannot simply convert a
UHF
> > x-cvr to 11 m or vise-versa.
>
> My 1956 ITT "Reference Data for Radio Engineers" lists
> 460-470 Mc as "Citizens radio" along with 27.225 Mc.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>

Which was along the lines of my post to this a few moons back. He may have
been referring to the UHF Citizen's band - which this conversion may have
then be possible from another UHF range. BUT to take it to 26-27 MHz, I
don't think so!

Lou

2011. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 15:26:19 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <vaNnc.184390$L31.58117@nwrddc01.gnilink.net>
Source record: 95462

Wes

Maybe I missed your point. I am trying to learn how to build a slotted line for impedance measurements at 137 MHz. It would be real helpfull to me to see how someone has built one at home. I'd sure appreciate hearing about how you did it or what you know about how I could build one here in my garage.
In fact, I'd like to know more about why a person (HAM type) would use the slab line configuration in preferance to coaxial.

Jerry

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:bm2v90dsn7593audtagkmn3rptlao537nk@4ax.com...
> On Mon, 10 May 2004 06:22:29 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
>
> [Richard's good stuff snipped]
>
> You can lead 'em to water, but you can't make 'em drink.
>
> |
> | I'm pretty sure I'll try to make it coax instead of "slab" like HP does
> |it. I saw some 2 inch copper pipe at Home Depot today. They sell it in
5
> |foot lengths for about $22.00. I'm OK with using only 1/2 wavelength for
> |the slotted coax. I thought I might be able to 'get away with' using my
> |scope for detecting the line voltages. I am wide open for learning that
my
> |approach has extremely difficult to solve problems. It all seems fairly
> |easy right now.
> | I was hoping to get a response from someone who either had built a line
or
> |knew of a publication on the pitfalls associated with making a slotted
line.
>
>
>

2012. Re: N8WWM will not feed his kids

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 15:34:53 UTC
From: Steveo <moparholic@hotmail-nospam.com>
Message-ID: <20040510113453.796$VV@newsreader.com>
Source record: 95463
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.cb,rec.radio.swap

"Bada Bing" <BadaBing@implant.com> wrote:
> What a piece of human trash doud adair tuned out to be.
>
> LUCAS COUNTY COURT OF COMMON PLEAS
> J. BERNIE QUILTER, CLERK
> 700 ADAMS STREET
> TOLEDO, OHIO TIME: 11:06:34 AM
> DATE: 5/10/2004
>
> CASE: G -4801 -CR -199606161
> TITLE: S/O V DOUGLAS W ADAIR
> JUDGE: JAMES D. JENSEN
> FILING DATE: 6/12/1996 CASE TYPE: CR CRIMINAL
>
> ---
> --- ----
> MONETARY AMOUNT: DOCKET/PAGE:
> ORIGINAL COURT: TAX TYPE:
> PREVIOUS CASE NUMBER: STATE OF OHIO NUMBER:
>
> ---
> --- ----
> Party Counsel Prosecutor
> Defendant 1:
> ADAIR DOUGLAS W
> 5319 SECOR RD.
> TOLEDO , OH 43623 MARY S. SWANSON
> 4199365120
> 411 N MICHIGAN
> TOLEDO , OH 436241606
>
> ---
> --- ----
> COUNT PARTY DESCRIPTION ABBREV.
> 1 (D -1)ADAIR DOUGLAS W NONSUPPORT OF DEPENDENTS F4
>
> ---
> --- ----
> DATE SEQ EVENT
> 6/12/1996 1 Title : JRE:CASE ACTIVATION IN FACTS
> PARTY : -
> 5/31/2000 1 Title : WAR:CAPIAS ORDERED PER LCAPD

> 803-00499 issued by PJ (CAPIAS REQUEST GRANTED)
> Pursuant to the request of probation a capias is ordered
> issued. Bond is set at $5,000.00 no 10%.
> JUDGE JAMES D. JENSEN
> PARTY : D1 - ADAIR DOUGLAS W
> 6/1/2000 1 Title : EVT:ORDER FILED & JOURNALIZED
> CAPIAS C-174-842
> PARTY : D1 - ADAIR DOUGLAS W
> 6/1/2000 2 Title : EVT:ORDER FILED & JOURNALIZED
> CAPIAS C-174-843
> PARTY : D1 - ADAIR DOUGLAS W
> 6/1/2000 3 Title : WAR:CAPIAS ISSUED BY CLERK
> C01-02080 issued by 163 (8931) WAR:CAPIAS ISSUED BY CLERK
> PARTY : D1 - ADAIR DOUGLAS W
> 11/13/2000 1 Title : WAR:DEFD'T ARREST WARR/CAPIAS
> PARTY : D1 - ADAIR DOUGLAS W
> 11/13/2000 2 Title : WAR:CAPIAS SERVED ON DEFENDANT
> PARTY : D1 - ADAIR DOUGLAS W
> 11/13/2000 3 Title : HRG:PV HEARING SET
> November 17, 2000 at 8:30 a.m.
> PARTY : D1 - ADAIR DOUGLAS W
> 11/13/2000 4 Title : WAR:CAPIAS RETURN FILED
> SERVED ON 11/13/00
> PARTY : D1 - ADAIR DOUGLAS W
> 11/13/2000 5 Title : WAR:CAPIAS RETURN FILED
> SERVED ON 11/12/00
> PARTY : D1 - ADAIR DOUGLAS W
> 11/17/2000 1 Title : BND:SUPERVISED OR BOND ISSUED
> PARTY : D1 - ADAIR DOUGLAS W
> 11/17/2000 2 Title : MIS:CASE CONT AT DEF REQUEST
> 772-28458 issued by JTS (GENERAL CONTINUANCE FOR CRIMINAL CA
> Dated November 15, 2000. Court Reporter SANDRA CORPE
> ordered. State of Ohio: ANNE KIRKHOPE. Defendant, DOUGLAS
> ADAIR present in court. Indigency Hearing held. MARY S.
> SWANSON appointed as counsel.
> Matter called for Probation Violation Hearing. Pursuant to
> the request of Defendant, matter rescheduled for Probation
> Violation Hearing on Friday, December 1, 2000 at 8:30 a.m.
> Bond is reset at Supervised Own Recognizance.
> JUDGE JAMES D. JENSEN
> PARTY : D1 - ADAIR DOUGLAS W
> 11/22/2000 1 Title : ORD:ATTORNEY APPOINTED
> Sue Swanson
> PARTY : D1 - ADAIR DOUGLAS W
> 11/27/2000 1 Title : EVT:ORD FILE/JOUR$ THRU9/23/03
> RESCHEDULED PV HEARING C-183-1483
> PARTY : D1 - ADAIR DOUGLAS W
> 11/29/2000 1 Title : MIS:REC'D PSI/PV/CCV REPORT
> PARTY : D1 - ADAIR DOUGLAS W
> 12/1/2000 1 Title : ORD: PV/PROBATION CONTINUED

> 671-01526 issued by JTS (PROBATION VIOL - PROBATION CONTINUE
> Dated December 1, 2000. Court Reporter SANDRA CORPE
> ordered. State of Ohio: ANNE KIRKHOPE. MARY S. SWANSON
> present on behalf of the defendant. Defendant, DOUGLAS
> ADAIR present in court.
> Defendant having admitted to a probation violation, and
> having waived oral hearing, defendant is found in violation
> of probation.
> Defendant having been convicted of the offense of Nonsupport
> of Dependents, in violation of Revised Code Section
> 2919.21(A)(2), a felony of the 4TH degree.
> Probation as ordered by this Court on April 11, 1997 is
> ordered continued with the following added conditions: 1)
> Seek and maintain gainful employment; 2) Defendant to seek
> mental health counseling; 3) Execute wage withholding
> agreement.
> Defendant ordered to pay the costs of prosecution including
> any fees associated with the appointment of counsel. It is
> further ordered that the defendant pay any supervision fees
> associated with being granted probation. Payment of
> financial obligations shall be prioritized as restitution,
> supervision fees, court costs, fines, and assigned counsel
> fees.
> JUDGE JAMES D. JENSEN
> PARTY : D1 - ADAIR DOUGLAS W
> 12/5/2000 1 Title : EVT:JE FILE/JOUR $ THRU9/23/03
> SENTENCE C-184-502
> PARTY : D1 - ADAIR DOUGLAS W
> 3/15/2002 1 Title : COMMUNITY CONTROL TERMINATED
> terminated unsuccesfully
> PARTY : D1 - ADAIR DOUGLAS W
> --
> Just one look says it all.
>
> http://us.share.geocities.com/picsrfun2003/upclosenfugly-dogie2.bmp
>
Hey, he's gotta feed crisco kathy first, she eats anything
you throw on the floor.

--
I won't retire, but I might retread.

2013. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 15:45:20 UTC
From: kludge@panix.com
Message-ID: <c7o82g$ot8$1@panix2.panix.com>
Source record: 95464
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

In article <409f9b54$1_3@corp.newsgroups.com>,
Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>Scott M wrote:
>> I HIGHLY doubt it's even possible. UHF is so far from 11 meters in the radio
>> spectrum that aside from scrounging parts, one cannot simply convert a UHF
>> x-cvr to 11 m or vise-versa.
>
>My 1956 ITT "Reference Data for Radio Engineers" lists
>460-470 Mc as "Citizens radio" along with 27.225 Mc.

Class A, however, is long gone.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

2014. Stubby car radio antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 15:50:37 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <8xNnc.10298$te.8372@fe39.usenetserver.com>
Source record: 95465

I have been seeing some rather short stubby antennas on newer cars lately. Some of them are short rods about an inch or two long. Others are blades similar to what you sometimes see on large airplanes, an inhc or so tall and 2 or 3 inches long. Of course what I actually see appears to be just the 'radome' covering the actual antenna.

They are way to short to be useable on AM/FM, so my guess is that they are actually:

1. Active antennas for AM/FM

2. The new 'satellite radio' antennas

3. Another conspiracy by the safety nuts who think that car radio antennas are dangerous and have convinced the NTSB that they (the NTSB, that is) are smarter than the rest of us and should tell us what we need.

Any 'experts' out there that know what they are?

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

2015. Re: N8WWM will not feed his kids

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 17:13:01 UTC
From: Walt Davidson <g3nyy@despammed.com>
Message-ID: <mldv90d4pi40lsuc4df6j20cm224djeanj@4ax.com>
Source record: 95466
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.cb,rec.radio.swap

On 10 May 2004 15:34:53 GMT, Steveo <moparholic@hotmail-nospam.com>
wrote:

>Hey, he's gotta feed crisco kathy first, she eats anything
>you throw on the floor.

I don't know the person whom this refers to, but if he is mentally ill
he deserves sympathy and help ... not abuse.

73 de G3NYY

--
Walt Davidson Email: g3nyy @despammed.com

2016. Re: Tektronix oscilloscope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 17:18:15 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <rPOnc.7520$xR4.352@newssvr24.news.prodigy.com>
Source record: 95467

there's a Tek group on Yahoo!
http://groups.yahoo.com/group/TekScopes/

Hank WD5JFR
<4nec2@gmx.net> wrote in message
news:ee90361b.0405100133.793350e6@posting.google.com...
> Hello....,
>
> I know, it's very much off-topic, but as an antenna enthousiast I read
> this news group a lot, so I thought lets give it a try.
>
> Some time ago I managed to blow-up the input-1 channel of my tektronix
> 2230 analog/digital oscilloscope. According the Service-manual and
> compared to the input-2 channel, probably one or more of the following
> parts are damaged:
>
> Comp-Nr Tek-part-nr Name, description Manufact. Mfr-part-nr
>
> A2Q13 151-1124-00 Trans: JFE, N-chan Siliconix inc. J-2400
> A2Q15 151-0711-00 Trans: NPN, Si, TO-92b Tektronix 151-0711-00
> A2Q18 151-0711-00 Trans: NPN, Si, TO-92b Tektronix 151-0711-00
>
> A2U10 156-2469-00 Microckt,dgtl: op-amp Texas-Instr. TLC271ACP
>
>
> Overhere in Europe (except for the TLC271) it seems almost impossible
> to get these parts. I also tried to contact Tekronix , but without
> much results.
>
> Anybody with suggestions how to get one or more of these parts ?
>
> Because all components on the (multi-layer?) channel-1 input board are
> soldered very close together the nicest thing would be if somebody had
> a replacement channel-1 (or -2) input board (tektronix 2230 or 2235)
> for sale.....
>
> Or, should I post this message on any other newsgroup. If so, please
> let me know.
>
> Thanks in advance,
> Arie.

2017. Re: N8WWM will not feed his kids

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 17:32:25 UTC
From: Steveo <moparholic@hotmail-nospam.com>
Message-ID: <20040510133225.145$Fa@newsreader.com>
Source record: 95468
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.cb,rec.radio.swap

Walt Davidson <g3nyy@despammed.com> wrote:
> On 10 May 2004 15:34:53 GMT, Steveo <moparholic@hotmail-nospam.com>
> wrote:
>
> >Hey, he's gotta feed crisco kathy first, she eats anything
> >you throw on the floor.
>
> I don't know the person whom this refers to, but if he is mentally ill
> he deserves sympathy and help ... not abuse.
>
> 73 de G3NYY
>
One might try to help him, if he wasn't such a lost cause. Check
him out.

http://groups.google.com/groups?q=n8wwm

--
I won't retire, but I might retread.

2018. Re: Stubby car radio antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 18:06:50 UTC
From: Allan Butler <ka0ies@hotmail.com>
Message-ID: <_wPnc.64687$lk.4846609@attbi_s53>
Source record: 95369

If I understand the description you gave properly these antennas are for the XM satellite radio receivers. On semi tractors, look for a whip mounted on a rear view mirror with an inverted cone at the top of the whip that tapers for about 6 inches or so. The wide part of the cone isn't a lot larger than the supporting whip but it is noticeable.

Normally on a hardtop car the antenna is placed near the rear of the roof. If it is a convertible then they will likely mount it on the trunk lid at the back of the vehicle.

2019. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 18:13:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <e6gv90ddlirum8bukd307abfdhffp0os7s@4ax.com>
Source record: 95370

On Mon, 10 May 2004 06:22:29 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:
> I was hoping to get a response from someone who either had built a line or
>knew of a publication on the pitfalls associated with making a slotted line.

Hi Jerry,

In response to this, and your email, your wishes are most likely to evince a deafening silence. If you are trying to survey those who have built one from a population of those who used them, I think you've already hit a saturation of 2 possible users. Your own construction effort would qualify you to expand the population by 50%.

As for why a slab style over a cylinder style. That for me is taken on faith that greater minds, in the person of HP Metrologists, figured that one out a long time ago. Myself, I can infer their rationale that perhaps demands more precision and accuracy than you care to pursue; but as any path demands a handcrafted solution, why put in 80% of the effort for a 20% design when 90% effort would double or triple your return?

Harkening back to my days at Metrology school, I can imagine that the slab method was chosen because of the inevitable inner line sag that would inject residual SWR into the system. Sagging between two plates would seem to me to be a non-issue. Sagging within a cylinder may not bring enough residual SWR to cause you grief either, but you have to build and test one to discover the error of your presumption if it disappoints you.

As for using your scope to eke out the voltage measurements. That is a tantalizing thought, but the big boys accomplish more with less. Simplicity is the keyword, with thinking outside of the box. You are focusing on the literal, absolute voltage measurement when SWR is all a matter of relativity that affords orders of magnitude more sensitivity and resolution (and hence accuracy).

Research the Agilent archives for the Metrology papers of the 1960s. The discussion is very accessible (with only the math necessary to perform a real measurement) and focused to the concept and the theory. The writing of that era is a hallmark of clarity.

73's
Richard Clark, KB7QHC

2020. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 18:35:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gdiv909ac5ln02djvcdq03lsdnnkpnneh5@4ax.com>
Source record: 95371

On Mon, 10 May 2004 18:13:00 GMT, Richard Clark <kb7qhc@comcast.net>
wrote:
>Sagging between two plates would seem to me to be a non-issue.

On further reflection (no pun), I would retract this because line sag would necessarily induce a voltage variation between the probe and the line that did not actually exist (probe tracking is very important, of course). Sag may not introduce residual SWR, but it may appear to.

Also, yes, you could use a less than one wavelength long slotted line - provided you had a sliding load to make up for the remaining length. In other words, instead of moving the probe to measure the crests/troughs, you move the load (or both very carefully). When you introduce limitations into design and wish to maintain precision, it necessarily follows that you need more standards to compare against.

73's
Richard Clark, KB7QHC

2021. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 18:57:39 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <DgQnc.109495$G_.53181@nwrddc02.gnilink.net>
Source record: 95372

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:e6gv90ddlirum8bukd307abfdhffp0os7s@4ax.com...
> On Mon, 10 May 2004 06:22:29 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
> > I was hoping to get a response from someone who either had built a line
or
> >knew of a publication on the pitfalls associated with making a slotted
line.
>
> Hi Jerry,
>
> In response to this, and your email, your wishes are most likely to
> evince a deafening silence. If you are trying to survey those who
> have built one from a population of those who used them, I think
> you've already hit a saturation of 2 possible users. Your own
> construction effort would qualify you to expand the population by 50%.
>
> As for why a slab style over a cylinder style. That for me is taken
> on faith that greater minds, in the person of HP Metrologists, figured
> that one out a long time ago. Myself, I can infer their rationale
> that perhaps demands more precision and accuracy than you care to
> pursue; but as any path demands a handcrafted solution, why put in 80%
> of the effort for a 20% design when 90% effort would double or triple
> your return?
>
> Harkening back to my days at Metrology school, I can imagine that the
> slab method was chosen because of the inevitable inner line sag that
> would inject residual SWR into the system. Sagging between two plates
> would seem to me to be a non-issue. Sagging within a cylinder may not
> bring enough residual SWR to cause you grief either, but you have to
> build and test one to discover the error of your presumption if it
> disappoints you.
>
> As for using your scope to eke out the voltage measurements. That is
> a tantalizing thought, but the big boys accomplish more with less.
> Simplicity is the keyword, with thinking outside of the box. You are
> focusing on the literal, absolute voltage measurement when SWR is all
> a matter of relativity that affords orders of magnitude more
> sensitivity and resolution (and hence accuracy).
>
> Research the Agilent archives for the Metrology papers of the 1960s.
> The discussion is very accessible (with only the math necessary to
> perform a real measurement) and focused to the concept and the theory.
> The writing of that era is a hallmark of clarity.

>
> 73's
> Richard Clark, KB7QHC

Richard

I used to think the HP slab configuration was choosen so as to put the probe in a place of minimum fiels within the line. That might be needed so that the probe introduces a minimum disturbance, or influence. The truth is; I dont really know why slab is prefered. I thpought I could attach some light dielectric supports along the bottom of the center conductor to eliminate the serious sag. I think the diam. ratio for the condoctors is close to 2.3 to 1 for 50 ohms without dielectric loading. Thats something I could evaluate after I decide how to make a slotted line.

All thoughts from 'readers' will be appreciated, I'm way out of touch with antenna design these days.

Jerry

2022. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 19:04:17 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <RmQnc.109519$G_.362@nwrddc02.gnilink.net>
Source record: 95373

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:gdiv909ac5ln02djvcdq03lsdnnkpnneh5@4ax.com...
> On Mon, 10 May 2004 18:13:00 GMT, Richard Clark <kb7qhc@comcast.net>
> wrote:
> >Sagging between two plates would seem to me to be a non-issue.
>
> On further reflection (no pun), I would retract this because line sag
> would necessarily induce a voltage variation between the probe and the
> line that did not actually exist (probe tracking is very important, of
> course). Sag may not introduce residual SWR, but it may appear to.
>
> Also, yes, you could use a less than one wavelength long slotted line
> - provided you had a sliding load to make up for the remaining length.
> In other words, instead of moving the probe to measure the
> crests/troughs, you move the load (or both very carefully). When you
> introduce limitations into design and wish to maintain precision, it
> necessarily follows that you need more standards to compare against.
>
> 73's
> Richard Clark, KB7QHC

Richard

This is a good example of how out of touch I am. I thought I could get
all the impedance measuring data from a line only slightly over 1/4 wave
long. Even after thinking about it for several minutes, I cant convince
myself that the slotted line has to be more than 1/2 wave long.

Jerry

2023. Optimizing for Loop Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 19:16:01 UTC
From: zeno <zeno@sonic.net>
Message-ID: <409FD4EC.7675D64F@sonic.net>
Source record: 95374

I am planning 5 masts for an irregular pentagon to be fed with ladder line to a Johnson Matchbox (275W). The available perimeter is somewhere between <520 - >560++ feet (there is a bit of adjustment available on the exact placement of one of the masts, the other masts are fixed. I want to use this antenna for multi-band use and am not sure yet exactly what precise frequencies I might be on. Since I will hoist up each point with a pulley and dacron rope the excess between the total wire length and the actual perimeter (call it "D") will allow a certain distance away from the metal masts which I assume is desirable. My question is: what would be a good precise antenna length to shoot for given the intended multi-band use AND taking into consideration that I can utilize "D" for spacing the antenna wire away from the metal masts a few feet at each facet?

(1005/3.8)x2 = 529 feet, ok, but is (are) there other length(s) that might have some obscure magical mystery properties I may be overlooking. Obviously I am more interested in 75-80m band than 160m per se.

I though I heard somewhere that calculating for the "lower" part of the 80m band had some advantage, but I cannot fing that reference. Also, once I determine what part of 75-80m to calculate for, do I just double it to be in the ballpark of my available perimeter?

Bill K6TAJ

2024. Re: Stubby car radio antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 19:37:53 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <2ga40cFfougU1@uni-berlin.de>
Source record: 95375

Short Rods are cellphone, in the 2 gig band, or a short loaded 800
celphone. or multibanded.
Blades can be from 49 MHz on up, 800 MHz common.
Many blades are folded over 1/4 wave tuned with a cap at the end, tend to be
narrowband.
Some of the washing requirements for busses, require blade antennas, has to
do with mechanical devices going over the vehicles and harsh chemicals.
Short antennas can be undercover or just business people.
If it is a round dome like a salad bowl on top like on Sears Trucks it is
satellite, Qualcom in L or S band, a data/tracking system (they paid too
much for)

"JLB" <IHateSpam@nospam.net> wrote in message
news:8xNnc.10298$te.8372@fe39.usenetserver.com...
> I have been seeing some rather short stubby antennas on newer cars lately.
> Some of them are short rods about an inch or two long. Others are blades
> similar to what you sometimes see on large airplanes, an inhc or so tall
and
> 2 or 3 inches long. Of course what I actually see appears to be just the
> 'radome' covering the actual antenna.
>
> They are way to short to be useable on AM/FM, so my guess is that they are
> actually:
>
> 1. Active antennas for AM/FM
>
> 2. The new 'satellite radio' antennas
>
> 3. Another conspiracy by the safety nuts who think that car radio
antennas
> are dangerous and have convinced the NTSB that they (the NTSB, that is)
are
> smarter than the rest of us and should tell us what we need.
>
>
> Any 'experts' out there that know what they are?
>
> --
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net
>
>

>

2025. Re: Hustler mobile antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 20:28:30 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <a3ov90192nfi9btiqnk02upu4u7fk9oing@4ax.com>
Source record: 95376

On Mon, 10 May 2004 11:41:10 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Yes it can! Gain improvement = 10*Log{50) = +16 dB or about 3 S-units.

I already gave up. You know more about the subject than me.

Just a question, is W1MCE your original call?

Ron W1WBV (1952)

2026. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 20:52:20 UTC
From: tclay@qmc.ph.msstate.edu
Message-ID: <m365b4t37f.fsf@qmc.ph.msstate.edu>
Source record: 95377

On Mon, 10 May 2004 06:22:29 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:
> I was hoping to get a response from someone who either had built a line or
>knew of a publication on the pitfalls associated with making a slotted line.

This month's QEX has an article with some information about slotted lines
(used at 2.4 GHz in that article if I remember).

Torsten Clay
N4OGW

2027. Re: Stubby car radio antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 21:04:29 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <x7Snc.22454$xw3.1440840@attbi_s04>
Source record: 95378

GPS

JLB wrote:

> I have been seeing some rather short stubby antennas on newer cars lately.
> Some of them are short rods about an inch or two long. Others are blades
> similar to what you sometimes see on large airplanes, an inhc or so tall and
> 2 or 3 inches long. Of course what I actually see appears to be just the
> 'radome' covering the actual antenna.
>
> They are way to short to be useable on AM/FM, so my guess is that they are
> actually:
>
> 1. Active antennas for AM/FM
>
> 2. The new 'satellite radio' antennas
>
> 3. Another conspiracy by the safety nuts who think that car radio antennas
> are dangerous and have convinced the NTSB that they (the NTSB, that is) are
> smarter than the rest of us and should tell us what we need.
>
>
> Any 'experts' out there that know what they are?
>

2028. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 21:24:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <409ff39f_3@corp.newsgroups.com>
Source record: 95379
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Scott Dorsey wrote:
> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>>My 1956 ITT "Reference Data for Radio Engineers" lists
>>460-470 Mc as "Citizens radio" along with 27.225 Mc.
>
> Class A, however, is long gone.

As is Mc. :-)

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2029. Re: Optimizing for Loop Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 21:35:37 UTC
From: jgboyles@aol.com
Message-ID: <20040510173537.29049.00000796@mb-m07.aol.com>
Source record: 95380

>My question is: what would be a good
>precise antenna length to shoot for given the intended
>multi-band use

Since you are using a tuner, all you need to do is insure the impedance of the antenna system is within the matching range of the tuner at the frequencies of interest. The simplest way is to put the antenna up and then insure that you can tune on the bands you wish to work. If one band presents a problem, then change the feedline length a few feet.
You could model the antenna and do an swr sweep, and that would tell you if there were potential problems, but the tuner is a problem solver as well as changing the line length.
The ARRL Handbook had a list of "feedline lengths to avoid" or something like that when using a 135' dipole for all band use. As far as I know there has never been a list for a 530' loop.
BTW, according to Reg Edwards G4FGQ above 21 MHZ your tuner will start acting funny because of stray inductance and capacitance. I.E. the calculated values if L and C to achieve a match will be off because of strays. I agree with Reg on the many tuners I have built.
73 Gary N4AST

2030. Re: Understanding Ground.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 21:35:43 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c7osndpsj1@newshost.mot.com>
Source record: 95381

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:cc2t90do18suoh6nttcknfnr4epbdnbjp@4ax.com...
> On Sun, 09 May 2004 18:45:24 GMT, zeno <zeno@sonic.net> wrote:
> >Theoretically, if "neutrals" (eg. the center taps of the step down
> >transformer's secondary) were not grounded anywhere on the Earth, would
the
> >Earth still act as the return path?
> Hi Bill,
>
> ...[snip...]
> there must be a complete circuit...
> the "return path" of the hot lead is always the neutral
> lead...

In other words, if the center tap of the pole transformer is not
connectod to a ground rod, connecting one side of a bulb to ground (to
complete the circuit) can't result in any current (given no other "secret"
paths).

Simply think of the pole transformer as a DC battery. Connect a light bulb
between one terminal of the battery and a ground rod. With the other
terminal of the battery not connected to a groung rod there is no complete
circuit. Its just hanging there.
The pole transformer has the center tap grounded for other safety
considerations - not to conduct current.

Take that bulb out in the field (with ONE hot lead back home) and it
will light with a brightness roughly proportional to the length of its
ground rod...unless there are problems in your neighbor's electrical
systems, then all bets are off...or you accidently grab the wire...

Measure the voltage between yours and your neighbor's ground rods.
Should be interesting.

OT:
> [snip] Ground is ground,
Reminds me...
I have an old (toung-in-cheek) saying (when it comes to RF):
""A grounds a ground the world around."" Not many get my light-hearted
sarcasm.
--
Steve N, K,9;d, c. i My email has no u's.

2031. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 22:14:06 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c7ouvc$q9h$1@newshost.mot.com>
Source record: 95386

How 'bout this...'

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:DgQnc.109495$G_.53181@nwrddc02.gnilink.net...
> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> news:e6gv90ddlirum8bukd307abfdhffp0os7s@4ax.com...
> > On Mon, 10 May 2004 06:22:29 GMT, "Jerry Martes"
> > <j.jmartes@verizon.net> wrote:
> > > RE: making a slotted line.
> >
> > Hi Jerry,
> > [...] As for why a slab style over a cylinder style. That for me is
taken
> > on faith that greater minds, in the person of HP Metrologists, figured
> > that one out a long time ago. ...
> > 73's
> > Richard Clark, KB7QHC
>
> Richard
>
> I used to think the HP slab configuration was choosen so as to put the
> probe in a place of minimum fiels within the line.
> Jerry

Gents.
What you are calling "slab line" is more properly called "Stripline".
It is a very well defined type of transmission line...that is, it has exact equations (unlike the one-sided Micro-strip). I suspect that Jerry's conclusion is right-on. At least theoretically, there is zero field along a line through the center conductor, parallel to the ground planes. So it appears that you would indeed disturb things the least...as long as your 'probe' exited parallel to the ground planes.
Ignore everything but the lower right figure on page 3 of the stripline E field:
http://www.altera.com/literature/wp/lvdsboardwp.pdf

It is all sort of 'sucked' into the ground planes...
The best pix I could find... I think as long as the probe has a small cross section when viewed from the line you will disturb the field the least.
Seems to me in the old days, the probe consisted of a 1N21 diode...
--
Steve N, K,9;d, c. i My email has no u's.

2032. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 22:24:07 UTC
From: Robert Casey <wa2ise@ix.netcom.com>
Message-ID: <40A00106.2090201@ix.netcom.com>
Source record: 95382
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

>
>
>>
>>
>
>Class A, however, is long gone.
>--scott
>
Didn't it morph into FRS?

>
>
>

2033. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 22:31:02 UTC
From: "No Spam"@attglobal.net
Message-ID: <ifgU75G3LLdo-pn2-JcVtVQ2Mzj2U@localhost>
Source record: 95383
Cross-posted to:
rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.cb

On Mon, 10 May 2004 09:27:53 UTC, "Scott M" <spamkiller@elp.rr.com>
wrote:

> I HIGHLY doubt it's even possible. UHF is so far from 11 meters in the radio
> spectrum that aside from scrounging parts, one cannot simply convert a UHF
> x-cvr to 11 m or vise-versa.
>
> "Gary hildebrand" <ghldbrd@ccp.com> wrote in message
> news:598dc4be.0405031436.6f51ff7f@posting.google.com...
> > WA3MOJ <WA3MOJ@home.com> wrote in message
> news:<c60cuk02d43@drn.newsguy.com>...
> > > Hi all, I'm looking for a good reference manual, pdf file, or web site's
> that
> > > will assist me in converting used UHF gear to operate on 11 meters. I'm
> finding
> > > there is a substantial market for such gear and I'll need some
> references for
> > > various solid state and tube conversions.
> > >
> > > Thanks in advance for any help.
> > >
> > > WA3MOJ
> >
> > First, the circuit techniques for UHF receiver front ends and
> > transmitter PA's are totally different than those on 11 meters.
> > Conversion becomes wholesale replacement of about half of the radio.
> >
> > Second, <<`ALL'>> CB radios must be type-accepted by the FCC for use
> > on the air. Unless you have the thousands of dollars for R&D, and
> > legal assistance to complete this, forget the whole thing.
> >
> > What you are trying to do is tantamount to modifing a VCR into a
> > satellite uplink to jam television satellites. Can't get there from
> > here, No how, now way. Zip. Nada. The BIG goose egg.
> >
> > Now you could use UHF commercial radios on the GMRS (former Class A CB
> > channels) with very little problem. Just change crystals or reprogram
> > the synthesizer in the radio, tweak, and you're in business. Any
> > competent two-way radio shop can do that.
> >
> > I'd suggest you study a LOT more on basic electronic theory, and
> > circuit design before you post such an asinine question.
> >

> > Gary Hildebrand WA7KKP

Couple things gang.

The original note was likely a Troll. It wasn't a serious request for information. I don't know the 3MOJ story but there's something odd going on, flame-war, troll baiting, etc.

The use of "UHF" might be a typo, where the intent was "HF".

The other possibility is the freebanders have a different terminology from standard radio talk.

VHF and UHF in freebander, bandit CB lingo isn't 100 mhz, 500 mhz, etc. VHF and UHF are band segments just above 27 mHz and below 30 mHz. .

2034. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 22:38:32 UTC
From: jgboyles@aol.com
Message-ID: <20040510183832.29868.00000825@mb-m07.aol.com>
Source record: 95384

>When you scale an antenna's dimensions, including the wire diameter,the
fractional bandwidth remains the same. So if you scale it for twice the
frequency, the bandwidth doubles.
Hi Roy,
I have never heard of *fractional* bandwidth. Not unusual that I have never
heard of stuff. If one has a band that is 100khz wide and the 2:1 swr
bandwidth is say 20khz, what is the fractional bandwidth, and the bandwidth?
If you scale the antenna to double the frequency (neglecting losses, or
assuming negligible) and scale the dimensions, what are the 2 bandwidths?
I hope you enjoy Dayton, first time in 5 years I won't be there. It rains
too much when I am up there:-(

73 Gary N4AST

2035. Re: Antenna bandwidth and learners.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-10 22:40:29 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <xxTnc.35322$pJ1.10675@lakeread02>
Source record: 95385

(sent last night, didn't show up on my reflector, so,,,)

Thanks Reg. I only presumed that if my standing wave back at the transmitter was a good balance therefore best output from the antenna was possible. I did think that implies that even considering the somewhat long run to the balun, that reflected power was at a mimimum possible level because a resonant antenna condition (or as close as I was able to estimate) existed. Each time that meter readings were taken was after the whole antenna(s) were raised back up in the air, then lower to trim, raise and measure, etc. Starting with about 10% beyond formula length, it noetheless had to have some material added to one antenna and trimmed from another. From what I have learned from you guys, I attribute this to the varying and unique ground absorbtion variables of my particular installation. The help provided on this list is invaluable. Many thanks.

73's

Jack
Virginia Beach

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c7ncbccul1@hercules.btinternet.com...
> Jack, I think you know what you are about. But you may be doing the right
> things for the wrong reasons.
>
> The ONE and ONLY purpose of the SWR meter is to facilitate the
> antenna-plus-line (plus tuner if you use one) to be adjusted such that the
> transmitter is loaded with its design impedance of 50 ohms, plus or minus
20
> percent or thereabouts.
>
> What the SWR on the line may be is not relevant. It can be anything you
> like! It doesn't matter insofar as the adjusting process itself is
> concerned. And it is not of great consequence anyway.
>
> The meter, Bird or MFJ or otherwise, does NOT indicate SWR on the
feedline.
> This is a popular misconception - a very old Old Wives' tale. It merely
> indicates whether or not the impedance looking into the transmitter end of
> the line is 50 ohms or is not 50 ohms. If it is not 50 ohms it won't even
> tell you what it actually is.
>
> So after adjusting line input impedance to be 50 ohms by some means or
> other, you may be quite happy to retire under the impression the SWR is a
> nice 1-to-1 and the antenna input impedance is what you think it is.

Whereas
> it very likely isn't.
>
> But you will have achieved the true objective - the transmitter will be
> correctly loaded with 50 ohms within plus or minus 20 percent even after
> taking so-called SWR meter uncertainty into account.
> ----
> Happy adjusting, Reg, G4FGQ
>
>

2036. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 00:05:47 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <3n40a0lv4b3e0upqg7ncgq3i7ai0hheos4@4ax.com>
Source record: 95387

On Mon, 10 May 2004 17:14:06 -0500, "Steve Nosko"
<suteuve.nosukowicuz@moutouroula.com> wrote:

|How 'bout this...'
|
|"Jerry Martes" <j.jmartes@verizon.net> wrote in message
|news:DgQnc.109495$G_.53181@nwrddc02.gnilink.net...
|> "Richard Clark" <kb7qhc@comcast.net> wrote in message
|> news:e6gv90ddlirum8bukd307abfdhffp0os7s@4ax.com...
|> > On Mon, 10 May 2004 06:22:29 GMT, "Jerry Martes"
|> > <j.jmartes@verizon.net> wrote:
|> > > RE: making a slotted line.
|> >
|> > Hi Jerry,
|> > [...] As for why a slab style over a cylinder style. That for me is
|taken
|> > on faith that greater minds, in the person of HP Metrologists, figured
|> > that one out a long time ago. ...
|> > 73's
|> > Richard Clark, KB7QHC
|>
|> Richard
|>
|> I used to think the HP slab configuration was choosen so as to put the
|> probe in a place of minimum fiels within the line.
|> Jerry
|
|
|Gents.
| What you are calling "slab line" is more properly called "Stripline".
|It is a very well defined type of transmission line...that is, it has exact
|equations (unlike the one-sided Micro-strip). I suspect that Jerry's
|conclusion is right-on. At least theoretically, there is zero field along a
|line through the center conductor, parallel to the ground planes. So it
|appears that you would indeed disturb things the least...as long as your
|'probe' exited parallel to the ground planes.
|Ignore everything but the lower right figure on page 3 of the stripline E
|field:
|http://www.altera.com/literature/wp/lvdsboardwp.pdf
|
|It is all sort of 'sucked' into the ground planes...
|The best pix I could find... I think as long as the probe has a small cross
|section when viewed from the line you will disturb the field the least.
|Seems to me in the old days, the probe consisted of a 1N21 diode...

Steve Adam in "Microwave Theory and Applications," pp. 384-385 discusses the H-P slab line slotted section. (No surprise, Adam worked for H-P) He references, "A New Type of Slotted Line Section", Proceedings of the I.R.E., Vol. 38, No. 3 (March 1950).

The slab line as shown is a round center conductor between parallel plates. Equations for this type of line are given in the ITT "Reference Data For Radio Engineers" and are different from those for stripline, which uses a flat center conductor.

General Radio manufactured a true coaxial slotted line section (Discussed in their "Handbook of Coaxial Microwave Measurements"), but it is much more complicated mechanically than the H-P slab line.

As to disturbing the fields with the probe, of course the fields are disturbed. Just like every other electrical measurement I can think of, the device or system under test is *always* disturbed. The question is just a matter of degree.

As far a building a coaxial slotted line long enough for the frequency of interest, let me just ask how would you propose to machine a straight, uniform width slot down the length of a round piece of soft copper. And then, how would you support the center conductor without the supports getting in the way of the moving probe. Answer these questions (to start with) and then you'll understand why H-P used slab line.

2037. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 01:27:50 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <q_Vnc.111178$G_.5134@nwrddc02.gnilink.net>
Source record: 95388

```
"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:3n40a0lv4b3e0upqg7ncgq3i7ai0hheos4@4ax.com...
> On Mon, 10 May 2004 17:14:06 -0500, "Steve Nosko"
> <suteuve.nosukowicuz@moutouroula.com> wrote:
>
> |How 'bout this...'
> |
> |"Jerry Martes" <j.jmartes@verizon.net> wrote in message
> |news:DgQnc.109495$G_.53181@nwrddc02.gnilink.net...
> |> "Richard Clark" <kb7qhc@comcast.net> wrote in message
> |> news:e6gv90ddlirum8bukd307abfdhffp0os7s@4ax.com...
> |> > On Mon, 10 May 2004 06:22:29 GMT, "Jerry Martes"
> |> > <j.jmartes@verizon.net> wrote:
> |> > > RE: making a slotted line.
> |> >
> |> > Hi Jerry,
> |> > [...] As for why a slab style over a cylinder style. That for me is
> |taken
> |> > on faith that greater minds, in the person of HP Metrologists,
figured
> |> > that one out a long time ago. ...
> |> > 73's
> |> > Richard Clark, KB7QHC
> |>
> |> Richard
> |>
> |> I used to think the HP slab configuration was choosen so as to put
the
> |> probe in a place of minimum fiels within the line.
> |> Jerry
> |
> |
> |Gents.
> | What you are calling "slab line" is more properly called "Stripline".
> |It is a very well defined type of transmission line...that is, it has
exact
> |equations (unlike the one-sided Micro-strip). I suspect that Jerry's
> |conclusion is right-on. At least theoretically, there is zero field
along a
> |line through the center conductor, parallel to the ground planes. So it
> |appears that you would indeed disturb things the least...as long as your
> |'probe' exited parallel to the ground planes.
> |Ignore everything but the lower right figure on page 3 of the stripline E
> |field:
```

> |http://www.altera.com/literature/wp/lvdsboardwp.pdf
> |
> |It is all sort of 'sucked' into the ground planes...
> |The best pix I could find... I think as long as the probe has a small
cross
> |section when viewed from the line you will disturb the field the least.
> |Seems to me in the old days, the probe consisted of a 1N21 diode...
>
> Steve Adam in "Microwave Theory and Applications," pp. 384-385
> discusses the H-P slab line slotted section. (No surprise, Adam
> worked for H-P) He references, "A New Type of Slotted Line Section",
> Proceedings of the I.R.E., Vol. 38, No. 3 (March 1950).
>
> The slab line as shown is a round center conductor between parallel
> plates. Equations for this type of line are given in the ITT
> "Reference Data For Radio Engineers" and are different from those for
> stripline, which uses a flat center conductor.
>
> General Radio manufactured a true coaxial slotted line section
> (Discussed in their "Handbook of Coaxial Microwave Measurements"), but
> it is much more complicated mechanically than the H-P slab line.
>
> As to disturbing the fields with the probe, of course the fields are
> disturbed. Just like every other electrical measurement I can think
> of, the device or system under test is *always* disturbed. The
> question is just a matter of degree.
>
> As far a building a coaxial slotted line long enough for the frequency
> of interest, let me just ask how would you propose to machine a
> straight, uniform width slot down the length of a round piece of soft
> copper. And then, how would you support the center conductor without
> the supports getting in the way of the moving probe. Answer these
> questions (to start with) and then you'll understand why H-P used slab
> line.

Wes

I wonder why such a smart guy like you would ask about how a person would machine a straight slot where a "sraight slot" isnt even needed. Why would you propose use of "soft copper" And, why would you put any supports on the center conductor when it isnt necessary to put them on top, where the probe would.be. Besides, at 137 MHZ, is wouldnt be all that necessary to have the probe moveable continuously. It is aparent to me that either you want to diminish the value of my learning project or you are just not smart. I havent read this antenna news group for very long. Your *help* to me is hopefully not typical. I'm trying to learn. What are you trying to do??

Jerry
>

2038. Re: SteppIR 3 el Yagi vs. Force 12 XR5

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 01:37:40 UTC
From: Rob <noemail@pse.com>
Message-ID: <F4Wnc.9358$dr1.321814@news20.bellglobal.com>
Source record: 95389

J. McLaughlin wrote:
> Dear Rob (unknown call; unknown location; no E-mail address):
> Your questions are unanswerable.
> What constitutes the "best" antenna depends on many factors. You
> have only provided the information that you are "up north" and that
> you wish an antenna to survive Winter weather.
> It is unlikely that someone has "tried" both of the antennas you
> mention. If they had gone to that expense it would be to write a
> paper/book or because one of the antennas died.
> Winter survival depends on a number of factors (including luck).
> What is a reasonable design to place at 40 feet in an old, wooded
> subdivision is likely to be outrageous at 200 feet in open country.
> The ARRL has sold a book on the mechanical design of beams. It
> is a good reference to study. The mechanical standard for towers and
> antennas is 222F. It too should be consulted.
> It will be a few more years before the survival characteristics of
> the Step products starts to have statistical significance. I have
> heard from riggers that the F12 products do not do well in severe
> wind/weather conditions. (You may well not have such severe
> conditions.) A search using Google, or the like, will turn up
> more information.
> Be cautious of statements that contend that their antenna survived
> last Winter's storm. The writer's location may have shielded the
> antenna. I hope that this is of assistance.
> Regards, Mac N8TT
>
> "Rob" <noemail@pse.com> wrote in message
> news:FDzmc.57707$ZJ5.1729584@news20.bellglobal.com...
>> I am thinking of putting up a yagi antenna. I am considering
>> putting up either the SteppIR 3 el yagi or the Force 12 XR5.
>>
>> Does anyone have any opinions on which is the best antenna? Has
>> anyone tried both?
>>
>> Rob
>> P.S. I live up north where there is lots of snow and ice during the
>> winter. Will the SteppIR antenna survive such weather?

Thanks for the reply. Well the most important factor for me is survival. I live inside a National Park up in Canada where lots of snow, ice, wind, etc occur during the long winter months. The antenna will be located up in the clear. There will be not much around to shield it from the winds.

The SteppIR products looks interesting but they do not have much of a track record. I used to use a Cushcraft R7000 but that only lasted 3 winters. I

am not that impressed with the strength of Cushcraft products.

Rob

2039. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 02:22:42 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c7pddi$ks5$1@mail.specsol.com>
Source record: 95390

Jerry Martes <j.jmartes@verizon.net> wrote:

> I'm pretty sure I'll try to make it coax instead of "slab" like HP does
> it. I saw some 2 inch copper pipe at Home Depot today. They sell it in 5
> foot lengths for about $22.00. I'm OK with using only 1/2 wavelength for
> the slotted coax. I thought I might be able to 'get away with' using my
> scope for detecting the line voltages. I am wide open for learning that my
> approach has extremely difficult to solve problems. It all seems fairly
> easy right now.
> I was hoping to get a response from someone who either had built a line or
> knew of a publication on the pitfalls associated with making a slotted line.

> Jerry

Though you don't usually see it for sale, "coax" can be square as well
as round.

Why build a square line? Because it is a hell of a lot easier to mount
and hold on to while you are doing the metal work and easier to build
a centering probe carriage on a flat surface.

--
Jim Pennino

Remove -spam-sux to reply.

2040. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 02:29:00 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <MTWnc.23876$iF6.2419617@attbi_s02>
Source record: 95391

If I understand correctly: Q = "Quality factor" of a tuned circuit, a measure of the energy stored in the circuit ato the energy dissipated or lost. Quantitatively it is: Reactance/Resistance and is a unitless ratio. A "High Q" circuit is one w/ low resistance, the ideal case being an LC circuit with the DC resistance approaching zero hence Q approaching infinity. In practical terms it is a measure of the lossiness or damping in the circuit. Note that for pracical purposes a high Q may or may not be a good thing.

See also:
http://www.techlib.com/reference/q.htm

"AM200" <gt@am200.net> wrote in message
news:e0bnc.167$Gz6.76@newsfe5-gui.server.ntli.net...
> Hello,
>
> Can you tell me what "Q" stands for please?
>
> "Tom Bruhns" <k7itm@aol.com> wrote in message
> news:3200347.0405080744.4cd8201d@posting.google.com...
> > "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> news:<c7idth$416$1@sparta.btinternet.com>...
> >
> > > Knowledge of antenna bandwidth is not of great practical use at HF
> because
> > > the Q of the feedline plus tuner has at least the same effect on the
> overall
> > > system bandwidth as the antenna.
> >
> > I'm sorry, you lost me there Reg. How does the Q of a modern
> > broadband amplifier feeding a nom. 75 ohm feedline contribute more to
> > system Q than an 80 meter 1/2 wave dipole made from 2mm wire -- or for
> > that matter even one that's a half-meter diameter cage (though by then
> > it doesn't much matter for ham use)?
> >
> > Cheers,
> > Tom
>
>

2041. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 02:44:06 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <toc0a09gskgjvk6dcd8h38o159pf1armga@4ax.com>
Source record: 95392

On Tue, 11 May 2004 01:27:50 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:

[snip]

Let's establish something first. I used to instruct a fourth
year/graduate level microwave measurements lab in which experiment #1
was on the use of slotted lines.

|
| I wonder why such a smart guy like you would ask about how a person would
|machine a straight slot where a "sraight slot" (sic) isnt (sic) even needed.

If you don't think the longitudinal slot needs to be straight down the
length of the line then let's stop here.

If I can convince you that it needs to be then we can proceed.

|Why would
|you propose (the) use of "soft copper"(?)

Perhaps I shouldn't have said "soft" copper; nevertheless, copper
isn't the easiest material to machine, and it was you, you should
recall, that mentioned the use of copper water pipe. If you have a
milling machine with five or six feet of table travel, then good for
you, have at it.

|And, why would you put any supports on the
|center conductor when it isnt (sic) necessary to put them on top, where the probe
|would.be.(?)

The center conductor needs to be precisely located so as to not have
the probe coupling vary as it is moved. This will necessitate a fair
number of disks/beads or whatever. To be precise, the center
conductor diameter should be reduced (or the outer conductor
increased) wherever there is a dielectric support. If you intend to
slot the supports, then the missing dielectric will modify the
effective dielectric constant. Be sure and calculate that effect.

|Besides, at 137 MHZ, is wouldnt be all that necessary to have
|the probe moveable continuously.

Oh, I didn't know that. Apparently General Radio didn't either; they
had a micrometer attached to theirs to measure position to the
thousandths of an inch.

|It is aparent to me that either you want
|to diminish the value of my learning project or you are just not smart.

Why thank you!

|I havent read this antenna news group for very long.

I have, although with some of the inane stuff posted lately, it isn't often. BTW, it's an *amateur radio* group. I didn't know we had a band at 137 MHz.

|Your *help* to me is
|hopefully not typical.

No, I believe in this instance that the advice Richard gave you and what I am trying to give you is atypically better that what you will usually get.

|I'm trying to learn. What are you trying to do??

Beats the hell out of me.

2042. Re: bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 03:16:27 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c7pgib$t8a$1@mail.specsol.com>
Source record: 95393

Eric Oyen - N7ZZT <n7zzt@127.0.0.1> wrote:
> On Sun, 09 May 2004 16:54:29 +0000, jim wrote:

> > Eric Oyen - N7ZZT <n7zzt@127.0.0.1> wrote:
> >> ok,
> >> I recently built an inverted-v antenna out of 2 lengths of copper pipe.
> >> I centered it at 26.000 Mhz. it seems to have a 3:1 SWR bandwidth of 6
> >> Mhz (23-29 Mhz). is this typical for this type of antenna?
> >
> >> construction details:
> >> 2 lengths of .5 inch copper pipe at 108 inches in length: 4.5 feet of
> >> RG-8x coax wrapped in a tight loop (8 turns on 4 2 inch diameter form as
> >> a 1:1 current balun), 100 feet of rg-8x coax to station (in this case,
> >> an FRG-7 SW receiver).
> >
> >> I used an MFJ antenna analyzer to determine the BW of the antenna.
> >
> >> does this look koshur to anyyone here?
> >
> >> DE N7ZZT
> >> Phoenix, Arizona
> >
> >> --
> >> the difference between intelligence and stupidity is that intelligence
> >> has its limits.
> >
> > 100 feet of coax will make it look a little better than it really is, but
> > the the bandwidth doesn't sound out of line.
> >
> > Why don't you download the demo eznec (www.eznec.com) and model it with
> > various thickness of elements and see what happens?
> I would, but I don't run windows (or MSDOS) here.
> I am strictly a unix man.

> unless, of course, there is a version for linux/unix I could use.

> DE N7ZZT
> Phoenix, Arizona

> --
> the difference between intelligence and stupidity is that intelligence
> has its limits.

Unfortunately, no, unless you want to use command line nec code.

But then again, if you're really a Unix man, you have a 64 bit Sparc machine into which you can pop a SUNPCI card for that occasional treasure (like eznec) that requires self debasement. Run windows in workspace four and switch back to workspace one if you hear someone approaching.

--
Jim Pennino

Remove -spam-sux to reply.

2043. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 03:19:12 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <QCXnc.60231$sK3.2458@nwrddc03.gnilink.net>
Source record: 95394

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:toc0a09gskgjvk6dcd8h38o159pf1armga@4ax.com...
> On Tue, 11 May 2004 01:27:50 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
>
> [snip]
>
> Let's establish something first. I used to instruct a fourth
> year/graduate level microwave measurements lab in which experiment #1
> was on the use of slotted lines.
>
> |
> | I wonder why such a smart guy like you would ask about how a person
would
> |machine a straight slot where a "sraight slot" (sic) isnt (sic) even
needed.
>
> If you don't think the longitudinal slot needs to be straight down the
> length of the line then let's stop here.
>
> If I can convince you that it needs to be then we can proceed.
>
> |Why would
> |you propose (the) use of "soft copper"(?)
>
> Perhaps I shouldn't have said "soft" copper; nevertheless, copper
> isn't the easiest material to machine, and it was you, you should
> recall, that mentioned the use of copper water pipe. If you have a
> milling machine with five or six feet of table travel, then good for
> you, have at it.
>
> |And, why would you put any supports on the
> |center conductor when it isnt (sic) necessary to put them on top, where
the probe
> |would.be.(?)
>
> The center conductor needs to be precisely located so as to not have
> the probe coupling vary as it is moved. This will necessitate a fair
> number of disks/beads or whatever. To be precise, the center
> conductor diameter should be reduced (or the outer conductor
> increased) wherever there is a dielectric support. If you intend to
> slot the supports, then the missing dielectric will modify the
> effective dielectric constant. Be sure and calculate that effect.
>

>
> |Besides, at 137 MHZ, is wouldnt be all that necessary to have
> |the probe moveable continuously.
>
> Oh, I didn't know that. Apparently General Radio didn't either; they
> had a micrometer attached to theirs to measure position to the
> thousandths of an inch.
>
> |It is aparent to me that either you want
> |to diminish the value of my learning project or you are just not smart.
>
> Why thank you!
>
> |I havent read this antenna news group for very long.
>
> I have, although with some of the inane stuff posted lately, it isn't
> often. BTW, it's an *amateur radio* group. I didn't know we had a
> band at 137 MHz.
>
> |Your *help* to me is
> |hopefully not typical.
>
> No, I believe in this instance that the advice Richard gave you and
> what I am trying to give you is atypically better that what you will
> usually get.
>
> |I'm trying to learn. What are you trying to do??
>
> Beats the hell out of me.

Well Wes I see it *IS* time to stop this rant. You *are* much more
educated than I am. And I see you as also being smug and negative , at
least as your help applies to my post. Why would I care if the slot was
straight?? That makes no sense to me. I certainly have no reason to
dissuade anyone from making the slot straight. But, why? If you are so
smart, perhaps you can tell me _why_ something is done rather than just
stating "thats the way HP or General Radio did it". What am I missing
here?? I think that it would be nice to have the slot straight, I had
intended to do that a VERY simple way, on a garage sized Bridgeport. Have
you no concept of how to ,machine metal?? I wonder why you even bothered to
post to my question when you make wrong statements.
Please dont go away till you tell why the slot in a line must be straight
if the line is to be used for impedance measurement.
Yeah, Wes, There is an amateur radio group thats interested in monitoring
weather satellites. Does that bother you?? What advice did Richard give
that might help me build a slotted line??
Please take a few minutes to consider the validity of your advice before
offering it. You seem to get side tracked easily like the softness of
copper and the length of what a mill can slot. Try to focus on the fact
that Jerry is trying to learn how to build a slotted line at home. If you

have *ANY* helpfull information I will certainly appreciate hearing it.

Jerry

2044. Re: Antenna bandwidth and learners.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 03:40:04 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7phuk$5b5$1@titan.btinternet.com>
Source record: 95395

Jack, I got your message first time.

Juggling with antenna height, lengths and angles, perhaps even varying line length, does indeed eventually obtain a 50-ohm load for the transmitter. But the ONLY way of finding what the antenna impedance actually is is to get up there and measure it in situ - out of idle curiosity. ;o)

Incidentally, the forward power indicated by the Bird is correct regardless of SWR on the line simply because the impedance looking into the line is near enough to 50 ohms. In this respect the meter behaves as intended.

And practically all of the power entering the line will eventually be radiated because, although the SWR is not known, by virtue of the near-to-resonance antenna(s) it cannot possibly be high enough to worry about.

Fascinating subject! I've always been hooked on it. There's something about transmission lines. Yet, believe it or not, I've never used a Smith Chart in 60 years. Too unecessarily complicated.

Cecil, must pour myself a small nightcap of 2002 Merlot.

Reg, G4FGQ

2045. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 04:10:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a052c5$1_7@corp.newsgroups.com>
Source record: 95396

JGBOYLES wrote:
> I have never heard of *fractional* bandwidth.

Fractional bandwidth is bandwidth in Hz divided by
the center frequency in Hz. Multiplying by 100 gives
a percentage bandwidth. Both are normalized bandwidth.
--
73, Cecil http://www.qsl.com/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2046. Re: Antenna bandwidth and learners.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 04:19:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a054f6$1_7@corp.newsgroups.com>
Source record: 95397

Reg Edwards wrote:
> Cecil, must pour myself a small nightcap of 2002 Merlot.

Wish I could do that. Acid reflux has caused me to quit
drinking around 6pm. That means I have to get an early
start. :-) Love Merlot.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2047. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 04:22:38 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7pkee$3kl$1@sparta.btinternet.com>
Source record: 95398

A slotted line is a fundamental Standard of Impedance. It relates impedance measurements to the absolute standard of length, the International Metre!

Its weakest feature is the probe mechanism itself. Its electrical presence is unpredictable. Incalculable. Uncertainty can only be minimised.

Or am I 60 years out of date?

Does anyone know what is the uncertainty in measuring an impedance of, say, around 100 ohms at 10 MHz, as may be claimed by a National Measurement Standards Laboratory.

What may be claimed by an instrument manufacturer in the sales blurb is another matter.

Reg, G4FGQ

2048. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 05:04:51 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <T9Znc.60614$sK3.58203@nwrddc03.gnilink.net>
Source record: 95399

Reg

I would sure like to get some information from you. I think you are the kind of guy who would know about how this line might be made to work. I have some 'notions' that may well be wrong, and I'm too easily confused to work this out alone. It seems to me that a "home made" slotted line wouldnt have to be 50 ohms, yet it could accurately measure load impedances.
For my purpose, I'd want to try to get the line impedance as close to 50 as practical. But, if the slotted line's impedance was 48 ohms or 52 ohms, the line would give quite good information on load impedance. That would require alot of testing to actually determine the Zo of the line. But, I would like only to get real close. I dont need a lab standard.
Since I've gotten so involved with this news group discussion, I'll start building a slotted line useing that 5 foot long piece of copper tube at Home Depot. Still, it would be more satisfying to know more about what I'm attempting. It occurred to me that, if building a slotted line for impedance measurement at 137 MHz was easy, someone would have done it already. So, I'm not real confidant that I'll be successful.
I'd thought I might be able to use my Oscilloscope with a sensitive probe for the "voltage measurement". But, since I'm hearing nothing from this group about how slotted lines are home made for VHF impedance measurement, I'm not confidant I'll be successful.

Of course it is not you who is out of date. It is me. I've been away from electronics and antennas for the last 35 years.

Jerry

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message news:c7pkee$3kl$1@sparta.btinternet.com...
> A slotted line is a fundamental Standard of Impedance. It relates impedance
> measurements to the absolute standard of length, the International Metre!
>
> Its weakest feature is the probe mechanism itself. Its electrical presence
> is unpredictable. Incalculable. Uncertainty can only be minimised.
>
> Or am I 60 years out of date?
>
> Does anyone know what is the uncertainty in measuring an impedance of, say,
> around 100 ohms at 10 MHz, as may be claimed by a National Measurement
> Standards Laboratory.
>

> What may be claimed by an instrument manufacturer in the sales blurb is
> another matter.
> ----
> Reg, G4FGQ
>
>

2049. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 06:54:07 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <n1u0a05hf5nkatoes5h6cu73hotoh0osb5@4ax.com>
Source record: 95400

On Tue, 11 May 2004 03:19:12 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:

[snip]

|If you
|have *ANY* helpfull information I will certainly appreciate hearing it.
|

Sorry, I can't help you.

ps. Before I went into engineering I was a machinist.

2050. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 07:01:11 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a07ae1$1_6@corp.newsgroups.com>
Source record: 95401

Reg Edwards wrote:
> Its weakest feature is the probe mechanism itself. Its electrical presence
> is unpredictable. Incalculable. Uncertainty can only be minimised.

I remember making some measurements on half-inch 75 ohm coax at
Texas A&M by simply pushing the braid away from a place on the
inner insulation and drilling a small hole to the center conductor.
We used an RF VTVM probe. I remember seeing the effects of
standing voltage waves but I have no idea what the accuracy
was.
--
73, Cecil http://www.qsl.net/w5dxp

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2051. Re: Optimizing for Loop Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 08:17:41 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A08C25.F8521ADA@cwis.net>
Source record: 95402

Bill,
Unfortunately there are no 'magic' lengths for your loop. Something in the neighborhood of 520 feet should work well on 160 meters, 250 - 260 feet for 80 meters. The limiting factor is the 'MatchBox', it doesn't have the impedance tuning range other tuners have because of the small number of inductance taps it uses. (It's 'big brother' has the same limitations, by the way.) The 'MatchBox' being a real 'balanced' tuner is nice, but just not that big'a deal for all practical purposes.
In general (meaning that there are always exceptions) the largest loop you can get into the air is the way to go, if you cn 'match' it...
'Doc

2052. Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 08:38:06 UTC
From: Andy <andrew.birch@nospam.bluewin.ch>
Message-ID: <40a090ee$1_2@news.bluewin.ch>
Source record: 95403

Dipole keeps melting?

I've got a multi-band inverted V trap dipole antenna which as my first HF antenna seems to working fine, I like the fact that can get away without a tuner on most bands.

However I've just started getting into 80meters and the tip of the dipole keeps melting the guy rope isolator hence the dipole leg falls to the ground, only running 200watts, the antenna is rated for 1kw.

Everyone suggested its high SWR but not according to 3 different SWR meters (1.1:5) I always use a tuner built into the amp to give the perfect VSWR but after 10 seconds the melting starts and the VSWR starts to increase..

Any ideas?

2053. Re: Wire thicknes versus bandwith

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 08:46:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10a14noilnhvm91@corp.supernews.com>
Source record: 95404

By fractional bandwidth, I mean the fraction of the operating frequency that the bandwidth is; or in other words the ratio of the bandwidth to the operating frequency. For example, if the operating frequency is 10 MHz and the bandwidth is 1 MHz, the fractional bandwidth is 0.1 (1 MHz / 10 MHz). If you scale the antenna to 20 MHz, the bandwidth of the scaled antenna is 2 MHz. The fractional bandwidth is 2 MHz / 20 MHz = 0.1, the same as before it was scaled.

I don't have enough information to answer your question, since you didn't give the operating frequency. I hope the example I gave will clarify what I meant.

I always enjoy Dayton. It's a pleasure to meet EZNEC users, potential EZNEC users, and some of the many people who read this newsgroup. And if rain bothered me, I sho' 'nuff wouldn't live here in Oregon!

Roy Lewallen, W7EL

JGBOYLES wrote:
>>When you scale an antenna's dimensions, including the wire diameter,the
>
> *fractional* bandwidth remains the same. So if you scale it for twice the
> frequency, the bandwidth doubles.
> Hi Roy,
> I have never heard of *fractional* bandwidth. Not unusual that I have never
> heard of stuff. If one has a band that is 100khz wide and the 2:1 swr
> bandwidth is say 20khz, what is the fractional bandwidth, and the bandwidth?
> If you scale the antenna to double the frequency (neglecting losses, or
> assuming negligible) and scale the dimensions, what are the 2 bandwidths?
> I hope you enjoy Dayton, first time in 5 years I won't be there. It rains
> too much when I am up there:-(
>
>
> 73 Gary N4AST

2054. Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 09:59:10 UTC
From: Jan Van Belle <Jan.Van_Belle@advalvas.be>
Message-ID: <2gbmfeFtg9hU1@uni-berlin.de>
Source record: 95405

Hello all,

The last days I was searching for more info o how to build fratal antennas on the web. But besides lots of links to fractenna.com and a few powerpoint slides I found nothing.

Has anyone sucessfully build such an antenna for HF? Is anyone using it?

Kind regards,

Jan, ON5DOA

2055. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 10:56:41 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gbpqrFv5q6U1@uni-berlin.de>
Source record: 95406

FWIW here, using network analyzers may be preferable to slotted lines for RF system measurements. The paper linked below tells why...

http://broadcastengineering.com/ar/broadcasting_antenna_measurements_revisited/

RF

Visit http://rfry.org for FM broadcast RF system papers.

2056. FS: Collins Radio KWM-2 Parts and More

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 11:08:49 UTC
From: Gordon <greyeagl@bellsouth.net>
Message-ID: <61d1a0pvqtlmnrbq2bl22eurnq4igv1t34@4ax.com>
Source record: 95407

I have for sale several small parts gleaned from a Collins KWM-2
transceiver, including the complete bare chassis for that radio. The
following link will take you to my web site where a short description
and pictures for each item is listetd. Follow this link:

http://home.bellsouth.net/p/s/community.dll?ep=87&subpageid=147273&ck=

Thanks for your consideration.

Gordon - KB4LA

2057. HF VHF UHF LOG PERIODIC 20 TO 1.2 GHZ

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 11:25:28 UTC
From: fumper@aol.com
Message-ID: <20040511072528.12117.00000014@mb-m26.aol.com>
Source record: 95409

SEE THIS ON EBAY
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2244030632

2058. Re: bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 11:27:49 UTC
From: Alexander Schewelew <dl1pbd@gmx.de>
Message-ID: <c7qd80aup1@online.de>
Source record: 95408

Hi,
> I recently built an inverted-v antenna out of 2 lengths of copper pipe.
> I centered it at 26.000 Mhz. it seems to have a 3:1 SWR bandwidth of 6 Mhz
> (23-29 Mhz). is this typical for this type of antenna?
>
> construction details:
> 2 lengths of .5 inch copper pipe at 108 inches in length:
> 4.5 feet of RG-8x coax wrapped in a tight loop (8 turns on 4 2 inch
> diameter form as a 1:1 current balun), 100 feet of rg-8x coax to station
> (in this case, an FRG-7 SW receiver).
>
> I used an MFJ antenna analyzer to determine the BW of the antenna.
>
> does this look koshur to anyyone here?
>
> DE N7ZZT
> Phoenix, Arizona

InvV without cabel, wire 1/2''
Freq SWR
23 10.2
26 1.1
29 6.5

Bandwidth SWR<3:1 27.95 - 24.3=3.65 MHz

With 104ft RG 8x
Freq SWR Efficient of line
23 3.6 0.34
26 1.05 0.68
29 3.0 0.41
Bandwidth SWR<3:1 29.6 - 23.78 = 5.22MHz

130ft dipol 100ft up Wire #18
freq SWR
3.5 3.6
3.65 1.2
3.8 3.6
4 9.3

Bandwidth SWR<3:1 3.77 - 3.51 = 0.26 MHz

With 285ft RG 8x
freq SWR Effic.
3.5 2.1 0.59

3.65 1.15 0.69
3.8 2.3 0.56
4.0 3.3 0.35

Bandwidth SWR<3:1 3.91 - 3.41= 0.5 MHz

73!
Alexander,DL1PBD

2059. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 11:51:29 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7qeo1dfm1@titan.btinternet.com>
Source record: 95410

"Jan Van Belle" <Jan.Van_Belle@advalvas.be> wrote in message
news:2gbmfeFtg9hU1@uni-berlin.de...
> Hello all,
>
> The last days I was searching for more info o how to build fratal
> antennas on the web. But besides lots of links to fractenna.com and a few
> powerpoint slides I found nothing.
>
> Has anyone sucessfully build such an antenna for HF? Is anyone using it?
>
> Kind regards,
>
> Jan, ON5DOA

==========

Fractal antennas at HF stay up long enough to discover they don't work any
better than multi-band dipoles. Or simple verticals.

The radiation patterns, of course, are somewhat modified but not enough to
make any practical difference. Particularly as they are not rotatable.
What's the point in having a rotable antenna which from one band to another
is omni-directional?

Efficiency-wise you can't improve on 95 to 98 percent anyway.

All this can be deduced just by looking at them. Like conventional antennas
they are just a few wires in space at various angles. How can an additional
bend in a wire have a significant effect?

But as you are a confirmed experimenter I guess I am unable to discourage
you from your next project. I'm sorry I do not have any antenna wire
dimensions readily at hand.

As for me, in my time I have had experience with a variety of dogs-hind-leg
fractals without being aware of it. Is an inverted-L a first-order fractal?

Reg, G4FGQ

2060. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 11:59:18 UTC
From: Minnie Bannister <GoonButNotForgotten@NottheBBC.org>
Message-ID: <10a1g0la46paab5@corp.supernews.com>
Source record: 95411

Are you just tying the wire to the nylon rope? Perhaps you need a glass
or ceramic insulator between.

Alan AB2OS

Andy wrote:

> Dipole keeps melting?

> I've got a multi-band inverted V trap dipole antenna which as my first HF
> antenna seems to working fine, I like the fact that can get away without a
> tuner on most bands.

> However I've just started getting into 80meters and the tip of the dipole
> keeps melting the guy rope isolator hence the dipole leg falls to the
> ground, only running 200watts, the antenna is rated for 1kw.

> Everyone suggested its high SWR but not according to 3 different SWR meters
> (1.1:5) I always use a tuner built into the amp to give the perfect VSWR but
> after 10 seconds the melting starts and the VSWR starts to increase..

> Any ideas?

2061. Re: Stubby car radio antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 12:10:33 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Oo3oc.166$zq2.57@fe39.usenetserver.com>
Source record: 95412

No.

Read my description.

Wrong shape.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:x7Snc.22454$xw3.1440840@attbi_s04...
> GPS
>
> JLB wrote:
>
> > I have been seeing some rather short stubby antennas on newer cars
lately.
> > Some of them are short rods about an inch or two long. Others are
blades
> > similar to what you sometimes see on large airplanes, an inhc or so tall
and
> > 2 or 3 inches long. Of course what I actually see appears to be just
the
> > 'radome' covering the actual antenna.
> >
> > They are way to short to be useable on AM/FM, so my guess is that they
are
> > actually:
> >
> > 1. Active antennas for AM/FM
> >
> > 2. The new 'satellite radio' antennas
> >
> > 3. Another conspiracy by the safety nuts who think that car radio
antennas
> > are dangerous and have convinced the NTSB that they (the NTSB, that is)
are
> > smarter than the rest of us and should tell us what we need.
> >
> >
> > Any 'experts' out there that know what they are?
> >
>

2062. Re: Elementary question: OOPS

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 12:21:11 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gbup8F116l5U1@uni-berlin.de>
Source record: 95413

"Cecil Moore" wrote
> I don't know much about commercial AM transmitting systems.
> Why not feed the towers with a gamma match?

Radiation patterns are not as omnidirectional using this method as they are when a tower is series-fed. The FCC frowns on them, especially for use in directional arrays. The following link may be of interest:
http://www.dlr.com/dlrweb/papers/nabpaper/nabpaper.htm

RF

Visit http://rfry.org for FM broadcast RF system papers.

2063. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 12:22:07 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <Ez3oc.168$zq2.28@fe39.usenetserver.com>
Source record: 95414

You are using a rope that absorbs RF energy and has a low temperature melting point. There is a very high voltage electric field at the end of a dipole which gets absorbed by the rope causing it to melt.

Spend more money on better quality rope. Stay away from 'poly' (or polystyrene rope). Nylon is good (but stretches). Dacron is considered better. Natural fiber ropes are very good (such as hemp). In general, if it doesn't cleary identify what type of plastic it is, don't buy it.

I don't think an insulator would make much difference for this problem but you should be using one anyway.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net
"Andy" <andrew.birch@nospam.bluewin.ch> wrote in message
news:40a090ee$1_2@news.bluewin.ch...
> Dipole keeps melting?
>
>
>
> I've got a multi-band inverted V trap dipole antenna which as my first HF
> antenna seems to working fine, I like the fact that can get away without a
> tuner on most bands.
>
>
>
> However I've just started getting into 80meters and the tip of the dipole
> keeps melting the guy rope isolator hence the dipole leg falls to the
> ground, only running 200watts, the antenna is rated for 1kw.
>
>
>
> Everyone suggested its high SWR but not according to 3 different SWR
meters
> (1.1:5) I always use a tuner built into the amp to give the perfect VSWR
but
> after 10 seconds the melting starts and the VSWR starts to increase..
>
>
>
> Any ideas?
>

>

2064. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 12:35:30 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040511083530.02695.00000867@mb-m21.aol.com>
Source record: 95415

>
>I don't think an insulator would make much difference for this problem but
>you should be using one anyway.
>
>--
>Jim
>N8EE

Makes BIG difference. You have high RF volatge point at the ends, you need good quality insulator that doesn't absorb water (like rope) or melt under RF. It helps to make small loop of wire, so it is terminated in "capacitor" plate rather than sharp wire end (had that problem with balloon vertical).
Situation gets worse in salty air environment, where rope becomes conductive when soaked with moisture and salt. Loop made of plastic ties works OK as insulator, rope tied directly to the end of wire is a NO-NO!

Yuri,
www.K3BU.us
www.computeradio.us - home of Dream Radio One

2065. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 12:41:27 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a0caa2$1_2@corp.newsgroups.com>
Source record: 95416

Andy wrote:
> However I've just started getting into 80meters and the tip of the dipole
> keeps melting the guy rope isolator hence the dipole leg falls to the
> ground, only running 200watts, the antenna is rated for 1kw.

What happens at the tips of the dipole has virtually nothing to do with the SWR at the transmitter. The voltage at the ends of the dipole for 200w will be in the ballpark of 600 volts RMS, 1600 volts peak-to-peak.

What are your insulators made of? Change to glass and the problem will probably go away. If you are in a salty environment near an ocean, that will aggravate the problem. Sounds to me that you simply need better quality insulators.
--
73, Cecil http://www.qsl.net/w5dxp

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2066. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 12:55:52 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <n0j1a0hcvaodqd93bsfslqdplt5gb585p8@4ax.com>
Source record: 95417

On Tue, 11 May 2004 10:38:06 +0200, "Andy"
<andrew.birch@nospam.bluewin.ch> wrote:

>Dipole keeps melting?
>
>
>>
>
>
>Any ideas?
>

Check the websites of places like RF Davis, The Wireman or Radio
Works. They sell rope that is appropos to antenna use -- it stands up
to the outdoor environment, and doesn't stretch too much. They also
sell end insulators for antennas -- sounds like you may not be using
any -- the wire shouldn't tie directly to the rope.

Bob
k5qwg

2067. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 12:57:42 UTC
From: Jan Van Belle <Jan.Van_Belle@advalvas.be>
Message-ID: <2gc0u6F10p4pU1@uni-berlin.de>
Source record: 95418

Reg Edwards wrote:
>
> Fractal antennas at HF stay up long enough to discover they don't work any
> better than multi-band dipoles. Or simple verticals.
>
> The radiation patterns, of course, are somewhat modified but not enough to
> make any practical difference. Particularly as they are not rotatable.
> What's the point in having a rotable antenna which from one band to
> another is omni-directional?
>
> Efficiency-wise you can't improve on 95 to 98 percent anyway.
>
> All this can be deduced just by looking at them. Like conventional
> antennas they are just a few wires in space at various angles. How can an
> additional bend in a wire have a significant effect?
>
> But as you are a confirmed experimenter I guess I am unable to discourage
> you from your next project. I'm sorry I do not have any antenna wire
> dimensions readily at hand.
>
> As for me, in my time I have had experience with a variety of
> dogs-hind-leg
> fractals without being aware of it. Is an inverted-L a first-order
> fractal? ----
> Reg, G4FGQ

OK, I get your point. If you've already have a complete set of antennas, it
will probably be no use of building such a new one.
From my point of view, fractal antennas seem to be MUCH smaller than the
full size ones. So it would be an ideal solution if you live on an
appartment or don't have the permission to place a full-sized antenna
somewhere.

So for me, it would just be a better solution than 2 times 5m of wire with a
balun in the middle.

Jan, ON5DOA

2068. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 13:29:14 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <40a0d573_1@newsfeed.slurp.net>
Source record: 95319

You're hitting a current node out at the ends of the wire. You could add some wire to the 80M elements, but if the antenna is working properly, your better option would be to find better end insulators. Ceramic dog-bone insulators are only a couple of bucks apiece...

73,
Mike KI6PR
El Rancho R.F., CA

"Andy" wrote
> I've got a multi-band inverted V trap dipole antenna which as my first HF
> antenna seems to working fine, I like the fact that can get away without a
> tuner on most bands.
>
>
>
> However I've just started getting into 80meters and the tip of the dipole
> keeps melting the guy rope isolator hence the dipole leg falls to the
> ground, only running 200watts, the antenna is rated for 1kw.
>
>
>
> Everyone suggested its high SWR but not according to 3 different SWR
meters
> (1.1:5) I always use a tuner built into the amp to give the perfect VSWR
but
> after 10 seconds the melting starts and the VSWR starts to increase..
>
>
>
> Any ideas?
>
>

2069. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 13:36:35 UTC
From: richardharrison@webtv.net
Message-ID: <8717-40A0D6E3-407@storefull-3251.bay.webtv.net>
Source record: 95320

Reg, G4FGQ, dismisses fractal antennas as not improving on the efficiency of radiation, but that may not be the intent.

Kraus, in "Antennas" says:
"They also provide new insights into antenna and array design----.
----Interestingly, the self-repeating different-size structure of a log-periodic antenna qualifies it as a fractal form."

Best regards, Richard Harrison, KB5WZI

2070. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 13:58:11 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A0DBF3.1BF391D9@cwis.net>
Source record: 95321

Jan,
Very simply, they don't work worth a 'hoot'. If
you lack antenna space a 'fractal' antenna is not
the solution. Sorry...
'Doc

2071. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 14:41:22 UTC
From: Marc Battyani <Marc.Battyani@fractalconcept.com>
Message-ID: <c7qojr$710@library2.airnews.net>
Source record: 95322

"Michael" <Michael-donotspam@bigpond.net.au> wrote
> "Marc Battyani" <Marc.Battyani@fractalconcept.com> wrote
> > Hello,
> >
> > I've made a Class-E amplifier which works rather well as I get 25VRMS
into
> a
> > 50 Ohm resistor.
> > But heating a resistor is not really want I do ;-)
> >
> > I want to send this power into a loop antenna to transmit power by
> induction
> > to another antenna 10 to 20 mm away.
> > The transmit loop antenna is in series with a capacitor and the receive
> > antenna is in parallel with a capacitor. Both antennas are tuned to the
> > correct frequency.
> >
> > The problem is that though I have 125Vpkpk at the transistor drain, I
only
> > have 15Vpkpk at my loop antenna and also 15Vpkpk in the receive antenna
> (not
> > loaded)
> > I guess I need to to some impedance matching but how do I compute the
> > impedance of those loops antennas (is it just the L//C ?) and how do I
> > compute the output impedance of the class-E amplifier ?
> >
> > Any suggestion, URL etc ?
>
> It sounds to me like you are talking about audio (or low) frequencies?

Sorry I forgot to mention the frequency :(
It's at 8MHz.
The antennas are one turn loops.

> I think you are correct in that you need some impedance matching. The
> impedance of your antenna is lower than 50 ohms so does not develop as
much
> voltage.
>
> The best way to work out the impedance of the loop is to measure it. If
you
> are absolutely sure it is at resonance then it will be purely resistive
and
> you can measure the impedance of the loop with the equipment you have - if
> it is not at resonance there will be phase errors in the following

> measurement.
>
> Connect your 50 ohm resister in series with your loop and then connect
this
> to the output of the amplifier. Measure the voltage across the output of
> the amplifier. If it is reading over 100v pk2pk turn the drive down so it
> does not saturate the output transistors.
>
> Next disconnect the voltmeter and connect it across the 50 ohm resistor
and
> note the voltage (Vr). Disconnect the voltmeter and connect it across the
> loop and note the voltage (Vl). You know one resistance Rr = 50 ohms.
> Since the current is the same in both loads and they are in phase you can
> use ohms law.
>
> Vr/Rr = Vl/Rl
>
> rearranging you get
>
> R_loop = (E_loop * 50ohms) / E_resistor
>
> it doesn't really matter if you measure RMS or pk2pk
>
> good luck and let us know how you go.

I will try something like this to measure the impedance of the loop+cap.
But my problem for the impedance matching is that I don't know the amplifier
output impedance.
It's a basic class-E amplifier (A self + an IRL510 MOSFET)
Is there a simple way to measure it or to compute it ?

Thanks,

Marc

2072. Re: HF VHF UHF LOG PERIODIC 20 TO 1.2 GHZ

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 15:09:23 UTC
From: fractenna@aol.com
Message-ID: <20040511110923.03106.00001109@mb-m03.aol.com>
Source record: 95323

>SEE THIS ON EBAY
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2244030632
>
>

Nice!

What is the feedline coax and how old is it?

73,
Chip N1IR

2073. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 17:00:51 UTC
From: Dave Hall <nojunk_n3cvj@ptd.net>
Message-ID: <qk12a0h5v8sean031qmqjvjleukps1b1v5@4ax.com>
Source record: 95324
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

On Mon, 10 May 2004 22:24:07 GMT, Robert Casey <wa2ise@ix.netcom.com>
wrote:

>>
>>
>>>
>>>
>>
>>Class A, however, is long gone.
>>--scott
>>
>Didn't it morph into FRS?

Actually, it morphed into GMRS.

Dave
http://home.ptd.net/~n3cvj

2074. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 17:03:36 UTC
From: K7JEB <k7jeb@no_spam.qsl.net>
Message-ID: <LH7oc.110476$Jy3.51745@fed1read03>
Source record: 95325

Jerry Martes wrote:
> In fact, I'd like to know more about why a
> person (HAM type) would use the slab line
> configuration in preference to coaxial....

One advantage of slab line is that when you drop something like a set screw into the line, it falls right on through. (Been there, done that).

I've used the HP slab-line instrument and obtained very good, repeatable results with it.

Others have commented that the big advantage is ease of fabrication, and I have to agree. Cutting a slot in a water pipe seems like a lot of trouble for minimum gain.

Another alternative might be a trough line. This is a slab line with bottom side closed off. The advantage this would provide is a means of supporting the center conductor by means of a longitudinal, dielectric strip between it and the bottom plate of the line. A long piece of Teflon fiberglass would be ideal for this. The line dimensions would have to be adjusted to maintain a 50-ohm Zo.

Anyway, it's an interesting project. Good luck with it.

Jim, K7JEB
Glendale, AZ

2075. Re: N8WWM will not feed his kids

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 18:07:50 UTC
From: The Dub Tub <54321ernie@hotmail.com>
Message-ID: <abc75$40a11668$d1cc5ac4$4457@snip.allthenewsgroups.com>
Source record: 95326
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.cb,rec.radio.swap

"Bada Bing" <BadaBing@implant.com> wrote in message
news:0ab18f87c10fcb8c7f5f71acde219b2e@news.teranews.com...
> What a piece of human trash doud adair tuned out to be.

Very good, Weber, we haven't seen this one before.
You've earned a carrot.

Well? Bend over! :)

2076. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 19:03:51 UTC
From: Dan Jacobson <jidanni@jidanni.org>
Message-ID: <87oeouyeeg.fsf@jidanni.org>
Source record: 95333
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

http://www.rdrop.com/users/billmc/phone_antenna is built around
a ".01uF capacitor", but what kind? Are big .01uF capacitors better
than small ones etc.?

Is .01uF critical or is there actually a range that is acceptable?

Also the "RF connector" isn't clear. What are examples of this "radio
frequency connector"? Perhaps just coax to alligator clip?

Is the 50 ohm coax critical? How about a plain wire from the capacitor
to the radio's telescoping antenna? Should the telescoping antenna
still be extended, or retracted?

How do we know if our phone line antenna is working properly? Should
time signals on 5000, 10000 khz etc. jump out in perfect clarity?

Certainly there must be a slight advantage between one of red and
green vs. the other... or might we not even bother comparing, as they
are certain to be the same?

By the way, I found a .01uF capacitor that the capacitor numbers web pages
don't seem to decode: 103K PE50. I can't figure out what the PE50 or
PE5Q means.

Lastly, the article has some spelling mistakes, e.g., lightening arrestors.

2077. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 19:08:16 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405111108.765db9f0@posting.google.com>
Source record: 95327

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:<9qCnc.55621$sK3.2971@nwrddc03.gnilink.net>...
> I'm condidering building a slotted line for measuring impedance at 137
> MHz. I find no referances to home made lines thru my quick Google search.
> Does anyone know of any publication that show how someone has already worked
> out the problems of contructing one?

Seems like the postings I've seen here are off on the wrong foot.
Yep, there will be problems, but I've learned a lot more by building
and experimenting with things that didn't work, than listening to or
arguing with people telling me that they won't work. And in fact, a
lot of the time they DO work well enough for me to accomplish what I
wanted.

So I'd like to encourage Jerry to have a go at the copper-pipe slotted
line, keeping in mind the pitfalls that have been mentioned and
thinking of ways around them. I know I would have no trouble at all
making a uniform narrow slot in such a pipe, maintaining a radial
angle straightness well under a degree, without using a milling
machine. I know I'd have no trouble supporting the 7/8" diameter
center conductor to maintain the impedance within a fraction of a
percent over the line length. With proper geometry, sag would not be
an issue for coupling. (Keeping the line vertical is one way, but not
the only way.) Perhaps more important is the initial straightness of
the pipes. 3/4"nom pipe is stiff enough that I can see doing this
with support only at the ends, so impedance AND velocity factor
variation caused by dielectric supports are no longer issues.

Will everything go smoothly? Heck no! Will Jerry learn from doing
it? You bet! Go for it, Jerry, and please see if you can write up
something about your results, to share with others. Listen to the
advice you get, but make up your own mind about what will work best
for you. You should be able to make very decent estimates of the
effects from the problem areas folk have mentioned, through either
formulas or measurements or both. You should be able to make tests on
your line to see if it's performing like you think it is, by applying
known loads and testing at various frequencies, using assorted
detectors and probes.

Cheers,
Tom

2078. Re: Stubby car radio antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 19:11:42 UTC
From: Phil <phil.bradway@verizon.net>
Message-ID: <Oz9oc.49041$wY.36843@nwrdny03.gnilink.net>
Source record: 95328

Probably GPS and OnStar

Phil, KB2HQ

"JLB" <IHateSpam@nospam.net> wrote in message
news:Oo3oc.166$zq2.57@fe39.usenetserver.com...
> No.
>
> Read my description.
>
> Wrong shape.
>
> --
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net
>
> "Dave Shrader" <david.shrader@comcast.net> wrote in message
> news:x7Snc.22454$xw3.1440840@attbi_s04...
> > GPS
> >
> > JLB wrote:
> >
> > > I have been seeing some rather short stubby antennas on newer cars
> lately.
> > > Some of them are short rods about an inch or two long. Others are
> blades
> > > similar to what you sometimes see on large airplanes, an inhc or so
tall
> and
> > > 2 or 3 inches long. Of course what I actually see appears to be just
> the
> > > 'radome' covering the actual antenna.
> > >
> > > They are way to short to be useable on AM/FM, so my guess is that they
> are
> > > actually:
> > >
> > > 1. Active antennas for AM/FM
> > >
> > > 2. The new 'satellite radio' antennas
> > >
> > > 3. Another conspiracy by the safety nuts who think that car radio
> antennas

> > > are dangerous and have convinced the NTSB that they (the NTSB, that
is)
> are
> > > smarter than the rest of us and should tell us what we need.
> > >
> > >
> > > Any 'experts' out there that know what they are?
> > >
> >
>
>
>

2079. Re: SteppIR Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 19:16:11 UTC
From: David L Thompson <thompson@mindspring.com>
Message-ID: <%D9oc.6224$KE6.4565@newsread3.news.atl.earthlink.net>
Source record: 95329

I don't have one but I have heard several with both the 3 and 4 el versions.
One, K7SS, has the 4 el with the two extra 6 meter elements. He was loud on
6 and I am all the way across the continent from him.

W1NA has stacked the beams There are now several others...

Sounds like a winner to me especially if you want one antenna for 20 to 10
plus 6.

73 Dave K4JRB

W0SZ <zumbruns@evertek.net> wrote in message
news:c7bursjpv1@news.netins.net...
> I would like to arrange a sked with someone who has either a 3 or 4
element
> SteppIR yagi in place. Thanks and 73, Steve W0SZ.
>
>

2080. voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 20:12:59 UTC
From: larry d clark <buddycl@swbell.net>
Message-ID: <ftaoc.26400$iD7.16433@newssvr22.news.prodigy.com>
Source record: 95330

in a never ending quest to acquire antenna knowledge
i've been doing some reading of a paper back book
by a well know antenna guru who's now a sk.
he claims that if a vertical antenna is fed at it's base
with a parallel resonant l/c circuit and tapped on the
inductor to to get an appropriate swr match, it's
rf ground can be no more than a 3'x3' screen combined
with a rod in the ground.

in my mind, this seems to be something for nothing. if true
why do i read about the importance of having a number
of radials?

questions, comments, pronouncements from the gurus on high
most welcome. brickbats & complaints, etc 2>&1 /dev/null

larry
kd5foy

2081. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 20:30:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a138a9_3@corp.newsgroups.com>
Source record: 95331

'Doc wrote:
> Very simply, they don't work worth a 'hoot'. If
> you lack antenna space a 'fractal' antenna is not
> the solution. Sorry...

As Richard Harrison pointed out, a log-periodic is
a fractal antenna, by definition.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2082. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 20:34:28 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a13981_3@corp.newsgroups.com>
Source record: 95332

larry d clark wrote:

> in a never ending quest to acquire antenna knowledge
> i've been doing some reading of a paper back book
> by a well know antenna guru who's now a sk.
> he claims that if a vertical antenna is fed at it's base
> with a parallel resonant l/c circuit and tapped on the
> inductor to to get an appropriate swr match, it's
> rf ground can be no more than a 3'x3' screen combined
> with a rod in the ground.
>
> in my mind, this seems to be something for nothing. if true
> why do i read about the importance of having a number
> of radials?
>
> questions, comments, pronouncements from the gurus on high
> most welcome. brickbats & complaints, etc 2>&1 /dev/null

Two words - coil loss. A center-fed 1/2WL vertical would
probably be better - no coil.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2083. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 21:14:13 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <2gcu12F1cf5vU1@uni-berlin.de>
Source record: 95334
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Remember lightning can induce some large voltages on the phone lines too.
(got a receiver smoked in the 70's by using a "very ,very long wire" like
antenna.
Most have 70 volt ringer voltage, some with much higher voltage spikes,
rating on cap should be high, .01 at 200 volt big is usually a sign of
higher voltage rating. Ceramic. and voltage limiter of some sort, 50/100
volt (sounds like a neon bulb!) on the other side of the cap (not telco
side)
Good idea is a preamp, but you needs good FM TV signal killer filter in
front.
0.1 may be too big, lets in too much noise from power lines.
The line may look like a high impedance, 1000 ohms or more, but the preamp
is your "matching" device.
Don't let the phone people find out, they control the government.

UnkleSmith@chart.com

"Dan Jacobson" <jidanni@jidanni.org> wrote in message
news:87oeouyeeg.fsf@jidanni.org...
> http://www.rdrop.com/users/billmc/phone_antenna is built around
> a ".01uF capacitor", but what kind? Are big .01uF capacitors better
> than small ones etc.?
>
> Is .01uF critical or is there actually a range that is acceptable?
>
> Also the "RF connector" isn't clear. What are examples of this "radio
> frequency connector"? Perhaps just coax to alligator clip?
>
> Is the 50 ohm coax critical? How about a plain wire from the capacitor
> to the radio's telescoping antenna? Should the telescoping antenna
> still be extended, or retracted?
>
> How do we know if our phone line antenna is working properly? Should
> time signals on 5000, 10000 khz etc. jump out in perfect clarity?
>
> Certainly there must be a slight advantage between one of red and
> green vs. the other... or might we not even bother comparing, as they
> are certain to be the same?
>
> By the way, I found a .01uF capacitor that the capacitor numbers web pages
> don't seem to decode: 103K PE50. I can't figure out what the PE50 or
> PE5Q means.
>
> Lastly, the article has some spelling mistakes, e.g., lightening

arrestors.

2084. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 21:34:55 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <3Gboc.27877$536.5250038@attbi_s03>
Source record: 95335

Double check the antenna details. I suspect you are describing the
matching circuit for a 1/2 or 5/8 antenna, not a 1/4 wave antenna.

DD

larry d clark wrote:
> in a never ending quest to acquire antenna knowledge
> i've been doing some reading of a paper back book
> by a well know antenna guru who's now a sk.
> he claims that if a vertical antenna is fed at it's base
> with a parallel resonant l/c circuit and tapped on the
> inductor to to get an appropriate swr match, it's
> rf ground can be no more than a 3'x3' screen combined
> with a rod in the ground.
>
> in my mind, this seems to be something for nothing. if true
> why do i read about the importance of having a number
> of radials?
>
> questions, comments, pronouncements from the gurus on high
> most welcome. brickbats & complaints, etc 2>&1 /dev/null
>
> larry
> kd5foy
>
>

2085. Re: Optimizing for Loop Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 21:45:31 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40A14976.FC236373@sonic.net>
Source record: 95337

I shall give it a try and see what happens. Is what you mention
the reason some homebrewers build there own matching networks?
Man, in the old days I remember there were a lot of those large
var. caps. in the ham shacks, but not anymore.

Palstar has a nice unit, but we are talking much bigger
investment. Basically, I am just putting up the antennas which
I can get away with given the boundry conditions at the qth.
Whatever I get, I am sure will be interesting. At this point, I
can, at various points here put up the loop, and up on the hill
in another "shack" I can probably fit in a double extended Zepp
(again with the ladder line). If I can get my archery chops
perfected there is still the possibility of a 160M OCF into a
tall Eucalytus tree and spanning to a mast on the side of
another chicken house. Each antenna situation, will be like an
expedition to another little shack on the property, could be
fun.

Bill K6TAJ

'Doc wrote:

> Bill,
> Unfortunately there are no 'magic' lengths for your
> loop. Something in the neighborhood of 520 feet should
> work well on 160 meters, 250 - 260 feet for 80 meters.
> The limiting factor is the 'MatchBox', it doesn't have
> the impedance tuning range other tuners have because of
> the small number of inductance taps it uses. (It's 'big
> brother' has the same limitations, by the way.) The
> 'MatchBox' being a real 'balanced' tuner is nice, but just
> not that big'a deal for all practical purposes.
> In general (meaning that there are always exceptions) the
> largest loop you can get into the air is the way to go, if
> you cn 'match' it...
> 'Doc

2086. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 21:49:54 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrnca2ik2.13po.bit-bucket@localhost.config.com>
Source record: 95336
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Re: Subject: Phone line as SW antenna

Probably *not* a Good Idea if the telephone line is employed in
DSL service.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | config.com | DM68mn SK

2087. FA: Palomar PFS-1 Field strength Meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 22:00:11 UTC
From: fractenna@aol.com
Message-ID: <20040511180011.28998.00000528@mb-m22.aol.com>
Source record: 95338

Great for antenna measurements. 160-2M. See:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3096137221

73!
Chip N1IR

2088. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 22:04:55 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gci2a0pgbaguafhtgo8b5o6gt806jv3gn7@4ax.com>
Source record: 95339

On Tue, 11 May 2004 11:59:10 +0200, Jan Van Belle
<Jan.Van_Belle@advalvas.be> wrote:

> Hello all,
>
> The last days I was searching for more info o how to build fratal
>antennas on the web. But besides lots of links to fractenna.com and a few
>powerpoint slides I found nothing.
>
>Has anyone sucessfully build such an antenna for HF? Is anyone using it?
>
>Kind regards,
>
>Jan, ON5DOA

Hi Jan,

The reason you see such a void of examples is because of your very
question:
who has built one?

This question above is the one that follows:
which one to build?

And this question above is the one that follows:
what limitations do I have?
or:
what qualities do I want?

Your question is raised here on sporadic occasions, and the poster
NEVER returns to report a successful outcome. This is not due to lack
of information. For such (the largest compilation in the world)
visit:
http://www.qsl.net/kb7qhc/antenna/fractal/index.htm

You should immediately notice that the first impediment is found in
the very nature of fractal shapes.

Do you want gain? Seems not, you do not describe having a large
enough space to do that.

Do you want multi banded resonances in a small space? Probably, but
you will find very, very few examples worth the effort (frankly none).
In all likelihood you would need a tuner, and if you had a tuner, you
should skip the complication of this academic trash.

In open competition between an Amateur and the professional fractal builder, the professional lost against 6 designs that trounced the best professional fractal on the basis of gain for the smallest footprint. That is to say, all seven antennas were bound within a prescribed "small" area (such as you describe), and the fractal came in dead last.

73's
Richard Clark, KB7QHC

2089. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-11 22:40:13 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <yuudneVKQpbeyzzdRVn-hw@comcast.com>
Source record: 95340
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

I used to do this by wrapping the curly-cord around my radio's rod antenna.
Worked quite well.

2090. shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 00:29:44 UTC
From: pdrunen@aol.com
Message-ID: <20040511202944.10186.00001305@mb-m15.aol.com>
Source record: 95341

Hello Group,

If I have an RG-58 coax and it is shorted at the load end. At the electrical 1/8 wave lenght what would be the impedance seen at the other end?

I understand that a shorted 1/4 wave length reflects an open, but was interested in what happens at the 1/8 wave frequency.

Tnx de KJ4UO

2091. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 00:32:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cuq2a0dgi0j0ul0jj65n9met65dfhv01dp@4ax.com>
Source record: 95342

On Tue, 11 May 2004 16:41:22 +0200, "Marc Battyani"
<Marc.Battyani@fractalconcept.com> wrote:

>But my problem for the impedance matching is that I don't know the amplifier
>output impedance.
>It's a basic class-E amplifier (A self + an IRL510 MOSFET)
>Is there a simple way to measure it or to compute it ?
>
>Thanks,
>
>Marc

Hi Marc,

For actual specifics of your device, go to:
http://www.irf.com/product-info/datasheets/data/irl510.pdf
The answer to your literal question requires more details of the
circuit, as the device shows a drain-source resistance that is common
of many finals transistors found in 100W amateur transmitters which
typically exhibit a 50 Ohm source Z at rated power.

This exhibited characteristic Z is a consequence of Z multiplication
through conventional transformer theory. These designs also have the
benefit of low pass filters aiding a smooth transition of Z from the
device Z on the order of 0.5 to 1 Ohm to the System Z of 50 Ohms.

If your amplifier lacks in these regards, it will suffer in efficiency
in spite of the claims of designs of its class. You may wish to
consider driving a small antenna directly to aid in matching. This is
because very small antennas (once the reactances are balanced out, an
important consideration) exhibit a much smaller load resistance that
corresponds to your device's natural output Z. However, to maintain
efficiency, you will need to be scrupulous about all Ohmic sources of
loss that come from construction issues.

73's
Richard Clark, KB7QHC

2092. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 00:55:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10a2tgmcqoafg5c@corp.supernews.com>
Source record: 95343

The impedance would be +j50 ohms, that is, 50 ohms of inductive
reactance. If you open the far end, you'll see -j50 ohms, that is, 50
ohms of capacitive reactance, at the input.

Roy Lewallen, W7EL

PDRUNEN wrote:

> Hello Group,
>
> If I have an RG-58 coax and it is shorted at the load end. At the electrical
> 1/8 wave lenght what would be the impedance seen at the other end?
>
> I understand that a shorted 1/4 wave length reflects an open, but was
> interested in what happens at the 1/8 wave frequency.
>
> Tnx de KJ4UO

2093. Re: Christina Aguilera naked 7848 - Virus detected

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 01:28:00 UTC
From: Arthur Dent <guest@unknown.com>
Message-ID: <MPG.1b0b3b48b7682d969897c8@news-server.midsouth.rr.com>
Source record: 95344
Cross-posted to: alt.binaries.multimedia.bdsm,az.politics,uk.food+drink.misc,alt.binaries.warez.ibm-pc.french,rec.games.video.arcade.marketplace,uk.people.disability,rec.radio.amateur.antenna,microsoft.public.word.vba.general

In article <zE8oc.34268$n7P1.23066
@twister01.bloor.is.net.cable.rogers.com>, lbnvanam@kamtamal.com says...
> Christina Aguilera
>
>
>
>
>
> [application/octet-stream]
>
Contains the W32/Spybot.Worm.Gen.B virus.
--
Arthur Dent
Artificial Intelligence will never be a match for natural stupidity

2094. Re: Hilary Duff naked 2344 - Virus detected

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 01:29:12 UTC
From: Arthur Dent <guest@unknown.com>
Message-ID: <MPG.1b0b3b8f464c2e659897c9@news-server.midsouth.rr.com>
Source record: 95345
Cross-posted to: alt.binaries.multimedia.bdsm,az.politics,uk.food+drink.misc,alt.binaries.warez.ibm-pc.french,rec.games.video.arcade.marketplace,uk.people.disability,rec.radio.amateur.antenna,microsoft.public.word.vba.general

In article <ySaoc.37848$n7P1.28927
@twister01.bloor.is.net.cable.rogers.com>, mfpmsnei@lfolrmdh.com says...
> Hilary Duff topless beach
>
>
>
>
>
> [application/octet-stream]
>
Contains the W32/Spybot.Worm.Gen.B virus.
--
Arthur Dent
Artificial Intelligence will never be a match for natural stupidity

2095. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 02:34:30 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A18D36.E9DD13E5@cwis.net>
Source record: 95346

Cecil,
And as you know, that wasn't exactly what he asked
about. Was it?
'Doc

2096. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 03:22:59 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7s5ajakm1@sparta.btinternet.com>
Source record: 95347

> I would sure like to get some information from you.

You don't sound like the CIA so I'll do my best.

You are correct. A home-made slotted line can be any value Zo provided you know what it is. But it is prudent to be close to the standard 50 or 75 ohms because of the Zo of any other cables and connectors to be used in conjunction with it. Otherwise you will forever be calculating corrections for impedance mismatches.

And how do you know what Zo is? You CALCULATE it from measured dimensions of the line's cross-section. After all, that's why you constructed it in the first place. Uncertainty in Zo depends on cross-section measuring accuracy and, of course, on the accuracy of the calculating formula.

The most simple cross-section is circular coaxial for which Zo = 60*Ln(D/d) exactly. But there's difficulty in producing a narrow slot without mechanical distortion. If you can think of a way of doing it that's fine. It depends on what measuring accuracy is required. Fortunately, Zo is relatively insensitive to absolute measurements on the cross section. Quite a big fat, strong, easily-measured line can be made.

Note that absolute measurements of the cross-section are not required - only the RATIO D/d is needed. This freedom also applies to all other shapes of cross section. There is no requirement for a length of line to be absolutely straight unless you intend to make an international measurement standard out of it. ;o)

The next most simple cross section is a square or rectangular aluminium trough or channel with the open top capped with 2 parallel straight strips spaced apart by the width of the slot which should be no wider than absolutely necessary. The separate parts can be screwed together.

A problem is providing support for the inner conductor of a long length of line. Ideally it should be rigid enough to be self-supporting without significant sag. Hard aluminium (Duralumin) alloy will be OK. A single support, half-way along the line, could be made from a THIN rigid plastic plate about an inch long.

A square or rectanglar cross section will allow the probe carraige to slide smoothly along the line. The formula for calculating line Zo will be fairly simple. I'm sure it will be available from some reliable source. Just don't even dream of deriving a formula from first principles. Accuracy of determination of Zo should be within a few percent even using a wooden ruler.

Departure of the inner conductor itself from a circular cross section, eg., square or moderately rectangular, will not detract from measurement accuracy for the degree of accuracy you say you require.

Below 200 or 300 MHz there's no need to be very particular about the coaxial connectors at the ends of the line. You should be more concerned about uncertainty of the impedance of the coaxial cables used in conjunction with it.

Can't think of anything else at present.

How do you propose to use a slotted line to measure unknown impedances?

Reg, G4FGQ

I think you are the
> kind of guy who would know about how this line might be made to work. I
> have some 'notions' that may well be wrong, and I'm too easily confused to
> work this out alone. It seems to me that a "home made" slotted line
wouldnt
> have to be 50 ohms, yet it could accurately measure load impedances.
> For my purpose, I'd want to try to get the line impedance as close to 50
> as practical. But, if the slotted line's impedance was 48 ohms or 52
ohms,
> the line would give quite good information on load impedance. That would
> require alot of testing to actually determine the Zo of the line. But, I
> would like only to get real close. I dont need a lab standard.
> Since I've gotten so involved with this news group discussion, I'll
start
> building a slotted line useing that 5 foot long piece of copper tube at
Home
> Depot. Still, it would be more satisfying to know more about what I'm
> attempting. It occurred to me that, if building a slotted line for
> impedance measurement at 137 MHz was easy, someone would have done it
> already. So, I'm not real confidant that I'll be successful.
> I'd thought I might be able to use my Oscilloscope with a sensitive
probe
> for the "voltage measurement". But, since I'm hearing nothing from this
> group about how slotted lines are home made for VHF impedance measurement,
> I'm not confidant I'll be successful.
>
> Of course it is not you who is out of date. It is me. I've been away
> from electronics and antennas for the last 35 years.
>
> Jerry
>
>
>
>
>
> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> news:c7pkee$3kl$1@sparta.btinternet.com...

> > A slotted line is a fundamental Standard of Impedance. It relates
> impedance
> > measurements to the absolute standard of length, the International
Metre!
> >
> > Its weakest feature is the probe mechanism itself. Its electrical
> presence
> > is unpredictable. Incalculable. Uncertainty can only be minimised.
> >
> > Or am I 60 years out of date?
> >
> > Does anyone know what is the uncertainty in measuring an impedance of,
> say,
> > around 100 ohms at 10 MHz, as may be claimed by a National Measurement
> > Standards Laboratory.
> >
> > What may be claimed by an instrument manufacturer in the sales blurb is
> > another matter.
> > ----
> > Reg, G4FGQ
> >
> >
>
>

2097. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 03:42:29 UTC
From: m II <ohmworkLEOPARD@spots.ca>
Message-ID: <F2hoc.862$RM.844@edtnps89>
Source record: 95348
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

John Smith wrote:

> **Don't let the phone people find out, they control the government.**

I'm going senile. What movie was that? I remember a desert scene and the actor and a phone booth...

mike

2098. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 03:48:01 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a19f1e$1_5@corp.newsgroups.com>
Source record: 95350

PDRUNEN wrote:
> If I have an RG-58 coax and it is shorted at the load end. At the electrical
> 1/8 wave lenght what would be the impedance seen at the other end?
>
> I understand that a shorted 1/4 wave length reflects an open, but was
> interested in what happens at the 1/8 wave frequency.

For lossless coax, it would be purely reactive, close to +jZ0. Questions
like that are easy when one understands the Smith Chart.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2099. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 03:48:06 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40a1a07b_1@news1.prserv.net>
Source record: 95349

Roy,

Many years ago an article was published showing nomographs for using 1/8
wave lines for universal impedance matching. Do you recall where and when
that appeared, by any remote chance? I know you can do all this with
computer programs now, but I can't easily carry a computer or software into
many of the places I go.

--
Crazy George
W5VPQ
Remove N O and S P A M imbedded in return address

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:10a2tgmcqoafg5c@corp.supernews.com...
> The impedance would be +j50 ohms, that is, 50 ohms of inductive
> reactance. If you open the far end, you'll see -j50 ohms, that is, 50
> ohms of capacitive reactance, at the input.
>
> Roy Lewallen, W7EL
>
> PDRUNEN wrote:
>
> > Hello Group,
> >
> > If I have an RG-58 coax and it is shorted at the load end. At the
electrical
> > 1/8 wave lenght what would be the impedance seen at the other end?
> >
> > I understand that a shorted 1/4 wave length reflects an open, but was
> > interested in what happens at the 1/8 wave frequency.
> >
> > Tnx de KJ4UO

2100. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 03:54:51 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a1a0b7$1_5@corp.newsgroups.com>
Source record: 95352

Crazy George wrote:
> ... I can't easily carry a computer or software into
> many of the places I go.

Everyone else does.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2101. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 03:55:56 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7s78cfpj1@titan.btinternet.com>
Source record: 95351

The input reactance of a shorted length of line is given by -

Inductive Xin = j * Zo * Tangent(Theta)

where Theta is line length in degrees.

For a 1/8-wavelength line Theta = 360/8 = 45 degrees, Tangent(45) = 1.0,
and for Zo = 50 ohms the input inductive reactance is also 50 ohms.

==========

For an open circuit length of line -

Capacitative Xin = -j * Zo / Tangent(Theta)

So for open-circuit 1/8-wavelength line and Zo = 50 ohms, input reactance is
a capacitative -j50 ohms.

The resistive component of input impedance is very small because line loss
is very small for 1/8 wavelength.

Reg, G4FGQ

==========

"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20040511202944.10186.00001305@mb-m15.aol.com...
> Hello Group,
>
> If I have an RG-58 coax and it is shorted at the load end. At the
electrical
> 1/8 wave lenght what would be the impedance seen at the other end?
>
> I understand that a shorted 1/4 wave length reflects an open, but was
> interested in what happens at the 1/8 wave frequency.
>
> Tnx de KJ4UO

2102. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 04:01:39 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <2gdlspF1ichbU1@uni-berlin.de>
Source record: 95353
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Yea, had James Colburn in it.
Was a early spoof on James Bond, forgot the name of the movie too.
The Phone Company won too.

"m II" <ohmworkLEOPARD@spots.ca> wrote in message
news:F2hoc.862$RM.844@edtnps89...
> John Smith wrote:
>
> > **Don't let the phone people find out, they control the government.**
>
> I'm going senile. What movie was that? I remember a desert scene and the
> actor and a phone booth...
>
>
>
> mike

2103. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 04:21:19 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7s8nvhhj1@hercules.btinternet.com>
Source record: 95354

Amateur radio transmitters do NOT typically exhibit a source Z of 50 ohms at rated power or any other power.

A conjugate match does NOT exist. It cannot play any part in transmitter design.

Actual source Z, whatever its value, appears purely by chance AFTER the design has been completed.

Even the designer doesn't know what value it might turn out to be. And the amateur radio transmitter user couldn't care two hoots what it is.

I thought this had all been settled a few years back. But no! It seems the Old Wives are still plagiarising each other.

Reg

2104. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 04:37:56 UTC
From: m II <ohmworkLEOPARD@spots.ca>
Message-ID: <EShoc.1706$RM.970@edtnps89>
Source record: 95355
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

John Smith wrote:
> Yea, had James Colburn in it.
> Was a early spoof on James Bond, forgot the name of the movie too.
> The Phone Company won too.

That was enough..I found it.."The President's Analyst" James Coburn!
It's been a while, so maybe there's hope for me yet.

Thank you.

2105. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 04:40:09 UTC
From: Paul_Morphy <nopaul_morphy2@coolgoose.com>
Message-ID: <JUhoc.81437$Xj6.1365443@bgtnsc04-news.ops.worldnet.att.net>
Source record: 95356
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

"John Smith" <pani@yahoo.com> wrote in message
news:2gdlspF1ichbU1@uni-berlin.de...
> Yea, had James Colburn in it.
> Was a early spoof on James Bond, forgot the name of the movie too.
> The Phone Company won too.

"The President's Analyst." http://www.imdb.com/title/tt0062153/

"PM"

2106. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 04:56:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10a3bjmbak47u59@corp.supernews.com>
Source record: 95357

Sorry, I don't recall having seen that.

Roy Lewallen, W7EL

Crazy George wrote:

> Roy,
>
> Many years ago an article was published showing nomographs for using 1/8
> wave lines for universal impedance matching. Do you recall where and when
> that appeared, by any remote chance? I know you can do all this with
> computer programs now, but I can't easily carry a computer or software into
> many of the places I go.
>
> --
> Crazy George
> W5VPQ
> Remove N O and S P A M imbedded in return address
>

2107. Re: FDTD in Matlab or C

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 05:14:46 UTC
From: Joel Kolstad <JKolstad71HatesSpam@Yahoo.Com>
Message-ID: <c7sbl5$gr1$1@news.oregonstate.edu>
Source record: 95358

Arun S V <arunsv@hathway.com> wrote:
> I am starting out on my class project which requires me to
> write a 2D FDTD code.I am thinking of doing it in Matlab or C.Matlab
> would offer good user friendliness but I have heard that Matlab being an
> interpreted language is quite slow when it comes to loops.

We (myself and other classmates) did an entire numerical electromagnetics class in Matlab. It's true that Matlab 'for' loops are slow... usually the execution time of the programs was completely dominated by actually 'filling up' the matrix (or cells) rather than, say, inverting the matrix, updating cells, etc. Even so, for a 200x200 FDTD program on any contemporary PC (>1GHz), Matlab is plenty fast and I'd argue the ease of plotting/manipulating the results more than outsweighs the generally ignoranble speed penalty.

Heck, I did a FDTD program in C back in 1994 on some PA-RISC HPUX workstation, and I'm _sure_ Matlab is a lot faster on a modern PC than C was back then, and back then it was certainly fast enough!

BTW, look into parallelizing your code... sometimes it's a lot more trouble than it's worth, but often it's very easy to get Matlab to fill in the results of an entire row or an entire matrix in a single statement if you code it correctly.

---Joel Kolstad

2108. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 05:26:45 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <qAioc.35888$pJ1.28301@lakeread02>
Source record: 95359

Reg, let me guess: you dug that Smith Chart out after all huh? he he he

Btw I had a Power Quality engineer that I was discussing ground line impedances with remind me that the same 1/4 wave phenomenon can happen in runs of ground and bonding too. The same radial or parallel or "web" of connections alleviates that risk with lightning grounding as it does with RF grounding.

Jack

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message news:c7s78cfpj1@titan.btinternet.com...
> The input reactance of a shorted length of line is given by -
>
> Inductive Xin = j * Zo * Tangent(Theta)
>
> where Theta is line length in degrees.
>
> For a 1/8-wavelength line Theta = 360/8 = 45 degrees, Tangent(45) = 1.0,
> and for Zo = 50 ohms the input inductive reactance is also 50 ohms.
>
> ==========
>
> For an open circuit length of line -
>
> Capacitative Xin = -j * Zo / Tangent(Theta)
>
> So for open-circuit 1/8-wavelength line and Zo = 50 ohms, input reactance is
> a capacitative -j50 ohms.
>
> The resistive component of input impedance is very small because line loss
> is very small for 1/8 wavelength.
> ----
> Reg, G4FGQ
>
> ==========
>
> "PDRUNEN" <pdrunen@aol.com> wrote in message
> news:20040511202944.10186.00001305@mb-m15.aol.com...
> > Hello Group,
> >
> > If I have an RG-58 coax and it is shorted at the load end. At the
> electrical
> > 1/8 wave lenght what would be the impedance seen at the other end?

> >
> > I understand that a shorted 1/4 wave length reflects an open, but was
> > interested in what happens at the 1/8 wave frequency.
> >
> > Tnx de KJ4UO
>
>

2109. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 05:57:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <use3a09a6lq179vkf5cbm1ogmh4of782i3@4ax.com>
Source record: 95360

On Wed, 12 May 2004 04:21:19 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:

>Amateur radio transmitters do NOT typically exhibit a source Z of 50 ohms at
>rated power or any other power.

Creaky yarn spinning that went out with high button shoes.

>A conjugate match does NOT exist. It cannot play any part in transmitter
>design.

A tale told to unruly hams by curmudgeons to shut them up.

>Actual source Z, whatever its value, appears purely by chance AFTER the
>design has been completed.

Wishful thinking in its full technicolor and surround sound glory.

>Even the designer doesn't know what value it might turn out to be. And the
>amateur radio transmitter user couldn't care two hoots what it is.

Called projection of wish fulfillment.
>
>I thought this had all been settled a few years back. But no! It seems the
>Old Wives are still plagiarising each other.

Self fulfilling prophecy.
>---
>Reg
>
Who's Reg?

2110. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 06:37:15 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7sgmrses1@hercules.btinternet.com>
Source record: 95361

> For lossless coax, it would be purely reactive, close to +jZ0. Questions
> like that are easy when one understands the Smith Chart.
> --
> 73, Cecil
>
==========

They are even easier WITHOUT the unessessary over-complication of the chart.

A student's valuable time is much better spent learning about transmissiom
lines instead of how to use an antique chart. The answer can be worked out
in the head in less than a second. Tan(45) = 1.0000000 and therefore X =
Zo.

Sorry to hear about your pH problem. Isn't there an ant-acid preparation
available in this modern day and age?

Reg, G4FGQ

2111. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 06:52:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9vg3a01pnuaeug7m1d5dg5mn7l9m2a4v1c@4ax.com>
Source record: 95362

This was MUCH too tempting to pass up for another chuckle. The number
of logical inconsistencies within this short gasp begged further
illumination:

On Wed, 12 May 2004 04:21:19 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:

>Amateur radio transmitters do NOT typically exhibit a source Z of 50 ohms at
>rated power or any other power.
...
>Actual source Z, whatever its value, appears purely by chance AFTER the
>design has been completed.

It thus follows there must be SOME Z exhibited, any value of which
occurs by happenstance and whose effect, easily determined, is a
probabilistic spin of the chambers in a capitalistic russian roulette
in the market place. Imagine trying to sell your rigs with this wild
inconsistency in quality and performance. 80% of your product would
be RMA'd to oblivion and your production line brought to its knees
with the loading docks running in reverse. Talk about a mismatch in
THAT line - I love it! We have a description of a conceptual death
wish embraced with a vengeance.
>
>Even the designer doesn't know what value it might turn out to be. And the
>amateur radio transmitter user couldn't care two hoots what it is.

Which, of course has been invalidated by the mere asking of the
question that lead to this thread. Boy, self snuffing predictions
come fast and furious. It would be so much more gothic if only there
were numbers behind this dire brooding.

This was better than any Dago Red you happen to be slugging down, Reg.
Do you write this stuff while looking through the bottom of the glass?
If you simply let yourself go, we could have a tale told by Heathcliff
pining for Catherine from the moors.

> It seems the Old Wives are still plagiarising each other.
Yours was just syllables short of being lifted from Emily Brontï¿½.

73's and thanx for the opportunity, I will of course allow you the
last comment ;-)
Richard Clark, KB7QHC

2112. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 07:35:46 UTC
From: 4nec2@gmx.net
Message-ID: <ee90361b.0405112335.30f2fa30@posting.google.com>
Source record: 95363

"Andy" <andrew.birch@nospam.bluewin.ch> wrote in message
news:<40a090ee$1_2@news.bluewin.ch>...
>
> However I've just started getting into 80meters and the tip of the dipole
> keeps melting the guy rope isolator hence the dipole leg falls to the
> ground, only running 200watts, the antenna is rated for 1kw.

Already some time ago I experienced the same thing, as I did not want
to use ceramic or glass insulators which would make my antenna
system(s) even more visible.

Now I am always using transparent 'Bic' ball-points for which I have
removed the the 'ink-cartridge'. Using this tranperent enclosure, on
both sides (using the small nail and the soldering iron) I melt 2
holes. At one I connect the antenna wire and at the other I connect
the guy rope. After using this solution I did not have these problems
any more, even using considerable power.

I do not know if these 'Bic' ball-points are available in the US, but
overhere in Europe they are widely used.
For an example picture I found the below url on the Internet:
"http://www.findaproperty.com/cgi-bin/story.pl?storyid=5985%20-%2015k"

Arie.

p.s. I almost forgot: All this has nothing to do with SWR

2113. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 08:13:10 UTC
From: Toni <ea3fya@hotmail.com>
Message-ID: <hlm3a05l4qou24notaog1kmv3colqrhfqh@4ax.com>
Source record: 95364

Hi Richard,

En Richard Clark va escriure en Wed, 12 May 2004 00:32:35 GMT:

>These designs also have the
>benefit of low pass filters aiding a smooth transition of Z from the
>device Z on the order of 0.5 to 1 Ohm to the System Z of 50 Ohms.

This is something I have always thought: When driving loops, very
short monopoles (VLF) or other low-impedance antennas, why raise
transmitter Z to 50 ohms, send it through the line and lower it
again to whatever required? Couldn't the amplifier be built
directly at the antenna base so _no_ transmission line is
required and couple directly the low Z at the final transistor(s)
to the low Z at the antenna?

Aside, for VLF, audio is usually transferred at 8, 4 or even 2
ohms. VLF is not that far apart from audio, only 1 decade higher.

73s

Toni - EA3FYA

2114. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 08:17:16 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7smic$6e0$1@sparta.btinternet.com>
Source record: 95365

Sorry to say I've never read Emily Bronte. My style of writing has been likened to Neville Shute but I've never read him either. Only seen films.

But I do believe fact is stranger than fiction.

2115. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 11:09:12 UTC
From: Andy <andrew.birch@nospam.bluewin.ch>
Message-ID: <40a205d7$1_2@news.bluewin.ch>
Source record: 95366

Thanx for all your help and answers, the bic pen seems to work will again
later tonight hopefully get me through to next week when the new isolators..

Thankyou

a.

> >
> > However I've just started getting into 80meters and the tip of the
dipole
> > keeps melting the guy rope isolator hence the dipole leg falls to the
> > ground, only running 200watts, the antenna is rated for 1kw.
>
> Already some time ago I experienced the same thing, as I did not want
> to use ceramic or glass insulators which would make my antenna
> system(s) even more visible.
>
> Now I am always using transparent 'Bic' ball-points for which I have
> removed the the 'ink-cartridge'. Using this tranperent enclosure, on
> both sides (using the small nail and the soldering iron) I melt 2
> holes. At one I connect the antenna wire and at the other I connect
> the guy rope. After using this solution I did not have these problems
> any more, even using considerable power.
>
> I do not know if these 'Bic' ball-points are available in the US, but
> overhere in Europe they are widely used.
> For an example picture I found the below url on the Internet:
> "http://www.findaproperty.com/cgi-bin/story.pl?storyid=5985%20-%2015k"
>
> Arie.
>
> p.s. I almost forgot: All this has nothing to do with SWR

2116. 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 11:17:04 UTC
From: Larry D <larry@may2004.com>
Message-ID: <JaqdnSLsOvcJmj_dRVn-uw@bright.net>
Source record: 95367

I want to construct a 5/8 wave ground plane for 24 MHz.
I am OK with the dimensions, but I can't get a grip on what
the impedance at the feedpoint will be. Even the ARRL
antenna book hasn't been much help.

Can anyone tell me the impedance I can expect to see,
also any tips on matching it? Thanks!

Larry DiGioia N8KU
N8KU at longwire.com

2117. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 13:07:37 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7t7io$s8$1@sparta.btinternet.com>
Source record: 95368

For a 5/8-wave vertical above ground at 24 MHz, conductor diameter 10 mm. -

Base feedpoint resistance = 110 ohms
Base feedpoint reactance = -j386 ohms
Base loading coil inductance = 2.6 uH
Coil diameter = 25 mm
Coil length = 33 mm
Number of spaced turns = 13
Wire = 14 awg = 1.64 mm diameter.

For other heights, frequencies and coil dimensions download in a few seconds
program BOTLOAD for immediate answers.

.....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
.....

2118. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:03:46 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40a2eb38_2@news1.prserv.net>
Source record: 95266

"Jack Painter"
<snip>
> Btw I had a Power Quality engineer that I was discussing ground line
> impedances with remind me that the same 1/4 wave phenomenon can happen in
> runs of ground and bonding too. The same radial or parallel or "web" of
> connections alleviates that risk with lightning grounding as it does with
RF
> grounding.
>
> Jack

Jack:

Alleviates? NO! Reduces somewhat, maybe, and that is one of the most difficult things to get across to people with little theoretical knowledge. Even if it were the perfectly conducting sphere so loved in textbooks, impedance still exists, and the instantaneous voltage at point A will be different from point B. All you are doing is increasing the current carrying capability, so it is less likely to blow up due to a direct strike. Instantaneous voltage difference with respect to a remote reference can still rise to a gazillion volts, no matter how much copper you put in there, or how you configure it.

--
Crazy George
Remove N O and S P A M imbedded in return address

2119. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:23:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a23404_6@corp.newsgroups.com>
Source record: 95219
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

```
m II wrote:
> John Smith wrote:
>
>> Yea, had James Colburn in it.
>> Was a early spoof on James Bond, forgot the name of the movie too.
>> The Phone Company won too.
>
> That was enough..I found it.."The President's Analyst" James Coburn!
> It's been a while, so maybe there's hope for me yet.

The "Flint" movies were also spoofs of James Bond with James Colburn.

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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```

2120. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:27:06 UTC
From: jder8745@aol.com
Message-ID: <20040512102706.21796.00001218@mb-m15.aol.com>
Source record: 95220

Years ago before they started burying all the phone drops and cabling the overhead wires, I connected my BC-348 to the phone withe a 0.005 uF disc ceramic capacitor. It gave me a VERY long wire, probabaly miles of long wire.

Worked quite well.

I haven't tried it since.

73 de Jack, K9CUN

2121. Re: Optimizing for Loop Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:29:10 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A234B6.D9F5BBC9@cwis.net>
Source record: 95221

Bill,
I'm not familiar with the 'Palstar', so can't say how 'suitable' it would be. There are a number of the 'older' (used/cheap) tuners that should work fine, though. I have an old Dentron 'MT-3000' that will match almost anything you can hook to it, for example. Something of that nature wouldn't be quite the inve$tment of a 'Palstar' (maybe?). You're right, there used to be many more of the 'bread-slicer' sized variable capacitors around than now. They were used for a lot of different applications where high voltages were present (as in matching 'odd' impedances). You also have other options, changing feed line lengths to the loop for various bands. Not exactly the easiest thing to do, but it certainly will work. Or, experimenting to find a 'magic' feed line length that is a good compromise for multiband use. Ask Cecil about that...
'Doc

PS - If you happen to run across a dump truck load of those old 'bread slicers' I would gladly take them off your hands...(he said with $$$ dancing in his eyes).

2122. antenna deal of a lifetime

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:31:29 UTC
From: Alfred Gosselin <a.gosselin@comcast.net>
Message-ID: <5zqoc.77560$lk.5642980@attbi_s53>
Source record: 95222

Best offer over $100 and I am serious!!!

1 Hygain 5 el 10 meter monobander with BN-86 balun - "Long John"
1 Hygain 5 el 6 meter monobander
1 Swan 2 el tribander - TB2A
1 Swan 40-10 trap vertical - 4010V
1 Cushcraft 40-10 vertical
1 Cushcraft 10 el 2 meter monobander
1 Cushcraft 20 el (vert and horiz) 2 meter monobander
1 Alliance HD-73 heavy duty rotator and control box
Lots of coax and some masting

Now there has to be a catch??? You bet there is!! This deal has to be completed by May 23 and I will entertain offers through this weekend. Last offer must be in by 6PM EDT, Sunday (May 16), unless I get an offer that I can't refuse. Why such an offer? Well, I am moving and I am sure that my new neighbors would not appreciate all this aluminum. These antennas have provided me with years of faithful service and enjoyment but now it is time to move on to a new phase of my life. OLD AGE!! All of the antennas are down except the 5 el 10 and 6 meter antennas and I will expect you and a friend to remove them. Not a very difficult chore for 2 healthy individuals.My wife and I put them up years ago. Oh yes, where is this deal located?? About 15 miles due west of Hartford,CT. Anything else?? Yes, please don't ask me if you can have just 1 or 2. It's a package deal. You have to take them all.So, if you're looking for an antenna project this summer, look no further.
Feel free to contact me with other questions and thanks for looking,

Fred KA1KE

2123. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:38:47 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a237a8$1_6@corp.newsgroups.com>
Source record: 95223

Reg Edwards wrote:
> They are even easier WITHOUT the unessessary over-complication of the chart.

Why do you think the chart is "over-complicated". I have one with the
R,X values and only the to/from wavelength circles outside. I deleted
everything else from the Smith Chart program.

What I find convenient is to carry the image of the Smith Chart around
in my head. I'm more of a visual person than a formula person and that
image has helped me tremendously.

> A student's valuable time is much better spent learning about transmissiom
> lines instead of how to use an antique chart. The answer can be worked out
> in the head in less than a second. Tan(45) = 1.0000000 and therefore X =
> Zo.

How about 0.07 wavelength in your head? :-) I can glance at a Smith Chart
faster than you can pick up a calculator.

> Sorry to hear about your pH problem. Isn't there an ant-acid preparation
> available in this modern day and age?

Prilosec OTC works well. Then I can drink twice as much as usual [hic].
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2124. cable selection for Sat. internet (6Ghz send, 4Ghz receive)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:41:18 UTC
From: jay@webhart.net
Message-ID: <d36e6460.0405120641.152d208b@posting.google.com>
Source record: 95224

Hi,

Was wondering what the best choice for cable would be for a satellite internet
installation. (based on Direcways technologies)
It utilizes 6 Ghz for send freq. and 4 for the receive freq.

A base install uses RG6 for dish to send/receive modem (for up to 125 feet) - but the little reading that I have done about 2.4 Ghz and short runs of LMR400 tells me that there may be a better low loss solution.

Any thoughts?

Thanks

2125. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:44:10 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a238eb$1_6@corp.newsgroups.com>
Source record: 95227

Toni wrote:
> This is something I have always thought: When driving loops, very
> short monopoles (VLF) or other low-impedance antennas, why raise
> transmitter Z to 50 ohms, send it through the line and lower it
> again to whatever required?

40-50 years ago, we had to lower the transmitter Z usually with
a built-in adjustable pi-net tuner.
--
73, Cecil http://www.qsl.net/w5dxp

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2126. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:44:48 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <nLqoc.112$Cv3.27@fe39.usenetserver.com>
Source record: 95225

"Mikey" <ki6pr@arrl.net> wrote in message
news:40a0d573_1@newsfeed.slurp.net...
> You're hitting a current node out at the ends of the wire. You could add
> some wire to the 80M elements, but if the antenna is working properly,
your
> better option would be to find better end insulators. Ceramic dog-bone
> insulators are only a couple of bucks apiece...

Of course there is a current node at the end.

The end of the dipole is open circuit isn't it? Unless the laws of physics have changed since I've been in school, electrons can not flow through an open circuit. There will always be a 'current node' at the end of a dipole regardless of the length. There will also be a high voltage electric field. With high enough RF power the electric field can be strong enough to cause arcing and corona. The strength of the field will depend on the shape of the end of the dipole (rounded vs pointed), as I was properly chastised for forgetting on my other post.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

2127. Re: Stubby car radio antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:45:54 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <pMqoc.116$Cv3.94@fe39.usenetserver.com>
Source record: 95226

Perhaps.

Possibly a combination antenna and cellular (which OnStar uses) antenna.

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net
"Phil" <phil.bradway@verizon.net> wrote in message
news:Oz9oc.49041$wY.36843@nwrdny03.gnilink.net...
> Probably GPS and OnStar
>
> Phil, KB2HQ
>
> "JLB" <IHateSpam@nospam.net> wrote in message
> news:Oo3oc.166$zq2.57@fe39.usenetserver.com...
> > No.
> >
> > Read my description.
> >
> > Wrong shape.
> >
> > --
> > Jim
> > N8EE
> >
> > to email directly, send to my call sign at arrl dot net
> >
> > "Dave Shrader" <david.shrader@comcast.net> wrote in message
> > news:x7Snc.22454$xw3.1440840@attbi_s04...
> > > GPS
> > >
> > > JLB wrote:
> > >
> > > > I have been seeing some rather short stubby antennas on newer cars
> > lately.
> > > > Some of them are short rods about an inch or two long. Others are
> > blades
> > > > similar to what you sometimes see on large airplanes, an inhc or so
> tall
> > and
> > > > 2 or 3 inches long. Of course what I actually see appears to be
just
> > the

> > > > 'radome' covering the actual antenna.
> > > >
> > > > They are way to short to be useable on AM/FM, so my guess is that
they
> > are
> > > > actually:
> > > >
> > > > 1. Active antennas for AM/FM
> > > >
> > > > 2. The new 'satellite radio' antennas
> > > >
> > > > 3. Another conspiracy by the safety nuts who think that car radio
> > antennas
> > > > are dangerous and have convinced the NTSB that they (the NTSB, that
> is)
> > are
> > > > smarter than the rest of us and should tell us what we need.
> > > >
> > > >
> > > > Any 'experts' out there that know what they are?
> > > >
> > >
> >
> >
> >
>
>

2128. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 14:53:26 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <sTqoc.118$Cv3.91@fe39.usenetserver.com>
Source record: 95228

Kraus (2nd edition, p. 375) gives a different answer.

Interpolating from the diagram on p. 375 (assuming length/diameter = 472) it
is about 90-j250.

Why the difference?

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net
"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c7t7io$s8$1@sparta.btinternet.com...
> For a 5/8-wave vertical above ground at 24 MHz, conductor diameter 10
mm. -
>
> Base feedpoint resistance = 110 ohms
> Base feedpoint reactance = -j386 ohms
> Base loading coil inductance = 2.6 uH
> Coil diameter = 25 mm
> Coil length = 33 mm
> Number of spaced turns = 13
> Wire = 14 awg = 1.64 mm diameter.
>
> For other heights, frequencies and coil dimensions download in a few
seconds
> program BOTLOAD for immediate answers.
> ----
> ....
> Regards from Reg, G4FGQ
> For Free Radio Design Software go to
> http://www.btinternet.com/~g4fgq.regp
> ....
>
>

2129. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 15:04:03 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a23d95_6@corp.newsgroups.com>
Source record: 95229

Larry D wrote:
> Can anyone tell me the impedance I can expect to see,
> also any tips on matching it? Thanks!

The VERT1 vertical that comes with EZNEC is 1/4WL on 40m.
It will be 5/8WL on 17m. (7.2 * 2.5 = 18) EZNEC sez the
feedpoint impedance on 17m will be about 100-j470 ohms.

A loading coil is usually installed between the base of
the antenna and the radial system. The coax braid is
tied to the radial system and the coax center wire is
tapped down on the coil at the 50 ohm point.

```
Rad| coil
Gnd-------+-////////---------------5/8WL----------------
Rad| ^
|
XMTR-----------+
```

If you don't mind a relatively low SWR of 2:1-3:1, use good
coax, a standard base-loading coil, and your tuner at the
transmitter.

There is plenty of 5/8WL information for 2m antennas
in the ARRL publications and antennas are scalable.
--
73, Cecil http://www.qsl.net/w5dxp

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2130. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 15:37:05 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <Bwroc.78018$kh4.4501929@attbi_s52>
Source record: 95230

Z is close to +58-j138 ohms.

A small inductor of 0.88 uH in series with the antenna should provide a
pretty good match to 50 ohm coax.

Larry D wrote:

> I want to construct a 5/8 wave ground plane for 24 MHz.
> I am OK with the dimensions, but I can't get a grip on what
> the impedance at the feedpoint will be. Even the ARRL
> antenna book hasn't been much help.
>
> Can anyone tell me the impedance I can expect to see,
> also any tips on matching it? Thanks!
>
> Larry DiGioia N8KU
> N8KU at longwire.com

2131. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 16:44:57 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7tka9mvi1@titan.btinternet.com>
Source record: 95231

> Kraus (2nd edition, p. 375) gives a different answer.
>
> Interpolating from the diagram on p. 375 (assuming length/diameter = 472)
it
> is about 90-j250.
>
> Why the difference?
>
==========

The program takes into account antenna diameter. Does Kraus? And is he on
the same band? Is he at the same height above ground? What sort of ground
or radial system does he have? Have you interpolated correctly? Have you
understood what Kraus is saying? Is the loading coil in the same location?
Is the feedpoint at the same place. Are you comparing like with like?
Spend more time thinking about it.

Is Kraus infallible? Could be he's wrong again.

Who's Kraus anyway? ;o)

Reg

2132. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 16:52:18 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7tko2$kr7$1@sparta.btinternet.com>
Source record: 95232

> There is plenty of 5/8WL information for 2m antennas
> in the ARRL publications and antennas are scalable.
> --
> 73, Cecil

==========

The trouble with scaling (as from 2m down to 160m) is that antenna conductor
diameters are forgotten about which can cause appreciable errors.

Reg, G4FGQ

2133. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 18:30:40 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a26e00$1_8@corp.newsgroups.com>
Source record: 95233

Reg Edwards wrote:
> The trouble with scaling (as from 2m down to 160m) is that antenna conductor
> diameters are forgotten about which can cause appreciable errors.

I dunno, Reg. My 20m rotatable dipole diameter is about ten times
bigger than my 2m 1/4WL ground plane. Seems about right to me.
--
73, Cecil http://www.qsl.net/w5dxp

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2134. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 19:01:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2vs4a0lv939hpj7nff5i70dfu98omt9frf@4ax.com>
Source record: 95234

On Wed, 12 May 2004 10:13:10 +0200, Toni <ea3fya@hotmail.com> wrote:

>This is something I have always thought: When driving loops, very
>short monopoles (VLF) or other low-impedance antennas, why raise
>transmitter Z to 50 ohms, send it through the line and lower it
>again to whatever required? Couldn't the amplifier be built
>directly at the antenna base so _no_ transmission line is
>required and couple directly the low Z at the final transistor(s)
>to the low Z at the antenna?

Hi Toni,

Exactly!

73's
Richard Clark, KB7QHC

2135. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 19:03:13 UTC
From: richardharrison@webtv.net
Message-ID: <21927-40A274F1-627@storefull-3257.bay.webtv.net>
Source record: 95236

Larry, N8KU wrote:
"I want to construct a 5/8 wave ground plane for 24 MHz.----Even the ARRL antenna book hasn`t been much help."

At 1/2-wave, reactance nearly is zero and begins repeating as from zero.. With a 5/8-wave, you have a 1/8-wave connected to the feedpoint through a reactance repeating 1/2-wave line. A 5/8-wave antenna will have nearly the same reactance as a 1/8-wave. Value of the reactance depends on the characteristic impedance of the antenna and this depends on length to diameter ratio.

Resistance of a vertical antenna increases with its length until it reaches nearly 1/2-wavelength where it peaks and starts to fall. Sharpness of this resonant peak depends on length to diameter ratio of the antenna. You might expect a radiation resistance of between 50 and 150 ohms. Reactance may be between 200 and 1200 ohms. It depends on how skinny the antenna is. Fat conductors have smaller impedance variations (a lower Q).

My impedance numbers come from Capt. Paul H. Lee, USNR, K6TS`s "Vertical Antenna Handbook".

5/8-wave vertical ground-planes were once popular on 27 MHz and often used an autotransformer at the base to step up the impedance from the 50 ohms of the coax.

Best regards, Richard Harrison, KB5WZI

2136. Re: Dipole keeps melting?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 19:07:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2dt4a0t04jabaocrr9tgtfdjd2cnmuqk9t@4ax.com>
Source record: 95235

```
On 12 May 2004 00:35:46 -0700, 4nec2@gmx.net wrote:
>I do not know if these 'Bic' ball-points are available in the US
Maybe for 40 years now....
```

2137. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 19:36:20 UTC
From: JLB <IHateSpam@nospam.net>
Message-ID: <U0voc.2$dH3.1@fe39.usenetserver.com>
Source record: 95237

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c7tka9mvi1@titan.btinternet.com...
> The program takes into account antenna diameter. Does Kraus?

Yes. My post said length/diameter = 472 (One thing I don't like about the way Kraus wrote his book is that he gives the formula for only one part of the feed impedance (R or X) and a diagram for the complex impedance. He then refers you to someones paper somewhere for the 'complete' formula.. I have it around here but it would take 2 days to find it.)

> And is he on the same band?

In the diagram I was interpolating from the dimensions are in wavelengths.

> Is he at the same height above ground? What sort of ground or radial system does he have?

It is an infinite perfect ground plane---ground mounted. (We are talking about a 5/8 wave vertical remember).

> Have you interpolated correctly?

Probably not.

> Have you understood what Kraus is saying?

Yes.

> Is the loading coil in the same location?

No 'loading coil' in the Kraus example. He is discussing the feed point impedance. A loading coil would be either across or in series with the feed point.

> Is the feedpoint at the same place.

Since the original post concerned a 5/8 wave vertical, I assumed it is at the bottom, which is what Kraus is discussing.

> Are you comparing like with like?

Hence my question. Are we? I recall that a 5/8 wave vertical was 'close' to 50 ohms at the feed point and could be 'adjusted' with an inductance across the feed point (with the feedline at a tap perhaps?). That is the whole point is using such a 'magic number' as 5/8 wavelength. If you look at the impedance curves, though, you find that they are quite steep at this point, so a small error in length causes a large error in impedance, and some tuning will be needed. The 5/8 wave is not a 'build it and go' antenna!

> Spend more time thinking about it.
>
I have, which is why I looked it up.

> Is Kraus infallible? Could be he's wrong again.
>

=8o Oh no!!! Kraus wrong!?

> Who's Kraus anyway? ;o)

Oh, I don't know. Just some guy that signed my Master's Thesis 16 years
ago.

> ----
> Reg
>
>

--
Jim
N8EE

to email directly, send to my call sign at arrl dot net

2138. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 20:57:46 UTC
From: richardharrison@webtv.net
Message-ID: <21927-40A28FCA-632@storefull-3257.bay.webtv.net>
Source record: 95239

KJ4UO wrote:
"If I have an RG-58 coax and it is shorted at the load end."

At the electrical input, 1/8-wave back from the short, you have an inductive reactance equal to the numerical value of Zo. At 1/4-wave back from the short, you have added an open-circuit 1/8-wavelength of line to the first. This new line has a capacitive reactance equal to Zo.

The combination of equal and opposite reactances makes a parallel resonant circuit equivalent which seems a very high impedance indeed.

Best regards, Richard Harrison, KB5WZI

2139. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 20:59:18 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405121259.f818d7f@posting.google.com>
Source record: 95238

Partly because you used a conductor diameter about 16.5mm and Reg's
was 10mm. (Don't think I'd want to make a self-supporting element
that long and that thin, myself. Maybe 50mm at the base and tapering
to 25 or so?) That probably does not account for the whole
difference. Did you both use the same sort of "ground plane"? Height
above earth has only a slight effect.

Cheers,
Tom

"JLB" <IHateSpam@nospam.net> wrote in message
news:<sTqoc.118$Cv3.91@fe39.usenetserver.com>...
> Kraus (2nd edition, p. 375) gives a different answer.
>
> Interpolating from the diagram on p. 375 (assuming length/diameter = 472) it
> is about 90-j250.
>
> Why the difference?
>
> --
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net
> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> news:c7t7io$s8$1@sparta.btinternet.com...
> > For a 5/8-wave vertical above ground at 24 MHz, conductor diameter 10
> mm. -
> >
> > Base feedpoint resistance = 110 ohms
> > Base feedpoint reactance = -j386 ohms
> > Base loading coil inductance = 2.6 uH
> > Coil diameter = 25 mm
> > Coil length = 33 mm
> > Number of spaced turns = 13
> > Wire = 14 awg = 1.64 mm diameter.
> >
> > For other heights, frequencies and coil dimensions download in a few
> seconds
> > program BOTLOAD for immediate answers.
> > ----
> > ....
> > Regards from Reg, G4FGQ
> > For Free Radio Design Software go to
> > http://www.btinternet.com/~g4fgq.regp

> > .....
> >
> >

2140. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 21:05:35 UTC
From: jgboyles@aol.com
Message-ID: <20040512170535.12081.00001083@mb-m04.aol.com>
Source record: 95240

>The VERT1 vertical that comes with EZNEC is 1/4WL on 40m.
>It will be 5/8WL on 17m. (7.2 * 2.5 = 18) EZNEC sez the
>feedpoint impedance on 17m will be about 100-j470 ohms.

Hi Cecil, He was asking about 24MHZ which is 12 meters. EZNEC sez a 5/8 on 24MHZ is 63-j206, more or less. As others have pointed out a lot of factors will enter into the final installed impedance.
Another matching method, for 63-j206, is feed the antenna with a 1.2 meter length of 300 ohm twinlead- 1:1 balun- 50 ohm coax. The twinlead transformer gives 43-j0. Don't tell Reg, but I did that on the Smith Chart in 48.32 seconds:-).
73 Gary N4AST

2141. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 21:14:05 UTC
From: richardharrison@webtv.net
Message-ID: <21927-40A2939D-634@storefull-3257.bay.webtv.net>
Source record: 95242

Reg, G4FGQ wrote:
"Isn`t there an ant-acid preparation avbailable in this day and age?"

I read in "Spectrum" that J.C. Maxwell took bicarbonate of soda but died of stomach cancer, regardless.

Best regards, Richard Harrison, KB5WZI

2142. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 21:18:49 UTC
From: Dan Jacobson <jidanni@jidanni.org>
Message-ID: <87r7tpe43q.fsf@jidanni.org>
Source record: 95194
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

I got a good answer in mail:
>>>>> "J" == Jerry writes:

>> http://www.rdrop.com/users/billmc/phone_antenna is built around
>> a ".01uF capacitor", but what kind? Are big .01uF capacitors better
>> than small ones etc.?

J> It isn't the size but the voltage rating that matters. The point of the
J> capacitor is to protect the RF stage of your radio from the ringer signal of
J> the phone, which will be anywhere from 40 to 70 volts. Considering that
J> your radio may be sensitive to signals in the microvolt range, it isn't
J> surprising that 70 volts could be a radio killer. I'd use a cap of 200 volt
J> or more rating. There are a lot of different kinds of caps. A ceramic disk
J> would be appropriate and dirt cheap.

Sure wish there would be that warning on that regular posting to
rec.radio.info . Yes I emailed McFadden.

>> Is .01uF critical or is there actually a range that is acceptable?

J> The point is to have it big enough to pass all the RF signals your
J> interested in, but not signals lower in frequency than you want. 0.01uf is
J> a standard value, but double or half that would be OK.

>> Also the "RF connector" isn't clear. What are examples of this "radio
>> frequency connector"? Perhaps just coax to alligator clip?

J> Just connect one end of the capacitor to the phone line and the other to
J> your radio. If your radio has a telescoping antenna, just clip it to that.

>> Is the 50 ohm coax critical? How about a plain wire from the capacitor
>> to the radio's telescoping antenna? Should the telescoping antenna
>> still be extended, or retracted?

J> You're making this too complicated. Just connect the capacitor to the
J> antenna. Any wire will do. Considering that the phone wire may be miles
J> long, whether or not you extend the telescoping antenna is probably
J> irrelevant.

>> How do we know if our phone line antenna is working properly? Should
>> time signals on 5000, 10000 khz etc. jump out in perfect clarity?

J> HF signals are rarely perfectly clear, no matter what the antenna. You
J> ought to hear more than you do with the telescoping antenna alone.

>> Certainly there must be a slight advantage between one of red and
>> green vs. the other... or might we not even bother comparing, as they

>> are certain to be the same?

J> If you have 4-wire phone, one of them will be ground, and that one certainly
J> will NOT work. The others are probably equal as antennas. Just try them
J> all.

>> By the way, I found a .01uF capacitor that the capacitor numbers web pages
>> don't seem to decode: 103K PE50. I can't figure out what the PE50 or
>> PE5Q means.

J> Probably means 50 volts. Not enough. The first time the phone rings will
J> damange this capacitor. A 1000-volt 0.01uF cap is only a quarter or so a
J> Radio Shack.

Far from stores, I wonder if the necessary high voltage capacitor
could be found in my pile of broken radios. I suppose I would look
for meaty cylindrical types rather than pill shaped types. OK, will look.

2143. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 21:20:24 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <Zxwoc.23029$%o1.12729@lakeread03>
Source record: 95241
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Best way to do this is to use telephone quad (station)\
wire between the telco demarc and the rj-11telephone
block. Phone pair will be the White, White/Blue
or Red/Green pairs. You can then use any of the unused
wires in the cable as the antenna lead. Radio signals
will be common mode on the cables, and will capacitively
couple to the adjacent pairs. No need for a direct
capacitive coupling to the hot phone pair.

Pete

"Dan Jacobson" <jidanni@jidanni.org> wrote in message
news:87oeouyeeg.fsf@jidanni.org...
> http://www.rdrop.com/users/billmc/phone_antenna is built around
> a ".01uF capacitor", but what kind? Are big .01uF capacitors better
> than small ones etc.?
>
>

2144. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 21:49:36 UTC
From: richardharrison@webtv.net
Message-ID: <19425-40A29BF0-16@storefull-3256.bay.webtv.net>
Source record: 95243

Jerry Martes wrote:
"I`m considering building a slotted line for measuring impedance at 137 MHz."

The 2nd edition of the RSGB "VHF-UHF Manual" has a home-built "trough line" on page 10.26. Dimensions are given for 50 ohms and the line is expected to be usable down to 145 MHz at its length of 36 to 40 inches. It needs to be at least 1/2-wavelength.

Best regards, Richard Harrison, KB5WZI

2145. UHF Yagi Ant construction Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 22:36:17 UTC
From: Xanax <Xanax@xanaxcorp.fm>
Message-ID: <IFxoc.7579$qP2.15966@news.indigo.ie>
Source record: 95244

Hi all,
I have a uhf yagi uda antenna mounted on the roof I have all the element
(alu welding rods) clamped to a alu- boom except the active elements.
Does this effect the preformance of the antenna in that the reflector and
directors are all connected from an electric point of view?

Cheers,
Xanax.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.682 / Virus Database: 444 - Release Date: 11/05/2004

2146. 40m Endfed vertical QRP question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 22:38:29 UTC
From: Need Help Please <orillia@rogers.com>
Message-ID: <FHxoc.11302$3Mj1.5828@news01.bloor.is.net.cable.rogers.com>
Source record: 95245

A endfed vertical for 40m is around 67'. Could a coil be placed in the center of the endfed wire to shorten it to say 40'? This would make it easier for my portable QRP work but will it work? Any thoughts on a short ended 1/2 vertical?

73

2147. Re: UHF Yagi Ant construction Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 22:43:23 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <nZudnQm-qZvdND_dRVn-sw@ctc.net>
Source record: 95246

> I have a uhf yagi uda antenna mounted on the roof I have all the element
> (alu welding rods) clamped to a alu- boom except the active elements.
> Does this effect the preformance of the antenna in that the reflector and
> directors are all connected from an electric point of view?

Provided the lengths are corrected for the boom (connected or not connected)
there is no differance in the antenna. It might make some differance if the
connection is not 100% all the time as the elements could become loose and
not be connected . YOu can get all kinds of noise on signals if the
elements become loose. That is one plus for insulating the elements.
Unless welded to the boom many elements will loosen up some in time.

2148. HP 8405 probe repair

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 23:07:47 UTC
From: Gary Schafer <gaschafer@comcast.net>
Message-ID: <8gb5a01a5vje0dtqj48o981f20unparsac@4ax.com>
Source record: 95247

Can anyone tell me what type of diodes I should try as replacements in
the HP 8405 vector voltmeter probes?

Anyone have a schematic of the boards in the probes?
I think I have a broken capacitor in one as well as bad diodes.

Or, would anyone have replacement boards for the probes?

Thanks for any help.
Gary K4FMX

2149. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 23:17:31 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <Nfyoc.23180$%o1.12114@lakeread03>
Source record: 95248
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

> (Odd thing about this dish -- this one is a DishTV brand -- is that in
the
> original design for satellite reception, the driven element [the "can",
the
> input to the LMB] was located low on the dish. In other words, the focus
> used in this design was off-center, about 30 degrees below the center axis
of
> the dish. This would mean that aiming would be off-axis, too, yes? What is
> the reasoning behind this design?)
>

1. Prevents the LNB converter from shadowing a major portion of the
dishes surface with loss of gain.

2. Since the angle of the received signal is offset by the same number
of degrees as the feedhorn offset, this results in a more vertically
plumb dish surface that more readily sheds snow and ice buildup.

Pete K1ZJH

2150. Re: 40m Endfed vertical QRP question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 23:26:58 UTC
From: jgboyles@aol.com
Message-ID: <20040512192658.12081.00001092@mb-m04.aol.com>
Source record: 95249

>A endfed vertical for 40m is around 67'

No it is not. A 1/4 wave vertical for 40M is around 33'. If mounted at
ground level it requires an extensive ground radial system to get good results.
If you are talking a 1/2 wave vertical better to feed it in the center.
An inverted "L" with 33' vertical and 33' horizontal is around 67'. Still
requires a good ground.

>Could a coil be placed in the
>center of the endfed wire to shorten it to say 40'

Yes, but you need to remember the radial requirements, and if you start
sticking coils in the antenna, then the matching starts being a problem.
>This would make it
>easier for my portable QRP
For QRP and portable operation 40m-10m, a 50'-100' inverted vee fed with
300-450 ohm balanced line and a tuner. Get the apex up as high as possible.
You can not beat this for multi-band portable operation.
73 Gary N4AST

2151. Re: UHF Yagi Ant construction Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 23:38:15 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40a2b538$0$433$5cbedd26@news.real-time.com>
Source record: 95250

The answer would be probably, but you really need to give more
information such as

o frequency
o boom diameter and shape
o description of the clamp

Draw us a picture with words.

tom
K0TAR

Xanax wrote:

> Hi all,
> I have a uhf yagi uda antenna mounted on the roof I have all the element
> (alu welding rods) clamped to a alu- boom except the active elements.
> Does this effect the preformance of the antenna in that the reflector and
> directors are all connected from an electric point of view?
>
> Cheers,
> Xanax.
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.682 / Virus Database: 444 - Release Date: 11/05/2004
>
>

2152. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-12 23:50:46 UTC
From: dplatt@radagast.org
Message-ID: <10a5e2m7nb7eh3a@corp.supernews.com>
Source record: 95251
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

>Working with 2.4 GHz 802.11b wireless signal. Using USB adapter (one of those
>thumb-sized products) and an old 18-inch satellite TV dish.
>
>Calculating dish's focus point as f = (d^^2) / (16 * c)
> f = focus point above center of dish
> d = diameter of dish
> c = depth of dish at center
>
>With a circular, symmetrical parabolic dish, I presume that the focus is
>directly above the center. I've located the tiny antenna within the adapter
>as close to this point as i can.

>(Odd thing about this dish -- this one is a DishTV brand -- is that in the
>original design for satellite reception, the driven element [the "can", the
>input to the LMB] was located low on the dish. In other words, the focus
>used in this design was off-center, about 30 degrees below the center axis of
>the dish. This would mean that aiming would be off-axis, too, yes? What is
>the reasoning behind this design?)

Yes, these dishes are designed/intended for an off-center LNB. They
have a different radius of curvature in the horizontal and vertical
dimensions. You won't be able to place an LNB (or access-point
antenna) at an on-axis location and get a clean focus.

The reason for an off-center focus arrangement is that it keeps the
LNB or other driven element, and its support strut(s), out of the path
between the satellite and the dish. This reduces diffraction effects,
and results in a stronger signal and cleaner focus.

>I find 2 things:
>1. It doesn't really matter where I point the dish. The signal varies a
>little bit when I approach the direction of the access point, but no "leaps
>and bounds" in the signal strength between being "dead on" and way off.
>
>2. I pick up signals that aren't even in the direction of the access point.

I'd guess that this is due to a combination of three effects:

- You aren't getting a clean focus, because you're trying an on-axis
focal position for a dish which isn't circularly symmetrical. Try
re-attaching the LNB support arm which came with the dish, and
mount the access point on this arm so that its antenna is at the
location of the original LNB.

- The dish was designed for frequencies higher than 802.11b - it's a bit small (in terms of wavelengths) to get a really clean focus at 2.4 GHz. Some people have had better results using the larger dishes originally intended for use with the lower-frequency Primestar system.

- The access point's antenna is probably rather omnidirectional in at least one dimension - you're getting significant reception "off the back" of the antenna, via direct radiation which isn't being reflected from the dish.

Commercial parabolic-dish antennas for 802.11b use are usually circularly symmetrical, with an on-axis feed arrangement consisting of a dipole or (often) a two- or three-element Yagi arrangment aimed towards the dish.

I've gotten reasonably good results using a Dish Network dish and LNB support arm, with the LNB replaced by a homebrew biquad antenna and sheet-metal reflector.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

2153. Re: UHF Yagi Ant construction Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 00:30:07 UTC
From: Xanax <Xanax@xanaxcorp.fm>
Message-ID: <3kzoc.7601$qP2.15976@news.indigo.ie>
Source record: 95252

The boom is 3 side square aluminium tubing as used in construction of
Aluminium doors and windows etc..

The elements are attached to the boom but U bolts that are fasened very very
tightly. It's up for about 6 months now and I check it every month and there
isn't any loose ness at all.

Cheers,
Xanax.
"Tom Ring" <tarnews@taring.org> wrote in message
news:40a2b538$0$433$5cbedd26@news.real-time.com...
> The answer would be probably, but you really need to give more information
> such as
>
> o frequency
> o boom diameter and shape
> o description of the clamp
>
> Draw us a picture with words.
>
> tom
> K0TAR
>
> Xanax wrote:
>
>> Hi all,
>> I have a uhf yagi uda antenna mounted on the roof I have all the element
>> (alu welding rods) clamped to a alu- boom except the active elements.
>> Does this effect the preformance of the antenna in that the reflector
>> and directors are all connected from an electric point of view?
>>
>> Cheers,
>> Xanax.
>>
>>
>> ---
>> Outgoing mail is certified Virus Free.
>> Checked by AVG anti-virus system (http://www.grisoft.com).
>> Version: 6.0.682 / Virus Database: 444 - Release Date: 11/05/2004
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.682 / Virus Database: 444 - Release Date: 12/05/2004

2154. Re: UHF Yagi Ant construction Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 00:43:36 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40a2c489$0$436$5cbedd26@news.real-time.com>
Source record: 95253

Ok, fine. The frequency and size of the U channel are still needed.

Also, how are the U bolts fastening the bits together? I can think of
at least 2 ways to do it with what you've described. 1 - the U bolts
are pinning the element like a staple pins a wire, and 1 or 2 of them
could be used in that case. 2 - the elements are large enough diameter
and the U bolts small enough that the U bolts pass around the boom, and
through holes drilled in the elements. I suspect #2 is unlikely at UHF,
though.

Also what is the orientation of the channel to the elements?

tom
K0TAR

Xanax wrote:

> The boom is 3 side square aluminium tubing as used in construction of
> Aluminium doors and windows etc..
>
> The elements are attached to the boom but U bolts that are fasened very very
> tightly. It's up for about 6 months now and I check it every month and there
> isn't any loose ness at all.
>
> Cheers,
> Xanax.
> "Tom Ring" <tarnews@taring.org> wrote in message
> news:40a2b538$0$433$5cbedd26@news.real-time.com...
>
>>The answer would be probably, but you really need to give more information
>>such as
>>
>>o frequency
>>o boom diameter and shape
>>o description of the clamp
>>
>>Draw us a picture with words.
>>
>>tom
>>K0TAR
>>
>>Xanax wrote:
>>
>>
>>>Hi all,
>>>I have a uhf yagi uda antenna mounted on the roof I have all the element

>>>(alu welding rods) clamped to a alu- boom except the active elements.
>>>Does this effect the preformance of the antenna in that the reflector
>>>and directors are all connected from an electric point of view?
>>>
>>>Cheers,
>>>Xanax.
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>>>
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>
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> Version: 6.0.682 / Virus Database: 444 - Release Date: 12/05/2004
>
>

2155. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 00:45:23 UTC
From: Xanax <Xanax@xanaxcorp.fm>
Message-ID: <nyzoc.7603$qP2.16017@news.indigo.ie>
Source record: 95254
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

That is one of the most ingenious sites I have ever seen those guys in NZ
are quite creative!
Xanax.
"DaveC" <me@privacy.net> wrote in message
news:0001HW.BCC7FCA90000D237F03055B0@news.individual.net...
> Working with 2.4 GHz 802.11b wireless signal. Using USB adapter (one of
> those
> thumb-sized products) and an old 18-inch satellite TV dish.
>
> Calculating dish's focus point as f = (d^^2) / (16 * c)
> f = focus point above center of dish
> d = diameter of dish
> c = depth of dish at center
>
> With a circular, symmetrical parabolic dish, I presume that the focus is
> directly above the center. I've located the tiny antenna within the
> adapter
> as close to this point as i can.
>
> (Odd thing about this dish -- this one is a DishTV brand -- is that in
> the
> original design for satellite reception, the driven element [the "can",
> the
> input to the LMB] was located low on the dish. In other words, the focus
> used in this design was off-center, about 30 degrees below the center axis
> of
> the dish. This would mean that aiming would be off-axis, too, yes? What is
> the reasoning behind this design?)
>
> Setting up on the roof, finding the wireless access point's signal, I
> moved
> the wireless adapter around the focus point a little to maximize signal
> strength (I use the word "maximize" loosely...). I then aimed the dish
> around
> in the general direction of the access point, looking for a leap in signal
> strength (using a signal strength utility program to verify my aim).
>
> I find 2 things:
> 1. It doesn't really matter where I point the dish. The signal varies a
> little bit when I approach the direction of the access point, but no
> "leaps
> and bounds" in the signal strength between being "dead on" and way off.
>

> 2. I pick up signals that aren't even in the direction of the access
> point.
>
> I tried rotating the dish on its axis to account for polarity mismatch (
> would this really be an issue?). No joy.
>
> The wireless adapter can receive signals well, generally, w/o a dish, but
> because of my location, reception of the desired signal is not great.
>
> I'm aware that reflections can be strong from nearby objects, so that
> could
> account for some pickup of signals in directions other than from their
> origin. Also, I suspect that the shallowness of the dish is a contributor.
> But the lack of directionality of the dish, in general, has me stumped.
> Have
> I miscalculated the focus? I understand that the ratio of
> focus-to-diameter
> of the dish is important; for 2.4 GHz, is best in the 0.25-0.55 range
> (this
> one is 0.69). Is this contributing to my problem?
>
> I used this web page as a reference:
>
> http://www.usbwifi.orcon.net.nz
>
> Any help would be greatly appreciated.
>
> If this is off-topic for any NG here, please let me know what is a more
> appropriate forum. Are there mailing lists for such topics?
>
> Thanks,
> --
> DaveC
> me@privacy.net
> This is an invalid return address
> Please reply in the news group
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.682 / Virus Database: 444 - Release Date: 12/05/2004

2156. Re: HP 8405 probe repair

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 00:49:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qfh5a0t5sjt8pfifpd10l8893pq3b3cpa3@4ax.com>
Source record: 95256

On Wed, 12 May 2004 23:07:47 GMT, Gary Schafer <gaschafer@comcast.net>
wrote:

>Can anyone tell me what type of diodes I should try as replacements in
>the HP 8405 vector voltmeter probes?
>
>Anyone have a schematic of the boards in the probes?
>I think I have a broken capacitor in one as well as bad diodes.
>
>Or, would anyone have replacement boards for the probes?
>
>Thanks for any help.
>Gary K4FMX

Hi Gary,

Try:
http://www.sphere.bc.ca/test/

73's
Richard Clark, KB7QHC

2157. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 00:49:54 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <SCzoc.36401$xw3.2418212@attbi_s04>
Source record: 95255
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

DaveC wrote:

> Working with 2.4 GHz 802.11b wireless signal. Using USB adapter (one of those
> thumb-sized products) and an old 18-inch satellite TV dish.
>

In addition to the discussion[s] on focal point, the received signal gain from the 18 inch antenna is down approximately -14 dB from the 12 GHz nominal frequency for the satellite tv signals. There will be a further reduction from the off center feed [It's been 15 years since I ran the calculations and I'm too rusty at age 66 to do them now <grin>].

From old experience, I would expect somewhere around a 10 +/- ? degree beamwidth at 12 GHz and somewhere around 30 to 40 +/- ? degree beamwidth at 2.4 GHZ. So, a fairly broad pattern that you describe does not seem unreasonable. However, I invite a microwave engineer with more recent experience to comment and I'll freely accept a better analysis and conclusions.

2158. Re: 40m Endfed vertical QRP question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 00:54:44 UTC
From: mike <n0qfv@stic.net>
Message-ID: <40a2c750$0$15835$39cecf19@news.twtelecom.net>
Source record: 95257

Need Help Please wrote:
> A endfed vertical for 40m is around 67'. Could a coil be placed in the
> center of the endfed wire to shorten it to say 40'? This would make it
> easier for my portable QRP work but will it work? Any thoughts on a short
> ended 1/2 vertical?
>
> 73
>
>
You might want to check out the article in the May 2004 issue of QST on
ppg 28. It is for a shortened end fed 1/2 wave 80 meter antenna.

Mike

2159. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 01:23:08 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <r2j5a01djbc0dao3sn1ba6t1b2ld1gf5sb@4ax.com>
Source record: 95258
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

http://www.qsl.net/n1bwt/chap5.pdf

On Wed, 12 May 2004 16:09:13 -0700, DaveC <me@privacy.net> wrote:

|Working with 2.4 GHz 802.11b wireless signal. Using USB adapter (one of those
|thumb-sized products) and an old 18-inch satellite TV dish.
|
|Calculating dish's focus point as f = (d^^2) / (16 * c)
| f = focus point above center of dish
| d = diameter of dish
| c = depth of dish at center
|
|With a circular, symmetrical parabolic dish, I presume that the focus is
|directly above the center. I've located the tiny antenna within the adapter
|as close to this point as i can.
|
|(Odd thing about this dish -- this one is a DishTV brand -- is that in the
|original design for satellite reception, the driven element [the "can", the
|input to the LMB] was located low on the dish. In other words, the focus
|used in this design was off-center, about 30 degrees below the center axis of
|the dish. This would mean that aiming would be off-axis, too, yes? What is
|the reasoning behind this design?)
|
|Setting up on the roof, finding the wireless access point's signal, I moved
|the wireless adapter around the focus point a little to maximize signal
|strength (I use the word "maximize" loosely...). I then aimed the dish around
|in the general direction of the access point, looking for a leap in signal
|strength (using a signal strength utility program to verify my aim).
|
|I find 2 things:
|1. It doesn't really matter where I point the dish. The signal varies a
|little bit when I approach the direction of the access point, but no "leaps
|and bounds" in the signal strength between being "dead on" and way off.
|
|2. I pick up signals that aren't even in the direction of the access point.
|
|I tried rotating the dish on its axis to account for polarity mismatch (
|would this really be an issue?). No joy.
|
|The wireless adapter can receive signals well, generally, w/o a dish, but
|because of my location, reception of the desired signal is not great.
|
|I'm aware that reflections can be strong from nearby objects, so that could
|account for some pickup of signals in directions other than from their

|origin. Also, I suspect that the shallowness of the dish is a contributor.
|But the lack of directionality of the dish, in general, has me stumped. Have
|I miscalculated the focus? I understand that the ratio of focus-to-diameter
|of the dish is important; for 2.4 GHz, is best in the 0.25-0.55 range (this
|one is 0.69). Is this contributing to my problem?
|
|I used this web page as a reference:
|
|http://www.usbwifi.orcon.net.nz
|
|Any help would be greatly appreciated.
|
|If this is off-topic for any NG here, please let me know what is a more
|appropriate forum. Are there mailing lists for such topics?
|
|Thanks,

2160. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 01:43:52 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <dlk5a09jrvcmf54hi2u7re1om1l8qlrtja@4ax.com>
Source record: 95259
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

I should have added:

http://www.qsl.net/n1bwt/app-5a.pdf

2161. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 02:01:51 UTC
From: dold@ParabolicX.usenet.us.com
Message-ID: <c7ukuf$a2a$1@blue.rahul.net>
Source record: 95260
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

In alt.internet.wireless DaveC <me@privacy.net> wrote:
> Working with 2.4 GHz 802.11b wireless signal. Using USB adapter (one of those
> thumb-sized products) and an old 18-inch satellite TV dish.

> With a circular, symmetrical parabolic dish, I presume that the focus is
> directly above the center. I've located the tiny antenna within the adapter
> as close to this point as i can.

Oops. It's not circular or symmetric.
I've heard that it is a portion of a parabola, rather than a parabola in
itself, as if the oringal mounting point of the LNB were mounted in the
predicted focal point of a larger piece of metal that did form a parabola.

The proper focal point is wherever the antenna element was on the original
LNB. The frequency doesn't matter. That's still the focal point.
The next problem is knowing exactly where the antenna is in your USB
widget, so that you can put it in the same spot.

> (Odd thing about this dish -- this one is a DishTV brand -- is that in the
> original design for satellite reception, the driven element [the "can", the
> input to the LMB] was located low on the dish. In other words, the focus
> used in this design was off-center, about 30 degrees below the center axis of
> the dish. This would mean that aiming would be off-axis, too, yes? What is
> the reasoning behind this design?)

I think it's 22 degrees, but it is certainly "off". The old Primestar
dishes often looked like they were pointing at the ground, instead of into
the heavens.

> I tried rotating the dish on its axis to account for polarity mismatch (
> would this really be an issue?). No joy.

My DLink DWL-122 USB adapter improves noticeably when the orientation is
correct. I tried the face facing the WAP, horizontal and vertical, as
well as edge on, horizontal and vertical. I didn't try end-on.
For my setup the face on - horizontal was best.

> The wireless adapter can receive signals well, generally, w/o a dish, but
> because of my location, reception of the desired signal is not great.

I put my USB widget 1" in front of a 9" pie tin. The 9" pie tin isn't
really quite large enough. 1" was discovered empirically, and appears to
be good for about 6db, according to Netstumbler. It is also far more
stable with the pie tin, where without it the signal seems to wander.

> http://www.usbwifi.orcon.net.nz

His wok is a parabola. That doesn't count for you.

I was going to use a reflector like Trevor's BiQuad to feed the USB to a Dish-Dish, but my son cleaned out his garage and threw the dish away about a week before I asked for the dish ;-(.

I think the reflector behind the USB widget, painting a parabola, should be a good combination. And the right focal point for the odd-shaped Dish-dish is important.

http://www.trevormarshall.com/biquad.htm
http://martybugs.net/wireless/biquad/
http://63.142.46.238/buck/CantennaUSB.html

And my favorite site:
http://www.nodomainname.co.uk/cantenna/cantenna.htm
Where David uses a full sized USB adapter, pulling the antenna loose and sticking it through the side of a can.

I might put my mini-usb inside a can.

--

Clarence A Dold - Hidden Valley (Lake County) CA USA 38.8-122.5

2162. Re: sick chick got to see to beleave - Virus detected

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 02:12:51 UTC
From: Arthur Dent <guest@unknown.com>
Message-ID: <MPG.1b0c978f216632679897de@news-server.midsouth.rr.com>
Source record: 95261
Cross-posted to: alt.binaries.multimedia.bdsm,az.politics,uk.food+drink.misc,alt.binaries.warez.ibm-pc.french,rec.games.video.arcade.marketplace,uk.people.disability,rec.radio.amateur.antenna,microsoft.public.word.vba.general

In article <o4soc.90990$NR5.70840@fe1.texas.rr.com>,
afde.sti@afceyqsi.com says...
> sick chick got to see to beleave
>
>
>
>
>
> [application/octet-stream]
>
Contains the W32/Spybot.Worm.Gen.B virus.
--
Arthur Dent
Artificial Intelligence will never be a match for natural stupidity

2163. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 02:25:38 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <C0Boc.191602$L31.108791@nwrddc01.gnilink.net>
Source record: 95262

Thanks Richard. Thats just the kind of information I need. But, I dont supose I can get that information off the Internet, ?can I? I'd take a trip to the library to look at something like that. Maybe you can tell me more about where I can find the book or article.

Jerry

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:19425-40A29BF0-16@storefull-3256.bay.webtv.net...
> Jerry Martes wrote:
> "I`m considering building a slotted line for measuring impedance at 137
> MHz."
>
> The 2nd edition of the RSGB "VHF-UHF Manual" has a home-built "trough
> line" on page 10.26. Dimensions are given for 50 ohms and the line is
> expected to be usable down to 145 MHz at its length of 36 to 40 inches.
> It needs to be at least 1/2-wavelength.
>
> Best regards, Richard Harrison, KB5WZI
>

2164. Re: Tektronix oscilloscope

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 03:01:38 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <10a5p8h6mpcjfdf@corp.supernews.com>
Source record: 95263

Also, in the U.S., W7TYR, in Sherwood, Oregon, U.S.A. has lots of parts,
ect. for Tek scopes- was their purchaseing
manager for years- has (with others) a web site His E-mail address is :
dektyr@teleport.com
Might give him a try-- Jim NN7K

--
No trees were killed in the sending of this message. However, a large number
of electrons were terribly inconvenienced !

" People who never get carried away, should be! " --- Malcom Forbes

<4nec2@gmx.net> wrote in message
news:ee90361b.0405100133.793350e6@posting.google.com...
> Hello....,
>
> I know, it's very much off-topic, but as an antenna enthousiast I read
> this news group a lot, so I thought lets give it a try.
>
> Some time ago I managed to blow-up the input-1 channel of my tektronix
> 2230 analog/digital oscilloscope. According the Service-manual and
> compared to the input-2 channel, probably one or more of the following
> parts are damaged:
>
> Comp-Nr Tek-part-nr Name, description Manufact. Mfr-part-nr
>
> A2Q13 151-1124-00 Trans: JFE, N-chan Siliconix inc. J-2400
> A2Q15 151-0711-00 Trans: NPN, Si, TO-92b Tektronix 151-0711-00
> A2Q18 151-0711-00 Trans: NPN, Si, TO-92b Tektronix 151-0711-00
>
> A2U10 156-2469-00 Microckt,dgtl: op-amp Texas-Instr. TLC271ACP
>
>
> Overhere in Europe (except for the TLC271) it seems almost impossible
> to get these parts. I also tried to contact Tekronix , but without
> much results.
>
> Anybody with suggestions how to get one or more of these parts ?
>
> Because all components on the (multi-layer?) channel-1 input board are
> soldered very close together the nicest thing would be if somebody had
> a replacement channel-1 (or -2) input board (tektronix 2230 or 2235)
> for sale.....
>
> Or, should I post this message on any other newsgroup. If so, please

> let me know.
>
> Thanks in advance,
> Arie.

2165. Re: bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 03:19:27 UTC
From: Eric Oyen - N7ZZT <n7zzt@127.0.0.1>
Message-ID: <pan.2004.05.13.03.19.27.796367@127.0.0.1>
Source record: 95264

On Tue, 11 May 2004 13:27:49 +0200, Alexander Schewelew wrote:

> Hi,
>> [quoted text muted]
>
>
> InvV without cabel, wire 1/2''
> Freq SWR
> 23 10.2
> 26 1.1
> 29 6.5
>
This is 1/2" wire. a bit different than 1/2" OD copper pipe.
The figures I gained from the analyzer fall a bit wider than this.

> Bandwidth SWR<3:1 27.95 - 24.3=3.65 MHz
>
> With 104ft RG 8x
> Freq SWR Efficient of line
> 23 3.6 0.34
> 26 1.05 0.68
> 29 3.0 0.41
> Bandwidth SWR<3:1 29.6 - 23.78 = 5.22MHz _____________________________
that adds up more like what I am seeing here.
the other stuff was for 80 meters and doesn't have any real relivance
here.

thanks for the numbers though.

DE N7ZZT
Phoenix, Arizona

--
the difference between intelligence and stupidity is that intelligence
has its limits.

2166. Re: bandwidth of inverted-v antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 03:20:33 UTC
From: Eric Oyen - N7ZZT <n7zzt@127.0.0.1>
Message-ID: <pan.2004.05.13.03.20.33.103907@127.0.0.1>
Source record: 95265

On Tue, 11 May 2004 03:16:27 +0000, jim wrote:

> Eric Oyen - N7ZZT <n7zzt@127.0.0.1> wrote:
>> [quoted text muted]
>
>> [quoted text muted]
>
>> [quoted text muted]
>
>> [quoted text muted]
>
>> [quoted text muted]
>
> Unfortunately, no, unless you want to use command line nec code.
>
> But then again, if you're really a Unix man, you have a 64 bit Sparc
> machine into which you can pop a SUNPCI card for that occasional treasure
> (like eznec) that requires self debasement. Run windows in workspace four
> and switch back to workspace one if you hear someone approaching.
HAHAHAHA
yeah, I have one of those, but not the card.

I do love my SunOS!

DE N7ZZT
Phoenix, Arizona

--
the difference between intelligence and stupidity is that intelligence
has its limits.

2167. Re: 50 ohm - 5 foot long - Slotted line.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 03:21:29 UTC
From: richardharrison@webtv.net
Message-ID: <14451-40A2E9B9-3@storefull-3258.bay.webtv.net>
Source record: 95268

Jerry wrote:
"Maybe you can tell me more about where I can find the book or article."

I believe the ARRL and RSGB sell each others books. There is a good
chance of finding a copy in the U.S.A. of the RSGB "VHF-UHF Manual".

Best regards, Richard Harrison, KB5WZI

2168. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 03:34:02 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <10a5r59gio55h8d@corp.supernews.com>
Source record: 95267
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Actually, (gain wise), as, from memory, double the SIZE, (or conversely),
Double the Frequency, you gain 6 dB! lets see: these for 18 GHz, , lose 6
dB, for 9 GHz,
Another 6, to 4.5 GIG, and another 6 to 2.25 GIG ! total, 18 dB loss!
Now, as to the dish, IF the round one, what was stated about getting the
feed centered is true,
HOWEVER, if you have the ELEPTCIAL dish, these are made to view 2 SATELITES!
and, even
Directv is useing them!! Reason?? Has to do with "OTHER" services, like
internet connects, and
LOCAL TV feeds!! In esscence, the dish is aimed between 2 sattelites,
allowing it to "see both
sattelites at the same time. This allows aprox 2-3 HUNDERD more (local)
channels to be direct
broadcast to your home (ABCBSNBCPBS) !! These are NOT very effecient
antennas at 2.4 GHz,
but, if you place your 802.11 feed, where the original feedpoint was for 18
GHz, most likely will be
at the most effecient point. Also, buried in the RECIEVERS for satelite
Recievers, they have
aiming instructions for these dishs, by zip code, and you will note the
different pointing instructions
for them, both round and eliptical!! Hope this helps, Jim NN7K

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:SCzoc.36401$xw3.2418212@attbi_s04...
> DaveC wrote:
>
> > Working with 2.4 GHz 802.11b wireless signal. Using USB adapter (one of
those
> > thumb-sized products) and an old 18-inch satellite TV dish.
> >
>
> In addition to the discussion[s] on focal point, the received signal
> gain from the 18 inch antenna is down approximately -14 dB from the 12
> GHz nominal frequency for the satellite tv signals. There will be a
> further reduction from the off center feed [It's been 15 years since I
> ran the calculations and I'm too rusty at age 66 to do them now <grin>].
>
> From old experience, I would expect somewhere around a 10 +/- ? degree
> beamwidth at 12 GHz and somewhere around 30 to 40 +/- ? degree beamwidth
> at 2.4 GHZ. So, a fairly broad pattern that you describe does not seem
> unreasonable. However, I invite a microwave engineer with more recent

> experience to comment and I'll freely accept a better analysis and
> conclusions.
>

2169. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 03:59:52 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7urroeng1@sparta.btinternet.com>
Source record: 95171

> Z is close to +58-j138 ohms.
>
> A small inductor of 0.88 uH in series with the antenna should provide a
> pretty good match to 50 ohm coax.
>
==========

Problem solved!

I've checked the program's source code.

A perfect Earth is assumed.

For simplicity, program BOTLOAD neglects "end effect" which amounts to about 6 percent of height when antenna diameter is 50 mm.

Radiation resistance is obtained by a Simpson integration of radiation along the length of the antenna. Input reactance is obtained from an open circuit at the end of a transmission line with Zo calculated from antenna dimensions.

We have two Eznec determinations close together which average Zin = 60 - j172 ohms. I think Kraus can be ignored.

Using BOTLOAD, if antenna height is varied at exactly 24 MHz we can obtain Zin = 60 - j176 ohms. The change in height corresponds to the 6 percent end-effect.

The relatively large change in input impedance is due to the sensistivity vs length at a height of 5/8 wavelengths.

A slight further change in length will bring input resistance to exactly 50 ohms.

But as implied by its name, the principal purpose of BOTLOAD is to calculate either the number of turns on a coil or the value of a tuning capacitor, plus or minus 10 percent.

Some of my programs incorporate end-effect without it being explicitly stated. But its a tedious task to do so and is usually not worth the trouble. Radio is by far the most inexact of all the engineering disciplines. Where else can one be happy with an S-unit or two, more or less?

Reg, G4FGQ

2170. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 04:04:54 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40A2F3E6.14B4@wt.net>
Source record: 95172

JLB wrote:
Hence my question. Are we? I recall that a 5/8 wave vertical was
'close' to
50 ohms at the feed point and could be 'adjusted' with an inductance
across
the feed point (with the feedline at a tap perhaps?).

Tuned to an electrical 3/4 wave...Basically, just tuning out the
reactance..

That is the whole
point is using such a 'magic number' as 5/8 wavelength.

Huh? The point of the 5/8 radiator is pattern and gain related, not feed impedance, or matching.

If you look at the
impedance curves, though, you find that they are quite steep at this
point,
so a small error in length causes a large error in impedance, and some
tuning will be needed. The 5/8 wave is not a 'build it and go' antenna!

It's pretty close to it though. All you have to do is start off with a "best guess" coil and test. If it's resonant low in freq, take turns off. One at a time, if close. If it's high in freq, you need more turns. Not really any more complicated than trimming a dipole for resonance. After building a lot of those, I can guess the number of turns needed in my head and come pretty close. Reg's guess of 13 turns is pretty close if the form is 1-1.5 inch wide. Using my built in guessing machine, I would have quoted appx 15-16-17 turns off the top of my head , if the coil is made of #12 solid wire, and wound on a 7/8 inch pipe former, "I use a piece of 7/8 inch copper tube as the former" and then taken off the form. "On those type of coils, I make them self supporting. The #12 wire is stiff enough to hold it's shape. Just connect and clamp each end of the coil to hold it in place. MK

--
http://web.wt.net/~nm5k

2171. Re: 40m Endfed vertical QRP question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 04:09:14 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c7usd9$fa6$1@hercules.btinternet.com>
Source record: 95173

Down-load in a few seconds and run immediately program MIDLOAD for a
complete design including number of turns on the coil. Can be made easy to
feed with a link coupling. Unfortunately, one band only.

....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
....

"Need Help Please" <orillia@rogers.com> wrote in message
news:FHxoc.11302$3Mj1.5828@news01.bloor.is.net.cable.rogers.com...
> A endfed vertical for 40m is around 67'. Could a coil be placed in the
> center of the endfed wire to shorten it to say 40'? This would make it
> easier for my portable QRP work but will it work? Any thoughts on a short
> ended 1/2 vertical?
>
> 73
>
>

2172. Re: 40m Endfed vertical QRP question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 04:25:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a2f963_6@corp.newsgroups.com>
Source record: 95174

Need Help Please wrote:
> A endfed vertical for 40m is around 67'. Could a coil be placed in the
> center of the endfed wire to shorten it to say 40'? This would make it
> easier for my portable QRP work but will it work? Any thoughts on a short
> ended 1/2 vertical?

It will certainly work and if you put the coil in the exact center of
the 1/2WL, it will satisfy the folks who claim that the net current into
the coil is the same magnitude as the net current out of the coil. :-)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2173. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 05:02:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a3020f_7@corp.newsgroups.com>
Source record: 95175

JGBOYLES wrote:
> Hi Cecil, He was asking about 24MHZ which is 12 meters. EZNEC sez a 5/8 on
> 24MHZ is 63-j206, more or less.

I had forgotten I had changed VERT1 from tubing to #14 wire.
That was the problem with the higher impedance. With 3 inch
dia. vertical tubing the impedance on 18 MHz is 62-j190.
--
Sorry & 73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2174. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 05:21:04 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <4BDoc.36057$pJ1.26625@lakeread02>
Source record: 95176

"Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
news:40a2eb38_2@news1.prserv.net...
> "Jack Painter"
> <snip>
> > Btw I had a Power Quality engineer that I was discussing ground line
> > impedances with remind me that the same 1/4 wave phenomenon can happen
in
> > runs of ground and bonding too. The same radial or parallel or "web" of
> > connections alleviates that risk with lightning grounding as it does
with
> RF
> > grounding.
> >
> > Jack
>
> Jack:
>
> Alleviates? NO! Reduces somewhat, maybe, and that is one of the most
> difficult things to get across to people with little theoretical
knowledge.
> Even if it were the perfectly conducting sphere so loved in textbooks,
> impedance still exists, and the instantaneous voltage at point A will be
> different from point B. All you are doing is increasing the current
> carrying capability, so it is less likely to blow up due to a direct
strike.
> Instantaneous voltage difference with respect to a remote reference can
> still rise to a gazillion volts, no matter how much copper you put in
there,
> or how you configure it.

George, thanks for your reply. But in Webster's Dictionary:

Alliviate: To make less hard to bear; to reduce or decrease.

That's exactly why I used that word. And, after all the absolutely
invaluable help available from experts on this group, I still consulted a
Professional for the specifics of my site requirements. And common bonding
everything becomes more important than whatever impedance ground has between
any two points in the entire system. A properly bonded and grounded system
does not care what impedance or voltage is present on the system. Please
don't make me define properly.

;-) 73's

Jack.

2175. Re: UHF Yagi Ant construction Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 05:51:28 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405122151.19f0095e@posting.google.com>
Source record: 95177

"Xanax" <Xanax@xanaxcorp.fm> wrote in message
news:<lFxoc.7579$qP2.15966@news.indigo.ie>...
> Hi all,
> I have a uhf yagi uda antenna mounted on the roof I have all the element
> (alu welding rods) clamped to a alu- boom except the active elements.
> Does this effect the preformance of the antenna in that the reflector and
> directors are all connected from an electric point of view?
>
> Cheers,
> Xanax.
>
No. The driven element can be grounded to the boom also. Again, no change, except you add a matching device. The connection is at the high current/min voltage point. Being there is little voltage at the center of the 1/2 wave elements, the boom is pretty much ignored by the antenna. Also, it's at a 90 degree angle, which further reduces coupling to the elements. My cushcraft tri-band beam uses an insulated driven element, but most of the yagi's I build have all the elements grounded to the boom. My three el 6m yagi has all the elements welded to the boom, and the whole antenna, elements, boom, even the gamma match tube, are all hard copper tubing. It's a one piece antenna. Or a plumbers delight, as many call that method of construction... MK

2176. Re: Optimizing for Loop Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 06:33:14 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40A316AB.1C7C62C3@sonic.net>
Source record: 95178

Doc,

If a rig has automatic antenna tuning, even like the older Kenwood TS-850SAT, how does that usually work if you have a balanced feed line? Would you still use a balanced antenna tuner in addition, or would you override the auto tune in the radio, or would the radio be able to handle it?

PS, concerning murphy's law or somesuch, I have been waiting to put my coax from the 80m OCF, in some conduit through the field to my house. I even said to myself "watch out while you mow", but there is something hypnotic about the mower and me being slightly a geezer (Doh! as I slap myself on the head), sure enough, I mowed right over it, so now I have to run an extension cord out to the field so I can do some soldering, I assume they make a female to female bulkhead connection or something, I will check at the local electronics store tomorrow, of course those connectors will not fit inside the conduit I have...etc. Sometimes I think I have the short term memory of a gnat.

'Doc wrote:

> Bill,
> I'm not familiar with the 'Palstar', so can't say how
> 'suitable' it would be. There are a number of the 'older'
> (used/cheap) tuners that should work fine, though. I have
> an old Dentron 'MT-3000' that will match almost anything
> you can hook to it, for example. Something of that nature
> wouldn't be quite the inve$tment of a 'Palstar' (maybe?).
> You're right, there used to be many more of the 'bread-
> slicer' sized variable capacitors around than now. They
> were used for a lot of different applications where high
> voltages were present (as in matching 'odd' impedances).
> You also have other options, changing feed line lengths
> to the loop for various bands. Not exactly the easiest
> thing to do, but it certainly will work. Or, experimenting
> to find a 'magic' feed line length that is a good compromise
> for multiband use. Ask Cecil about that...
> 'Doc
>
> PS - If you happen to run across a dump truck load of those
> old 'bread slicers' I would gladly take them off your
> hands...(he said with $$$ dancing in his eyes).

2177. Re: 40m Endfed vertical QRP question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 06:36:59 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0405122236.111515e3@posting.google.com>
Source record: 95179

jgboyles@aol.com (JGBOYLES) wrote in message
news:<20040512192658.12081.00001092@mb-m04.aol.com>...
Hi,
> If you are talking a 1/2 wave vertical better to feed it in the center.
Why ? A 1/2 wave antenna exhibits very high impedance on its end, but
it can be matched to any feeder by a 1/4 wave shorted stub of twinlead
or coax. This stub may be placed horizontally near ground and the coax
one may be even coiled. The antenna would be a sort of shortwave
J-pole. Its big advantage against a 1/4 wave groundplane is the J-pole
has only modest requirements on RF grounding. Lightning and static
protection are still essential, of course, but it is easy - the
shorted end of the matching stub can be grounded directly.

> >Could a coil be placed in the
> >center of the endfed wire to shorten it to say 40'
> Yes, but you need to remember the radial requirements, and if you start
> sticking coils in the antenna, then the matching starts being a problem.
If you cut the coil into halves, you will see a low (about 5 ohms)
balanced impedance there. The better idea seems to be: two identical
whips as long as possible and a matching coil between them. Another
coil (maybe 1 - 2 turns only) wound around the matching coil is
connected to the feeder. Download MIDLOAD.EXE from Reg's superb
collection http://www.btinternet.com/~g4fgq.regp/page3.html#S301" and
play with it a bit. If the total electrical length is 1/2 wave, the
radial requirements should be modest. Remember the bottom end of the
antenna will be near ground - possibly within reach of uninformed
people - and under high RF voltage !

73 Ivan OK1SIP

2178. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 07:53:02 UTC
From: Toni <ea3fya@hotmail.com>
Message-ID: <bp96a0polh2d9qp07bpkq4qekstbfivr3e@4ax.com>
Source record: 95180

Hi Cecil

En Cecil Moore va escriure en Wed, 12 May 2004 09:44:10 -0500:

>40-50 years ago, we had to lower the transmitter Z usually with
>a built-in adjustable pi-net tuner.

Do you mean before the existence of electronic simulators, when people actually build electronic apparatus? :^) When I studied electronics I was in the last course where students would actually build things. From the next course on student's practices would be made only by computer simulations :^(

As to your comment, I know valves exist but I have never learned / been taught how to use them. :^(

73s

Toni - EA3FYA

2179. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 08:58:27 UTC
From: Marc Battyani <Marc.Battyani@fractalconcept.com>
Message-ID: <c7vd8v$hv8@library2.airnews.net>
Source record: 95181

"Toni" <ea3fya@hotmail.com> wrote
> En Richard Clark va escriure en Wed, 12 May 2004 00:32:35 GMT:
>
> >These designs also have the
> >benefit of low pass filters aiding a smooth transition of Z from the
> >device Z on the order of 0.5 to 1 Ohm to the System Z of 50 Ohms.

There is 0.5 Ohm when the transistor is on but not when is it off. So the
resulting impedance should probably be more than that. ??

> This is something I have always thought: When driving loops, very
> short monopoles (VLF) or other low-impedance antennas, why raise
> transmitter Z to 50 ohms, send it through the line and lower it
> again to whatever required? Couldn't the amplifier be built
> directly at the antenna base so _no_ transmission line is
> required and couple directly the low Z at the final transistor(s)
> to the low Z at the antenna?

This is what I have. The amplifier is directly connected to the loop.

Here is a scope screen copy of the output of the amplifier:
http://www.fractalconcept.com/scope-screen.jpg

The C2 trace is the drain voltage and the C3 one is the 50 Ohm resistor
voltage.

The schematics is very simple:
http://www.fractalconcept.com/schema.pdf

The first one is the one that works on the scope screen.
The second one is a one that does not work at all: the torus of the 680nH
melted :(

I have a little more success by just connecting the drain to the loop
through a capacitor but it's still not good (25% efficiency)

Any idea ?

Marc

2180. Re: UHF Yagi Ant construction Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 11:52:40 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40a3614c$0$439$5cbedd26@news.real-time.com>
Source record: 95182

Hmm. Based on your response, I bet I misunderstood the question. Been working on finding element corrections for 432 this week.

tom
K0TAR

Mark Keith wrote:

> "Xanax" <Xanax@xanaxcorp.fm> wrote in message news:<lFxoc.7579$qP2.15966@news.indigo.ie>...
>
>>Hi all,
>>I have a uhf yagi uda antenna mounted on the roof I have all the element
>>(alu welding rods) clamped to a alu- boom except the active elements.
>>Does this effect the preformance of the antenna in that the reflector and
>>directors are all connected from an electric point of view?
>>
>>Cheers,
>>Xanax.
>>
>
> No. The driven element can be grounded to the boom also. Again, no
> change, except you add a matching device. The connection is at the
> high current/min voltage point. Being there is little voltage at the
> center of the 1/2 wave elements, the boom is pretty much ignored by
> the antenna. Also, it's at a 90 degree angle, which further reduces
> coupling to the elements. My cushcraft tri-band beam uses an insulated
> driven element, but most of the yagi's I build have all the elements
> grounded to the boom. My three el 6m yagi has all the elements welded
> to the boom, and the whole antenna, elements, boom, even the gamma
> match tube, are all hard copper tubing. It's a one piece antenna. Or a
> plumbers delight, as many call that method of construction... MK

2181. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 12:09:44 UTC
From: fractenna@aol.com
Message-ID: <20040513080944.10326.00001423@mb-m03.aol.com>
Source record: 95183

>In addition to the discussion[s] on focal point, the received signal
>gain from the 18 inch antenna is down approximately -14 dB from the 12
>GHz nominal frequency for the satellite tv signals. There will be a
>further reduction from the off center feed [It's been 15 years since I
>ran the calculations and I'm too rusty at age 66 to do them now <grin>].
>
> From old experience, I would expect somewhere around a 10 +/- ? degree
>beamwidth at 12 GHz and somewhere around 30 to 40 +/- ? degree beamwidth
>at 2.4 GHZ. So, a fairly broad pattern that you describe does not seem
>unreasonable. However, I invite a microwave engineer with more recent
>experience to comment and I'll freely accept a better analysis and
>conclusions.
>
>

For a circular aperture--a good approximation-- the gain equation approximates to :

10 log (10 D(L)^2)

where D(L) is the diameter of the aperture in wavelengths.

If the dish is 0.45 meters, we get the following for the gains (assuming (naively) 100% aperture efficiency):

Freq gain
12 GHz 35 dB
2.45 GHz 21 dB

Thus Dave's accurate answer.

Going off-axis lowers the aperture efficiency anywhere from 1-3 dB from ideal, although it usually is only 1 dB or so down from the losses of vignetting from the (centered) feed. So you're probably seeing about 18+ or so dB of gain.

The FWHM of the beam is approximately

57/D(L)

degrees. So at 2.4 GHz this is about 16 degrees to the 3 dB points. Possibly broadened by the feed arrangement and dish curvature , but the 30-40 degrees sounds a little high Dave.

Not a microwave engineer; will a radio astronomer do:-)?

73,
Chip N1IR

2182. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 12:16:56 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <10a6ppm8l0g22ad@corp.supernews.com>
Source record: 95184
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

Oh, and one other consideration-- your 802.11 most likely , (for the want
of a better word)
is "Omnidirectional" which is a lousey way to illuminate a dish!! A dish is
much happier when it
is illuminated with a beamwidth of say 60 degrees (for the sake of
arguement), any other power
outside that beamwidth isn't even hitting the dish (wasted energy, further
decreaseing the gain)!
Translation: if even a horn ,or a small yagi, ect. would make a much more
effecient feed than a
point source (radiating in ALL directions) You are starting with little
gain, and overlapping (wasteing
power) that is 2 strikes against you for directional gain!! Jim NN7K

I Sent:
> Actually, (gain wise), as, from memory, double the SIZE, (or conversely),
> Double the Frequency, you gain 6 dB! lets see: these for 18 GHz, , lose 6
> dB, for 9 GHz,
> Another 6, to 4.5 GIG, and another 6 to 2.25 GIG ! total, 18 dB loss!
> Now, as to the dish, IF the round one, what was stated about getting the
> feed centered is true,
> HOWEVER, if you have the ELEPTCIAL dish, these are made to view 2
SATELITES!
> and, even
> Directv is useing them!! Reason?? Has to do with "OTHER" services, like
> internet connects, and
> LOCAL TV feeds!! In esscence, the dish is aimed between 2 sattelites,
> allowing it to "see both
> sattelites at the same time. This allows aprox 2-3 HUNDERD more (local)
> channels to be direct
> broadcast to your home (ABCBSNBCPBS) !! These are NOT very effecient
> antennas at 2.4 GHz,
> but, if you place your 802.11 feed, where the original feedpoint was for
18
> GHz, most likely will be
> at the most effecient point. Also, buried in the RECIEVERS for satelite
> Recievers, they have
> aiming instructions for these dishs, by zip code, and you will note the
> different pointing instructions
> for them, both round and eliptical!! Hope this helps, Jim NN7K

2183. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 13:28:24 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <YJKoc.480$6f5.70342@attbi_s54>
Source record: 95185

Fractenna wrote:

> Not a microwave engineer; will a radio astronomer do:-)?
>
> 73,
> Chip N1IR
>

Hi Chip! Sure a radio astronomer will do just fine. <grin>

Glad to hear from you!

2184. FS CHEAP!! tribander,monobanders,trap verticals,heavy duty rotor

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 15:51:31 UTC
From: Alfred Gosselin <a.gosselin@comcast.net>
Message-ID: <7QMoc.1001$Dz.112257@attbi_s52>
Source record: 95186
Cross-posted to: rec.radio.amateur.antenna,rec.radio.swap

Best offer over $100 and I am serious!!!

1 Hygain 5 el 10 meter monobander with BN-86 balun - "Long John"
1 Hygain 5 el 6 meter monobander
1 Swan 2 el tribander - TB2A
1 Swan 40-10 trap vertical - 4010V
1 Cushcraft 40-10 vertical
1 Cushcraft 10 el 2 meter monobander
1 Cushcraft 20 el (vert and horiz) 2 meter monobander
1 Alliance HD-73 heavy duty rotator and control box
Lots of coax and some masting

Now there has to be a catch??? You bet there is!! This deal has to be completed by May 23 and I will entertain offers through this weekend. Last offer must be in by 6PM EDT, Sunday (May 16), unless I get an offer that I can't refuse. Why such an offer? Well, I am moving and I am sure that my new neighbors would not appreciate all this aluminum. These antennas have provided me with years of faithful service and enjoyment but now it is time to move on to a new phase of my life. OLD AGE!! All of the antennas are down except the 5 el 10 and 6 meter antennas and I will expect you and a friend to remove them. Not a very difficult chore for 2 healthy individuals.My wife and I put them up years ago. Oh yes, where is this deal located?? About 15 miles due west of Hartford,CT. Anything else?? Yes, please don't ask me if you can have just 1 or 2. It's a package deal. You have to take them all.So, if you're looking for an antenna project this summer, look no further.
Feel free to contact me with other questions and thanks for looking,

Fred KA1KE

2185. 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 17:05:38 UTC
From: theplanters95@aol.comnospam
Message-ID: <20040513130538.07460.00001412@mb-m02.aol.com>
Source record: 95187

The article in the May 2004 issue of QST on ppg 28. It is for a shortened end fed 1/2 wave 80 meter antenna. How well does this antenna perform.

Will it be an effective multiband antenna for 80m - 10m? I have no way of modeling the antenna and am not sure how to model it. Can somebody model it and let me know how it works as a multiband? Will performance change if it is made into an inverted "L" with the vertical section about 10-20ft high and the horizontal section about 20' off the ground. I am interested in NVIS on 80/40 and dx on the higher bands.

Randy KA4NMA

2186. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 17:34:40 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405130934.1e2a19ec@posting.google.com>
Source record: 95188

Several posters have recommended a simple series coil for matching.
But of course, you'll never get lower than the resistive component of
the feedpoint impedance that way. At least one suggested a tapped
coil, and that can give you a good match and has the advantage of
DC-grounding the lightening ro...I mean radiating element.

Another alternative is a shunt coil to ground and a series capacitor
off to the feedline; that gives you the grounding and also lowers the
low-frequency coupling to the feedline. If Reg's suggested 110-j386
is correct for your case, you can get a match to 50 ohms at 24MHz with
a 1.1 microhenry shunt coil and 25pF series capacitor. The Q should
be around 5, not much higher than the antenna itself but can lead to
fairly high voltage across the cap. Don't leave it exposed to rain
:-) (That's an advantage of the tapped coil: less suseptable to
weather problems.)

But beware...the range of impedances I've seen posted suggests your
installation may be somewhat different.

Cheers,
Tom

Larry D <larry@may2004.com> wrote in message news:<JaqdnSLsOvcJmj_dRVn-uw@bright.net>...
> I want to construct a 5/8 wave ground plane for 24 MHz.
> I am OK with the dimensions, but I can't get a grip on what
> the impedance at the feedpoint will be. Even the ARRL
> antenna book hasn't been much help.
>
> Can anyone tell me the impedance I can expect to see,
> also any tips on matching it? Thanks!
>
> Larry DiGioia N8KU
> N8KU at longwire.com

2187. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 19:13:31 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <2gi1lcF318vjU1@uni-berlin.de>
Source record: 95190
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

18 inch is much too small a diameter @ 2.4 Ghz for gain or directionality.
24 inch is "almost" workable, but it is easier to use a corner or yagi.
You can use a omni type generic antenna, and chicken wire, or hardware cloth
as reflector on a corner antenna.

Check your equations or gain, diameter with wavelength/frequency on the
parabolic.
If you aren't getting 10 dB out of it, it is not worth it. (you can get an
easy 6 from a simple corner reflector)
Illumination from the feed is important, should be 10 dB down at the edges.
Most likely it is not being fed at the right angle either, related to your
F/D ratio.

Note: lots of lame parabolic on the 802.11b market, too. (like a parabolic
on terrestrial TV)

Antennas are Fun! This is the place to post your questions.
>>>>>>>>>>>>>>>>>>>>>>>>>>>>

"DaveC" <me@privacy.net> wrote in message
news:0001HW.BCC7FCA90000D237F03055B0@news.individual.net...
> Working with 2.4 GHz 802.11b wireless signal. Using USB adapter (one of
those
> thumb-sized products) and an old 18-inch satellite TV dish.
>
> Calculating dish's focus point as f = (d^^2) / (16 * c)
> f = focus point above center of dish
> d = diameter of dish
> c = depth of dish at center
>
> With a circular, symmetrical parabolic dish, I presume that the focus is
> directly above the center. I've located the tiny antenna within the
adapter
> as close to this point as i can.
>
> (Odd thing about this dish -- this one is a DishTV brand -- is that in
the
> original design for satellite reception, the driven element [the "can",
the
> input to the LMB] was located low on the dish. In other words, the focus
> used in this design was off-center, about 30 degrees below the center axis
of
> the dish. This would mean that aiming would be off-axis, too, yes? What is
> the reasoning behind this design?)

>
> Setting up on the roof, finding the wireless access point's signal, I
moved
> the wireless adapter around the focus point a little to maximize signal
> strength (I use the word "maximize" loosely...). I then aimed the dish
around
> in the general direction of the access point, looking for a leap in signal
> strength (using a signal strength utility program to verify my aim).
>
> I find 2 things:
> 1. It doesn't really matter where I point the dish. The signal varies a
> little bit when I approach the direction of the access point, but no
"leaps
> and bounds" in the signal strength between being "dead on" and way off.
>
> 2. I pick up signals that aren't even in the direction of the access
point.
>
> I tried rotating the dish on its axis to account for polarity mismatch (
> would this really be an issue?). No joy.
>
> The wireless adapter can receive signals well, generally, w/o a dish, but
> because of my location, reception of the desired signal is not great.
>
> I'm aware that reflections can be strong from nearby objects, so that
could
> account for some pickup of signals in directions other than from their
> origin. Also, I suspect that the shallowness of the dish is a contributor.
> But the lack of directionality of the dish, in general, has me stumped.
Have
> I miscalculated the focus? I understand that the ratio of
focus-to-diameter
> of the dish is important; for 2.4 GHz, is best in the 0.25-0.55 range
(this
> one is 0.69). Is this contributing to my problem?
>
> I used this web page as a reference:
>
> http://www.usbwifi.orcon.net.nz
>
> Any help would be greatly appreciated.
>
> If this is off-topic for any NG here, please let me know what is a more
> appropriate forum. Are there mailing lists for such topics?
>
> Thanks,
> --
> DaveC
> me@privacy.net
> This is an invalid return address

> Please reply in the news group
>

2188. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 19:42:16 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hbh7a0957mjgoipgu8jclnn9nb5sjnegnj@4ax.com>
Source record: 95189

On Thu, 13 May 2004 10:58:27 +0200, "Marc Battyani"
<Marc.Battyani@fractalconcept.com> wrote:
>This is what I have. The amplifier is directly connected to the loop.
>
>Here is a scope screen copy of the output of the amplifier:
>http://www.fractalconcept.com/scope-screen.jpg
>
>The C2 trace is the drain voltage and the C3 one is the 50 Ohm resistor
>voltage.
>
>The schematics is very simple:
>http://www.fractalconcept.com/schema.pdf
>
>The first one is the one that works on the scope screen.
>The second one is a one that does not work at all: the torus of the 680nH
>melted :(
>
>I have a little more success by just connecting the drain to the loop
>through a capacitor but it's still not good (25% efficiency)
>
>Any idea ?

Hi Marc,

There are a number of questions.

First, how do you compute efficiency?

Where on the schematic are these scope connections?

What is your design source for this schematic, or if original, what
drove you to select the reactive components you did? The series load
on the drain does not resonate at 8MHz and is not particularly matched
to either the FET or the 50 Ohm load.

What is the inductance of the loop? Alternatively, what size is it?
This last is more important because it subsumes the radiation
resistance that must be known to perform any efficiency computation.

The two circuits are very, very different from each other to be
achieving the same purpose. The 50 Ohm resistor, as an equivalent
load appears to be grossly in error.

By all appearances of the magenta trace, you are running Class B or a
very long Class C. This is not a hallmark of high efficiency.
However, not knowing where this trace resides in the circuit, this is
simply a guess.

73's
Richard Clark, KB7QHC

2189. Re: 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 20:44:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a3dedc$1_4@corp.newsgroups.com>
Source record: 95191

Theplanters95 wrote:
> The article in the May 2004 issue of QST on ppg 28. It is for a shortened end
> fed 1/2 wave 80 meter antenna. How well does this antenna perform.
> Will it be an effective multiband antenna for 80m - 10m?

Here is a rule of thumb that you can take to the bank. If an shortened
80m antenna has loading coils, it will not perform well on the higher
bands. Why? XL=2*pi*f*L - do the math. XL *increases* proportional
to frequency. For antenna efficiency, you NEVER want XL to be more
than you need. And there's something called self-resonance where
XL=self-XC, a terribly lossy condition where the coil current is
sky high.

This is one of tricks that Mother Nature plays on us hams. XL goes
the "wrong" way with frequency but (pardon my Russian) "tough shitsky",
that's the only way it goes.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2190. Re: 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 20:52:26 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40A3E00A.B8C28971@uci.edu>
Source record: 95192

Cecil Moore wrote:
>
> Theplanters95 wrote:
> > The article in the May 2004 issue of QST on ppg 28. It is for a shortened end
> > fed 1/2 wave 80 meter antenna. How well does this antenna perform.
> > Will it be an effective multiband antenna for 80m - 10m?
>
> Here is a rule of thumb that you can take to the bank. If an shortened
> 80m antenna has loading coils, it will not perform well on the higher
> bands. Why? XL=2*pi*f*L - do the math. XL *increases* proportional
> to frequency. For antenna efficiency, you NEVER want XL to be more
> than you need. And there's something called self-resonance where
> XL=self-XC, a terribly lossy condition where the coil current is
> sky high.

> This is one of tricks that Mother Nature plays on us hams. XL goes
> the "wrong" way with frequency but (pardon my Russian) "tough shitsky",
> that's the only way it goes.

Could a loading coil be used more like a trap?

73, ac6xg

2191. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 21:10:02 UTC
From: Ken Fowler <ko6no@yahoo.com>
Message-ID: <QfKdnfsFy-O3eT7dRVn-vg@comcast.com>
Source record: 95193

On 12-May-2004, "JLB" <IHateSpam@nospam.net> wrote:

> Hence my question. Are we? I recall that a 5/8 wave vertical was 'close' to
> 50 ohms at the feed point and could be 'adjusted' with an inductance across
> the feed point (with the feedline at a tap perhaps?). That is the whole
> point is using such a 'magic number' as 5/8 wavelength.

The resistive part of the Z of a 5/8 wave will closer to 50 ohms than it will be for a 1/2 wave, but
in most cases will be higher than 50. You may be thinking of a vertical close to 3/8 wave which
will be 50 -jx. The -jx (capacitance) can be resonated with a +jx in series for a 50 ohm feedpoint.

Ken Fowler

2192. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 21:43:44 UTC
From: Marc Battyani <Marc.Battyani@fractalconcept.com>
Message-ID: <c80q3q$kns@library2.airnews.net>
Source record: 95195

"Richard Clark" <kb7qhc@comcast.net> wrote
> On Thu, 13 May 2004 10:58:27 +0200, "Marc Battyani"
> <Marc.Battyani@fractalconcept.com> wrote:
> >This is what I have. The amplifier is directly connected to the loop.
> >
> >Here is a scope screen copy of the output of the amplifier:
> >http://www.fractalconcept.com/scope-screen.jpg
> >
> >The C2 trace is the drain voltage and the C3 one is the 50 Ohm resistor
> >voltage.
> >
> >The schematics is very simple:
> >http://www.fractalconcept.com/schema.pdf
> >
> >The first one is the one that works on the scope screen.
> >The second one is a one that does not work at all: the torus of the 680nH
> >melted :(
> >
> >I have a little more success by just connecting the drain to the loop
> >through a capacitor but it's still not good (25% efficiency)
> >
> >Any idea ?
>
> Hi Marc,
>
> There are a number of questions.
>
> First, how do you compute efficiency?

The power in the load divided by the power used by the amplifier.

> Where on the schematic are these scope connections?

?? The C2 trace is the transistor drain voltage and the C3 one is the 50 Ohm
resistor voltage (not the ground ;-).

> What is your design source for this schematic, or if original, what
> drove you to select the reactive components you did? The series load
> on the drain does not resonate at 8MHz and is not particularly matched
> to either the FET or the 50 Ohm load.

I looked at a lot of class E app notes and picked one.
I started with approx values and changed them incrementally to try to have a
better result.

> What is the inductance of the loop? Alternatively, what size is it?
> This last is more important because it subsumes the radiation
> resistance that must be known to perform any efficiency computation.

The loop is 65x25mm

> The two circuits are very, very different from each other to be
> achieving the same purpose. The 50 Ohm resistor, as an equivalent
> load appears to be grossly in error.

Yes. This is the problem. The first one was to test if I was able to make a working class-E amplifier. The second one is really bad. I have a third one where the loop is connected in place of the resistor which is somewhat better but still not good.

> By all appearances of the magenta trace, you are running Class B or a
> very long Class C. This is not a hallmark of high efficiency.
> However, not knowing where this trace resides in the circuit, this is
> simply a guess.

The C2 trace (the drain voltage) looks like the one expected for a class E IMO.

Marc

2193. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 22:47:01 UTC
From: jgboyles@aol.com
Message-ID: <20040513184701.19642.00000856@mb-m03.aol.com>
Source record: 95196

>You may be thinking of a vertical close to 3/8 wave which
>will be 50 -jx. The -jx (capacitance) can be resonated with a +jx in series
>for a 50 ohm feedpoint.

Ken, we may be talking about two different things, but a 3/8 wave vertical has inductive reactance, and the R component is no where near 50 ohms. A 2/8, or 1/4 wave vertical has no reactance, shorter has -jx, and longer, as in 3/8 wave has +jx.
A .26 lambda vertical has about 50+j43 impedance, and the +j43 can be cancelled with series 154pf at 24 MHZ. This is a common method of matching a 1/4 wave vertical to 50 ohms. Make it a little longer to look inductive, 50+jx, and cancel with a series cap.
According to all the theory I know on this stuff a 3/8 wave vertical will not be as you describe.

73 Gary N4AST

2194. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-13 23:54:42 UTC
From: Dan Jacobson <jidanni@jidanni.org>
Message-ID: <871xlnnarh.fsf@jidanni.org>
Source record: 95197
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

McFadden responds! Hope he can integrate some of this into that
periodic posting.

To: Dan Jacobson <jidanni@jidanni.org>
From: Bill McFadden <billmc@agora.rdrop.com>

>http://www.rdrop.com/users/billmc/phone_antenna is built around
>a ".01uF capacitor", but what kind? Are big .01uF capacitors better
>than small ones etc.?

It doesn't matter much, but a ceramic capacitor is probably going to be the
best (and cheapest). A voltage rating 250V or higher would be good since
the ringing voltage on a phone line is around 90 V RMS.

>Is .01uF critical or is there actually a range that is acceptable?

The value isn't critical. Anything within a factor of 3 (.0033uf to .033
uF) should be okay.

>Also the "RF connector" isn't clear. What are examples of this "radio
>frequency connector"?

The RF connector is whatever kind of plug fits the antenna input on your
receiver.

>Perhaps just coax to alligator clip?

That's how I made the first one. It was one clip lead from the phone line
to the capacitor, and another clip lead from the capacitor to the whip
antenna. Worked okay.

>Is the 50 ohm coax critical? How about a plain wire from the capacitor
>to the radio's telescoping antenna? Should the telescoping antenna
>still be extended, or retracted?

You only need coax if you're feeding the coax antenna input on the
receiver. You can use the whip antenna, which doesn't matter whether it's
up or down. If you get a lot of interference from nearby broadcast
stations, you'll need to use coax and one of the filters in the article.
50 ohm coax isn't critical. 75 ohm coax (TV coax) is often cheaper and
better shielded.

>How do we know if our phone line antenna is working properly? Should
>time signals on 5000, 10000 khz etc. jump out in perfect clarity?

You should get stronger signals than you would with the whip antenna alone.
If the signal level drops when you disconnect it, then it's working.

>Certainly there must be a slight advantage between one of red and
>green vs. the other... or might we not even bother comparing, as they
>are certain to be the same?

I didn't notice any difference, but it was easy to try both.

>By the way, I found a .01uF capacitor that the capacitor numbers web pages
>don't seem to decode: 103K PE50. I can't figure out what the PE50 or
>PE5Q means.

50 is probably the voltage rating (50V). PE may refer to the dielectric
material, but I don't recognize it.

>Lastly, the article has some spelling mistakes, e.g., lightening arrestors.

Fixed.

2195. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 00:17:05 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <fd28a0lvc0bk1jf9pra8r637cndv6o9q48@4ax.com>
Source record: 95198

On Thu, 13 May 2004 23:43:44 +0200, "Marc Battyani"
<Marc.Battyani@fractalconcept.com> wrote:
>> This last is more important because it subsumes the radiation
>> resistance that must be known to perform any efficiency computation.
>
>The loop is 65x25mm

Hi Marc,

Yes, this appears to be extremely problematic. The radiation
resistance of this loop is on the order of 30 nano Ohms. For you to
achieve a 50% efficiency in radiating the input power, no component in
the resonant loop must have an Ohmic resistance greater than this.

In other words, you don't stand a chance. What coupling that you are
getting is probably more capacitive or inductive than radiative.

The radiation resistance of a loop rises or falls by the 4th power of
its ratio to the wavelength of excitation. Double the radius and you
will multiply the radiation resistance 16 fold.n What this says, is
that the radiation resistance is overwhelmed by conductor loss (even
if only micro Ohms) that is turning your power into heat.
>
>> The two circuits are very, very different from each other to be
>> achieving the same purpose. The 50 Ohm resistor, as an equivalent
>> load appears to be grossly in error.
>
>Yes. This is the problem.

An understatement with the loop dimension given.

73's
Richard Clark, KB7QHC

2196. TVI/ W3EDP question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 00:42:10 UTC
From: Paul Logan <paul.logan4@btinternet.com>
Message-ID: <c814l1cjs1@sparta.btinternet.com>
Source record: 95199

Hi all,

ive been having a bit of a TVI problem with a neighbour whos receiving set up isnt up to scratch (Receives me great though and seems to transmit line timebase sound very nicely too)

Anyhow I tried an experiment using an end fed wire the W3EDP - 85 feet of wire tuned against a 17 feet counterpoise and said neighbours tv went nuts. I was feeding the wire into the shack and using a tuner at the window frame with the counterpoise dropped out the window from the second floor- dangling with no connection to anything. Now on taking away the counterpoise and adding a much longer counterpoise which runs underground the interference problem cleared up.

Can someone explain to me exactly what was going wrong- was the counterpoise radiating like mad with no path to ground?.

Also can someone suggest some simple antennas which work well against TVI?.

--
Paul Logan, MI3LDO,
Lisnaskea, N. Ireland.
Location: 54 - 15 N, 7 - 27 W in IO64GG

Low VHF & FM DX Page:
www.geocities.com/yogi540

2197. Re: TVI/ W3EDP question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 01:26:31 UTC
From: dplatt@radagast.org
Message-ID: <10a8827rjhmlnd2@corp.supernews.com>
Source record: 95200

>Hi all,
>
>ive been having a bit of a TVI problem with a neighbour whos receiving set
>up isnt up to scratch (Receives me great though and seems to transmit line
>timebase sound very nicely too)
>
>Anyhow I tried an experiment using an end fed wire the W3EDP - 85 feet of
>wire tuned against a 17 feet counterpoise and said neighbours tv went nuts.
>I was feeding the wire into the shack and using a tuner at the window frame
>with the counterpoise dropped out the window from the second floor- dangling
>with no connection to anything. Now on taking away the counterpoise and
>adding a much longer counterpoise which runs underground the interference
>problem cleared up.
>
>Can someone explain to me exactly what was going wrong- was the counterpoise
>radiating like mad with no path to ground?.

The neighbor's TV might have been picking up direct radiation from the
counterpoise (yes, the counterpoise is going to radiate - it's half of
the antenna!). It's possible that the counterpoise was dangling close
enough to some household metal (e.g. a gutter, or the chickenwire in a
stucco wall) to be coupling a lot of RF into the building structure.

It's also possible that with this counterpoise you had a significant
antenna imbalance - enough to be creating an "RF in the shack"
problem, with RF appearing on your rig's chassis and coupling into
your house wiring, and getting into the TV set via the power mains.

>Also can someone suggest some simple antennas which work well against TVI?.

In general, what you want to do is minimize the amount of RF which
gets into the receiving set via any path:

- via the antenna,
- via the power lines,
- via direct pickup to the chassis

This will reduce the problem of "fundamental overload", where the high
RF voltage levels from your transmitter force the RF circuitry in the
TV into nonlinear operation. TV sets _should_ be designed to deal
gracefully with strong RF signals outside of their operational
band(s), but they often are not.

One good way to minimize RF pickup by the TV is to simply increase the
distance between your own antenna, and the TV and its antenna and
power wiring. Also, use a balanced antenna (e.g. a dipole), with a

good balun at the antenna feedpoint - this will minimize the extent to which your feedline radiates RF.

I've seen a claim that the Cobbwebb antenna (a dipole bent into a near-circular shape, with the tips of the wires only a foot or so apart) tends to cause less TVI than some other antennas... allegedly because having the two high-voltage ends fairly close to one another causes the resulting RF voltage fields to cancel out fairly rapidly as one moves away from the antenna. I haven't experimented enough with this sort of antenna configuration to know if it's true.

Other things which can help include:

- Install a high-pass filter right at the TV's antenna terminals. This will block out the lower-frequency RF from your transmitter, and help minimize fundamental overload in the TV's tuner.

- Add a ferrite RF choke to the TV's power cord, as close to the TV chassis as possible. This will help minimize RF pickup via the power mains and the TV's power cord. If the TV has wires to hook it to external loudspeakers, or to other A/V components, clamp some ferrites onto these wires as well.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

2198. Re: Parabolic dish gives weak performance increase

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 01:54:02 UTC
From: dold@ParabolicX.usenet.us.com
Message-ID: <c818rq$gm0$1@blue.rahul.net>
Source record: 95201
Cross-posted to: alt.internet.wireless,rec.radio.amateur.antenna

In alt.internet.wireless DaveC <me@privacy.net> wrote:
> You're thinking of the 2-LNB model, which is oblong. This dish is a round,
> symetric parabolic. Equal curvature, horizontal and vertical.

The comments about the dish being a portion of a parabola appeared long
before the multi-LNB dish became available.

In any case, using the original LNB location as the focus would be a good
thing to try.

--

Clarence A Dold - Hidden Valley (Lake County) CA USA 38.8-122.5

2199. Re: HP 8405 probe repair

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 02:58:00 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <YAWoc.19286$V97.6923@newsread1.news.pas.earthlink.net>
Source record: 95202

"Gary Schafer" <gaschafer@comcast.net> wrote in message
news:8gb5a01a5vje0dtqj48o981f20unparsac@4ax.com...
> Can anyone tell me what type of diodes I should try as replacements in
> the HP 8405 vector voltmeter probes?

I took the probe apart and looked at the bands around the diodes, wrote them down, and have now lost the note. In about two days, I'll have a chance to look again and I can either email you or post my findings here. OTOH, maybe it would be better to move this to the science.electronics.equipment forum?

> Anyone have a schematic of the boards in the probes?
> I think I have a broken capacitor in one as well as bad diodes.

See a.b.s.e., subject HP 8405 Probe Schematic. I posted a portion of the schematic I have. Unfortunately, the diode types are not indicated. The B.O.M. I have shows HP in-house numbers, I guess, so I didn't learn anything from it.

The SMT transistor in the probe is a 2N3379. So far, I have found one bad transistor and a bad diode in one probe and two bad diodes in the other probe. As I recall, searches on Mouser and DigiKey suggested replacements were 1N270 silicon equivalents.

I probably don't have an ice cube's chance in hell of getting my 8405A fixed.

> Or, would anyone have replacement boards for the probes?

I think the probes are the weak link in this fine instruments heritage. The manual profusely warns about applying voltages in excess of 2VAC or 50VDC. I'd bet excess AC is responsible for blowing the FET while excess DC blows the input capacitor *then* the FET.

I'd wager you won't find any replacement boards. I hope I'm wrong. And, if you do, please let me know.

> Thanks for any help.
> Gary K4FMX

I'll also watch the s.e.e. forum for additional posts by you.

Good luck.

John

my email address is jocjo underscore john at yooha dot com. But spell it yahoo instead.

2200. Re: Optimizing for Loop Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 05:06:07 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A453BF.252C0923@cwis.net>
Source record: 95203

Bill,
The plain old '850 is a very nice radio. If I had
my 'druthers', any radio I bought would have an auto-tuner
built in. May not use it, but having the ability is always
nice, and you never know...
'Doc

2201. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 11:57:58 UTC
From: Marc Battyani <Marc.Battyani@fractalconcept.com>
Message-ID: <c82c5f$p4q@library2.airnews.net>
Source record: 95204

"Richard Clark" <kb7qhc@comcast.net> wrote
> On Thu, 13 May 2004 23:43:44 +0200, "Marc Battyani"
> <Marc.Battyani@fractalconcept.com> wrote:
> >> This last is more important because it subsumes the radiation
> >> resistance that must be known to perform any efficiency computation.
> > >
> > >The loop is 65x25mm
> >
> > Hi Marc,
> >
> > Yes, this appears to be extremely problematic. The radiation
> > resistance of this loop is on the order of 30 nano Ohms. For you to
> > achieve a 50% efficiency in radiating the input power, no component in
> > the resonant loop must have an Ohmic resistance greater than this.
> >
> > In other words, you don't stand a chance. What coupling that you are
> > getting is probably more capacitive or inductive than radiative.

Yes, this is exactly what I want to do : Inductive coupling.
Maybe you didn't see my first posts, what I want to do is transmit 3W of
power by induction over a 12mm distance.

> The radiation resistance of a loop rises or falls by the 4th power of
> its ratio to the wavelength of excitation. Double the radius and you
> will multiply the radiation resistance 16 fold.n What this says, is
> that the radiation resistance is overwhelmed by conductor loss (even
> if only micro Ohms) that is turning your power into heat.
> >
> > >> The two circuits are very, very different from each other to be
> > >> achieving the same purpose. The 50 Ohm resistor, as an equivalent
> > >> load appears to be grossly in error.
> > >
> > >Yes. This is the problem.
> >
> > An understatement with the loop dimension given.

Heh, this is why I'm posting here. :)

Marc

2202. ANTENNAS FOR SALE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 13:02:00 UTC
From: n2ion@aol.com
Message-ID: <20040514090200.19969.00001466@mb-m10.aol.com>
Source record: 95205

I AM DOWNSIZING MY EXISTING STATION, AND HAVE THE FOLLOWING ANTENNAS FOR SALE:

1-KLM(NEW) 17M 3 ELEMENT YAGI ON AN 18' BOOM
$275 OBO

2-CUSHCRAFT 215WB 15 ELEMENT 2M YAGIS ON 15' BOOMS
$175 OBO

2-KLM 432-30LBX 30 ELEMENT 432 MHZ YAGIS ON 17' BOOMS
$200 OBO

1-KLM 220-22LBX 22 ELEMENTS ON 220 MHZ
$200 OBO

PRICES DO NOT INCLUDE SHIPPING
ALL ACTUAL SHIPPING CHARGES WILL BE PAID BY THE BUYER(NO INFLATED SHIPPING CHARGES).

2203. Re: SteppIR 3 el Yagi vs. Force 12 XR5

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 13:03:30 UTC
From: "H. Adam Stevens" <mayaone@earthlink.net>
Message-ID: <Cs3pc.118$SZ4.93@newsread2.news.pas.earthlink.net>
Source record: 95206

"Rob" <noemail@pse.com> wrote in message
news:F4Wnc.9358$dr1.321814@news20.bellglobal.com...
> J. McLaughlin wrote:
> > Dear Rob (unknown call; unknown location; no E-mail address):
> > Your questions are unanswerable.
> > What constitutes the "best" antenna depends on many factors. You
> > have only provided the information that you are "up north" and that
> > you wish an antenna to survive Winter weather.
> > It is unlikely that someone has "tried" both of the antennas you
> > mention. If they had gone to that expense it would be to write a
> > paper/book or because one of the antennas died.
> > Winter survival depends on a number of factors (including luck).
> > What is a reasonable design to place at 40 feet in an old, wooded
> > subdivision is likely to be outrageous at 200 feet in open country.
> > The ARRL has sold a book on the mechanical design of beams. It
> > is a good reference to study. The mechanical standard for towers and
> > antennas is 222F. It too should be consulted.
> > It will be a few more years before the survival characteristics of
> > the Step products starts to have statistical significance. I have
> > heard from riggers that the F12 products do not do well in severe
> > wind/weather conditions. (You may well not have such severe
> > conditions.) A search using Google, or the like, will turn up
> > more information.
> > Be cautious of statements that contend that their antenna survived
> > last Winter's storm. The writer's location may have shielded the
> > antenna. I hope that this is of assistance.
> > Regards, Mac N8TT
> >
> > "Rob" <noemail@pse.com> wrote in message
> > news:FDzmc.57707$ZJ5.1729584@news20.bellglobal.com...
> >> I am thinking of putting up a yagi antenna. I am considering
> >> putting up either the SteppIR 3 el yagi or the Force 12 XR5.
> >>
> >> Does anyone have any opinions on which is the best antenna? Has
> >> anyone tried both?
> >>
> >> Rob
> >> P.S. I live up north where there is lots of snow and ice during the
> >> winter. Will the SteppIR antenna survive such weather?
>
> Thanks for the reply. Well the most important factor for me is survival.
I
> live inside a National Park up in Canada where lots of snow, ice, wind,
etc

> occur during the long winter months. The antenna will be located up in
the
> clear. There will be not much around to shield it from the winds.
>
> The SteppIR products looks interesting but they do not have much of a
track
> record. I used to use a Cushcraft R7000 but that only lasted 3 winters.
I
> am not that impressed with the strength of Cushcraft products.
>
> Rob
>
>

Hi Rob
My SteppIR antennas have survived winds that destroyed nearby trees FWIW.
I think the claimed wind survival ratings are realistic.
Ice does not change the antenna's electrical behavior;
The elements are inside a fiberglass tube.
The elements can be fully retracted.
If the fiberglass tube does fail it can be cheaply replaced.
I'm upgrading my 3 to a 4.
73
H.
NQ5H

2204. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 16:05:07 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405140805.53008e96@posting.google.com>
Source record: 95207

jgboyles@aol.com (JGBOYLES) wrote in message
> A .26 lambda vertical has about 50+j43 impedance, and the +j43 can be
> cancelled with series 154pf at 24 MHZ. This is a common method of matching a
> 1/4 wave vertical to 50 ohms. Make it a little longer to look inductive,
> 50+jx, and cancel with a series cap.
> According to all the theory I know on this stuff a 3/8 wave vertical will not
> be as you describe.

It shouldn't be too far off. The usual method of tuning a 3/8 vertical
is also by using a series cap to tune out the reactance. Quite common
on 160m, etc where people run the "extended" inv L's that are 185-190
or so ft long. I've used them here, and with a series cap, the SWR was
quite low. The 3/8 impedance is higher than a 1/4 wave, but not enough
to really hurt things, or to make a l/c matching device needed. MK

2205. Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 16:35:31 UTC
From: JOE <JOEhatesEMAIL@hotmail.com>
Message-ID: <f91e209916d9e5d09ac3bfbdd2eda24b@news.meganetnews.com>
Source record: 95209
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=41466&item=3096485287&rd=1

What a hoot! No, it's not my auction. But very fun to read this one.
Lots of
folks in the groups could use this - maybe you can even talk to the black
helicopters that hover in your back yard at night....

JOE

2206. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 16:45:16 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405140845.50771da@posting.google.com>
Source record: 95208

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40a23d95_6@corp.newsgroups.com>...
> Larry D wrote:
> > Can anyone tell me the impedance I can expect to see,
> > also any tips on matching it? Thanks!
>
> The VERT1 vertical that comes with EZNEC is 1/4WL on 40m.
> It will be 5/8WL on 17m. (7.2 * 2.5 = 18) EZNEC sez the
> feedpoint impedance on 17m will be about 100-j470 ohms.

This is what I ran when I had my 40m GP up. It worked both 17m and
40m.
My old elnec model of that antenna showed appx 48.4-j213 ohms on 17m.
But I had sloping radials. Maybe that made a difference. I used an
ungrounded series coil to tune for 17m, and the SWR was very low. I
had a 24v DPDT relay that I used to bypass the coil for 40m use.
Otherwise, it would be resonant about 6.9 mhz. I had the transformer
here in the shack, and when I changed bands, I would just plug, or
unplug the transformer from my power strip. MK

2207. Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 17:04:38 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86lljvx7mh.fsf@duchess.twilley.org>
Source record: 95210

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

So who actually has the space and resources to set up an ideal
horizontal dipole on HF with the full length and height as specified
in all the formulas? Wouldn't it be cheaper and easier to set up a
vertical if you could install something that high off the ground?

The only thing I've seen personally that looks like it meets the ideal
is a small station tucked into the northeast cloverleaf of an exit off
Interstate 93 near Boston, MA, and the station appeared to be a marker
for Logan. Anyone have any personal, real-life experience with a
full-size, full-height HF dipole? Is it worth the cost?

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFApPwtGPFSfAB/ezgRAnsaAKCknbXs5lF7jihTaR8Xv6ENgxViBwCgyjhH
TfOqae1e0YBHG3B9ldy4mhg=
=hAum
-----END PGP SIGNATURE-----
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2208. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 17:30:13 UTC
From: Ken Fowler <ko6no@yahoo.com>
Message-ID: <TJ6dnVNKhca4nzjdRVn-sQ@comcast.com>
Source record: 95211

On 13-May-2004, jgboyles@aol.com (JGBOYLES) wrote:

> >You may be thinking of a vertical close to 3/8 wave which
> >will be 50 -jx. The -jx (capacitance) can be resonated with a +jx in series
> >for a 50 ohm feedpoint.
>
> Ken, we may be talking about two different things, but a 3/8 wave vertical
> has inductive reactance, and the R component is no where near 50 ohms. A 2/8,
> or 1/4 wave vertical has no reactance, shorter has -jx, and longer, as in 3/8
> wave has +jx.
> A .26 lambda vertical has about 50+j43 impedance, and the +j43 can be
> cancelled with series 154pf at 24 MHZ. This is a common method of matching a
> 1/4 wave vertical to 50 ohms. Make it a little longer to look inductive,
> 50+jx, and cancel with a series cap.
> According to all the theory I know on this stuff a 3/8 wave vertical will not
> be as you describe.

Sorry. I mispoke on that. The 3/8 wave will indeed be inductive. However its resistance will be
closer to 50 ohms than it would be for a 1/4 wave. A 1/4 wave would have a resistance of 37 ohms.
I'm not sure about your 50 + j43 for a 0.26 wave. Is that from EZNEC? With what kind of ground?

I didn't take the time to model the 3/8 wave. Sorry.

Ken

2209. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 17:52:22 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <qH7pc.49341$iF6.4470920@attbi_s02>
Source record: 95212
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

This one dumped all of my bookmarks. Be careful if you go to the URL.

Deacon Dave, W1MCE

JOE wrote:
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=41466&item=3096485287&rd=1
>
>
> What a hoot! No, it's not my auction. But very fun to read this one.
> Lots of
> folks in the groups could use this - maybe you can even talk to the black
> helicopters that hover in your back yard at night....
>
> JOE
>
>

2210. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 18:25:30 UTC
From: Gordon <greyeagl@bellsouth.net>
Message-ID: <in3aa0l4gaja2g7r9idhhvt2nj2dbpls9o@4ax.com>
Source record: 95213

The really hilarious part is that he has THREE bids on the thing!!

Gordon

On Fri, 14 May 2004 16:35:31 GMT, "JOE" <JOEhatesEMAIL@hotmail.com>
wrote:

>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=41466&item=3096485287&rd=1
>
>
>What a hoot! No, it's not my auction. But very fun to read this one.
>Lots of
>folks in the groups could use this - maybe you can even talk to the black
>helicopters that hover in your back yard at night....
>
>JOE
>

2211. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 19:06:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <e35aa0970tjuodt6e56o94mrnhcf72ac6s@4ax.com>
Source record: 95214

On Fri, 14 May 2004 13:57:58 +0200, "Marc Battyani"
<Marc.Battyani@fractalconcept.com> wrote:

>> Yes, this appears to be extremely problematic. The radiation
>> resistance of this loop is on the order of 30 nano Ohms. For you to
>> achieve a 50% efficiency in radiating the input power, no component in
>> the resonant loop must have an Ohmic resistance greater than this.
>>
>> In other words, you don't stand a chance. What coupling that you are
>> getting is probably more capacitive or inductive than radiative.
>
>Yes, this is exactly what I want to do : Inductive coupling.
>Maybe you didn't see my first posts, what I want to do is transmit 3W of
>power by induction over a 12mm distance.

Hi Marc,

Then this returns us to the native Z of the source, the FET, and the
sink Z of the load AFTER the link. Your link shows a 1:1 coupling (as
best I can tell) and it follows that the load should be on the order
of half an Ohm. It also follows that the characteristic Z of the FET
load should also exhibit this value (it does not) as well as the
coupling circuitry to the link.

Move the primary loop back into the Drain lead to the positive rail
path, and connect the 2200pF cap (which may be too much) from the
Drain lead to ground path. The other circuitry is superfluous. The
characteristic Z of this load is roughly equal to the FET; and as the
FET on time is roughly 120ï¿½; and depending upon coupling, then you
might find 60 - 80% efficiency. It will require some tuning as the
Bandwidth will be 1 or 2 MHz around resonance. If you want some other
actual load resistance other than half an Ohm, then you need to boost
the transform ratio (it works by the square of the windings ratio).

Give this a try and report your findings.

73's
Richard Clark, KB7QHC

2212. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 19:14:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <e86aa0h4a9d4fg6nvd7gbe4s16i4rekqpv@4ax.com>
Source record: 95215

On 14 May 2004 09:45:16 -0700, nm5k@wt.net (Mark Keith) wrote:

>My old elnec model of that antenna showed appx 48.4-j213 ohms on 17m.
>But I had sloping radials. Maybe that made a difference.

Hi Mark,

Yes, the significant difference. I have always endeavored to build
5/8'ths with an offset dipole fashion either with sloping radials, or
elevated feedpoint on a metal mast that terminated in a ground field
(radials). As this is also the basic structure of the sleeve dipole
(grounded at the bottom), using coax with a ground tap to the shield
about quarterwave (a guesstimate) from the feed made it easy to
achieve.

73's
Richard Clark, KB7QHC

2213. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 19:22:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tm6aa09osqmnsgf1mtbc14tgim782slfd3@4ax.com>
Source record: 95216

On Fri, 14 May 2004 10:04:38 -0700, Jack Twilley
<jmt+usenet@twilley.org> wrote:
> Anyone have any personal, real-life experience with a
>full-size, full-height HF dipole? Is it worth the cost?

Hi Jack,

There is no such thing. Full size and Full height for a band that has a frequencies spanning 15:1 is a contradiction. One antenna must be either significantly fuller sized or fuller heighted at some frequency, or suffer at another frequency as lesser sized or lesser heighted for the same reason.

You want a 10M dipole antenna up half a wave for 160M? Is half a wave full height? Is a 10M dipole full sized?

Describe your needs first, and then ask what would be reasonable.

73's
Richard Clark, KB7QHC

2214. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 20:26:45 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86u0yi7o1m.fsf@duchess.twilley.org>
Source record: 95217

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-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Richard" == Richard Clark <kb7qhc@comcast.net> writes:

Jack> Anyone have any personal, real-life experience with a full-size,
Jack> full-height HF dipole? Is it worth the cost?

Richard> Hi Jack,

Richard> There is no such thing. Full size and Full height for a band
Richard> that has a frequencies spanning 15:1 is a contradiction. One
Richard> antenna must be either significantly fuller sized or fuller
Richard> heighted at some frequency, or suffer at another frequency as
Richard> lesser sized or lesser heighted for the same reason.

I regret that my message was insufficiently specific. I didn't say
"all-bands HF", and I assumed that the potential respondents would
know that I knew that no single dipole is ideal for more than one band
(well, more than one *frequency*, but one band is close enough).

Richard> You want a 10M dipole antenna up half a wave for 160M? Is
Richard> half a wave full height? Is a 10M dipole full sized?

I am interested in people who have first-hand experience with a
full-length dipole mounted at the full height for any particular
band. A 10M dipole is full-sized if it's the full length and mounted
at the full height. Ditto for 160M.

Richard> Describe your needs first, and then ask what would be
Richard> reasonable.

I hope the clarification above is enough -- if not, please let me
know.

Richard> 73's Richard Clark, KB7QHC

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFApSuMGPFSfAB/ezgRAiYvAJ0Z5rUplnVMvIs2ZpVP5Ska6Rv3JgCfXXZb
Y+8B1+VqlzeNkgXyQdwtBpQ=
=YpAB
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-----END PGP SIGNATURE-----
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2215. Re: HP 8405 probe repair

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 21:38:14 UTC
From: Gary Schafer <gaschafer@comcast.net>
Message-ID: <n1faa0h1ekbect6peg2ejofed7tk70mt58@4ax.com>
Source record: 95218

Hi John,

Thanks for the info. Also thanks to Richard for the link to sphere.
They told me that people that have replaced those diodes used 1N5711.
They are schottky diodes. Sphere wants $3.00 each for them and digi
key has them for 39 cents each.

I drug my probes out that I hadn't looked at in several years. I did
find my manual and it does have a schematic of the probes but gives no
part numbers for the diodes or the FET.

In looking at my probe boards one has diodes that have numbers 392
717. They are the input diodes. The other set at the FET input have
numbers 393 717. I don't know if they are original or replaced.

The other probe has diodes marked HP on them and color bands. The
input ones have yellow, green, gray. The ones at the FET input have
yellow, violet, blue. Don't know if original or replaced.

I see the input capacitor on one probe has been replaced and the 100k
resistor.

I checked the diodes with a meter and they all seem to have proper
forward drop (around .3 volts or so) and high reverse reading. Maybe
they are not bad? The problem may be the FET?

Haven't worked on the thing in years. Sure would like to get it going.

>See a.b.s.e., subject HP 8405 Probe Schematic.
What is a.b.s.e. ?

How did you check the FET to find out it was bad?

The sphere site has some HP house number cross references if you have
some HP numbers.

Wonder how you found the FET part number 2N3379 ?

I have run across several people with 8405,s with bad probes. Would be
nice to figure out how to get them going.

To email me direct make address garyschafer.

Thanks for your help
Gary K4FMX

On Fri, 14 May 2004 02:58:00 GMT, "The other John Smith"
<jocjo-john@yooha.com> wrote:

>
>"Gary Schafer" <gaschafer@comcast.net> wrote in message
>news:8gb5a01a5vje0dtqj48o981f20unparsac@4ax.com...
>> Can anyone tell me what type of diodes I should try as replacements in
>> the HP 8405 vector voltmeter probes?
>
>
>I took the probe apart and looked at the bands around the diodes, wrote them
>down, and have now lost the note. In about two days, I'll have a chance to
>look again and I can either email you or post my findings here. OTOH, maybe
>it would be better to move this to the science.electronics.equipment forum?
>
>
>> Anyone have a schematic of the boards in the probes?
>> I think I have a broken capacitor in one as well as bad diodes.
>
>
>See a.b.s.e., subject HP 8405 Probe Schematic. I posted a portion of the
>schematic I have. Unfortunately, the diode types are not indicated. The
>B.O.M. I have shows HP in-house numbers, I guess, so I didn't learn anything
>from it.
>
>The SMT transistor in the probe is a 2N3379. So far, I have found one bad
>transistor and a bad diode in one probe and two bad diodes in the other
>probe. As I recall, searches on Mouser and DigiKey suggested replacements
>were 1N270 silicon equivalents.
>
>I probably don't have an ice cube's chance in hell of getting my 8405A
>fixed.
>
>> Or, would anyone have replacement boards for the probes?
>
>
>I think the probes are the weak link in this fine instruments heritage. The
>manual profusely warns about applying voltages in excess of 2VAC or 50VDC.
>I'd bet excess AC is responsible for blowing the FET while excess DC blows
>the input capacitor *then* the FET.
>
>I'd wager you won't find any replacement boards. I hope I'm wrong. And, if
>you do, please let me know.
>
>
>> Thanks for any help.
>> Gary K4FMX
>
>I'll also watch the s.e.e. forum for additional posts by you.
>
>Good luck.
>
>John
>

>my email address is jocjo underscore john at yooha dot com. But spell it
>yahoo instead.
>

2216. Re: Phone line as SW antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 21:51:17 UTC
From: jder8745@aol.com
Message-ID: <20040514175117.13769.00000935@mb-m26.aol.com>
Source record: 95269

Years ago before they started burying all the phone drops and cabling the overhead wires, I connected my BC-348 to the phone withe a 0.005-uF disc ceramic capacitor. It gave me a VERY long wire, probabaly miles of long wire.

Worked quite well.

I haven't tried it since.

73 de Jack, K9CUN

2217. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 22:16:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <57gaa0ptf20sorj9e8t4ku15jb5rf5dua0@4ax.com>
Source record: 95270

On Fri, 14 May 2004 13:26:45 -0700, Jack Twilley
<jmt+usenet@twilley.org> wrote:

>I am interested in people who have first-hand experience with a
>full-length dipole mounted at the full height for any particular
>band. A 10M dipole is full-sized if it's the full length and mounted
>at the full height. Ditto for 160M.
>
>Richard> Describe your needs first, and then ask what would be
>Richard> reasonable.
>
>I hope the clarification above is enough -- if not, please let me
>know.

Hi Jack,

This is still inspecific. "Full height" is actually meaningless.
Let's look at a 40M dipole antenna and choose a modest 20ï¿½ launch
angle to compare against.
5M over real ground:
-2dBi
10M over real ground:
1.29dBi
15M over real ground:
3.75dBi
20M over real ground:
6.27dBi
25M over real ground:
8.08dBi
30M over real ground:
7.67dBi
35M over real ground:
7.1dBi
40M over real ground:
7.52dBi

Well, let's see - best gain is NOT at any cardinal point such as
quarter wave, half wave, three quarter, nor full wave above ground ANY
of which "could" be interpreted as "full height."

This exercise is easily within the limited feature set of the free
distribution of EZNEC.

73's
Richard Clark, KB7QHC

2218. Re: HP 8405 probe repair

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 22:22:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rehaa0lu9rfn0cakefm4nrb3u1ca8jel05@4ax.com>
Source record: 95271

On Fri, 14 May 2004 21:38:14 GMT, Gary Schafer <gaschafer@comcast.net>
wrote:

>I checked the diodes with a meter and they all seem to have proper
>forward drop (around .3 volts or so) and high reverse reading. Maybe
>they are not bad? The problem may be the FET?
>
>Haven't worked on the thing in years. Sure would like to get it going.

Hi Gary,

Science and technology has marched on nigh these 30 or 40 years after
production. Shop for good components and simply do it. Your greater
task will be proving it works correctly irrespective of pedigree of
the part number.

73's
Richard Clark, KB7QHC

2219. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 22:36:07 UTC
From: jgboyles@aol.com
Message-ID: <20040514183607.09334.00000514@mb-m01.aol.com>
Source record: 95272

>I'm not sure about your 50 + j43 for a 0.26 wave. Is that from EZNEC? With
>what kind of ground?

Yes it was EZNEC, ground type real/Mininec.
73 Gary N4AST

2220. Re:ANTENNAS FOR SALE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 22:46:45 UTC
From: John Lyder <johnlyder@NOSPAMverizon.net>
Message-ID: <p%bpc.39599$L8.15376@nwrdny02.gnilink.net>
Source record: 95273
Cross-posted to: rec.radio.amateur.antenna,rec.radio.swap

How nice, Im broke, got no money, my ***&# ex-wife even took my house dog.
I need a stuff to make me happy again, accepting donations for my favorite
charity
"Me"

NY State says I only keep 1% for the actual charity and have a partner
write up 99% of the rest of the loot for my administrative costs. Then we
cook the books again and spend what we sold on ourselves,

"It's far too easy for anybody to set up a charity, get tax-exempt status
with the IRS, do very little of anything charitable and get away with it.
**Is not what's illegal, but what's legal - and what people can get away
with in the name of charity**
They can get away with giving 1 percent to the cause," and pay themselves 99
percent for administrative costs
Charities get protection under the First Amendment, this has resulted in a
nationwide plague of newly established charities, doing little good but
considered legitimate.

ITS A HUGE EPIDEMIC IN NEW YORK, SCUM LIKE THIS MAKE's ME ILL

http://abcnews.go.com/sections/primetime/WorldNewsTonight/charities030717.html

>"Donnie" <look me up @ qrz.com> wrote in message
> YUP! Thats Him...

"John Lyder" wrote in message
> Isn't this the same guy who is always asking for equipment donations for
> some erroneous operation on Long Island ?

"N2ION" <n2ion@aol.com> wrote in message
news:20040514085905.19969.00001461@mb-m10.aol.com...
> I AM DOWNSIZING MY EXISTING STATION, AND HAVE THE FOLLOWING ANTENNAS FOR
SALE:
>
> 1-KLM(NEW) 17M 3 ELEMENT YAGI ON AN 18' BOOM
> $275 OBO
>
> 2-CUSHCRAFT 215WB 15 ELEMENT 2M YAGIS ON 15' BOOMS
> $175 OBO
>
> 2-KLM 432-30LBX 30 ELEMENT 432 MHZ YAGIS ON 17' BOOMS
> $200 OBO
>
> 1-KLM 220-22LBX 22 ELEMENTS ON 220 MHZ

> $200 OBO
>
> PRICES DO NOT INCLUDE SHIPPING
> ALL ACTUAL SHIPPING CHARGES WILL BE PAID BY THE BUYER(NO INFLATED SHIPPING
> CHARGES).
>

2221. Re: UHF Yagi Ant construction Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-14 23:39:49 UTC
From: Xanax <Xanax@xanaxcorp.fm>
Message-ID: <SMcpc.7796$qP2.16181@news.indigo.ie>
Source record: 95274

thats great on the info.
I'm pretty sure I have it right then.
cheeers
xanax
"Tom Ring" <tarnews@taring.org> wrote in message
news:40a3614c$0$439$5cbedd26@news.real-time.com...
> Hmm. Based on your response, I bet I misunderstood the question. Been
> working on finding element corrections for 432 this week.
>
> tom
> K0TAR
>
> Mark Keith wrote:
>
>> "Xanax" <Xanax@xanaxcorp.fm> wrote in message
>> news:<lFxoc.7579$qP2.15966@news.indigo.ie>...
>>
>>>Hi all,
>>>I have a uhf yagi uda antenna mounted on the roof I have all the element
>>>(alu welding rods) clamped to a alu- boom except the active elements.
>>>Does this effect the preformance of the antenna in that the reflector
>>>and directors are all connected from an electric point of view?
>>>
>>>Cheers,
>>>Xanax.
>>>
>>
>> No. The driven element can be grounded to the boom also. Again, no
>> change, except you add a matching device. The connection is at the
>> high current/min voltage point. Being there is little voltage at the
>> center of the 1/2 wave elements, the boom is pretty much ignored by
>> the antenna. Also, it's at a 90 degree angle, which further reduces
>> coupling to the elements. My cushcraft tri-band beam uses an insulated
>> driven element, but most of the yagi's I build have all the elements
>> grounded to the boom. My three el 6m yagi has all the elements welded
>> to the boom, and the whole antenna, elements, boom, even the gamma
>> match tube, are all hard copper tubing. It's a one piece antenna. Or a
>> plumbers delight, as many call that method of construction... MK
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.682 / Virus Database: 444 - Release Date: 11/05/2004

2222. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 00:41:23 UTC
From: Gray Shockley <gray-87a@cybercoffee.org>
Message-ID: <zsKdncNnPd2v-jjdRVn-tw@giganews.com>
Source record: 95275
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

On Fri, 14 May 2004 11:35:31 -0500, JOE wrote:

> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=41466&item=3096485287&
> rd=1
>
>
> What a hoot! No, it's not my auction. But very fun to read this one.
> Lots of folks in the groups could use this - maybe you can even talk
> to the black helicopters that hover in your back yard at night....
>
> JOE
>

Thank you for posting this; it's /wonderful/!

Now, if he wants, I can think of another feature that might
increase the auction price.

Offer a double-your-money-back guarantee.

If the purchaser can prove absolutely that no aliens have ever
heard the broadcasts, that'll double etc etc.

If the bids don't go any higher, that would be $2.50.

(But I'd /really/ like to see the conclusive proof!!)

Gray Shockley

DX-392 DX-398
RX-320 DX-399
CCradio+ w/RS Loop
Justice AM Antenna
Torus Tuner (3-13 MHz)
Select-A-Tenna

Vicksburg, MS US

2223. Re: UHF Yagi Ant construction Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 00:44:47 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40a567c5$0$436$5cbedd26@news.real-time.com>
Source record: 95276

Well, as long as the design matches your construction technique and boom. ;) If not, it may be far from working well.

VHF and up yagis have to be made just as specified in construction articles, including element diameter and taper, element mounting method, and boom diameter. If not, they can end up performing quite differently than what you would expect.

The higher the frequency, the more critical things become. At 432, for instance, we use a length tolerance of .5mm or better on element length. Cut to just a bit too long, and then carefully file to length. Then chamfer the tips.

We were picky, because we were making EME antennas for arrays, and very long boom test antennas for antenna range competitions.

And a hint on old VHF/UHF yagis - Scothbrite the elements after you test the antenna and test it again. We found it worth about .4dB on an antenna only 2 years old.

tom
K0TAR

Xanax wrote:

> thats great on the info.
> I'm pretty sure I have it right then.
> cheeers
> xanax
> "Tom Ring" <tarnews@taring.org> wrote in message
> news:40a3614c$0$439$5cbedd26@news.real-time.com...
>
>>Hmm. Based on your response, I bet I misunderstood the question. Been
>>working on finding element corrections for 432 this week.
>>
>>tom
>>K0TAR
>>
>>Mark Keith wrote:
>>
>>
>>>"Xanax" <Xanax@xanaxcorp.fm> wrote in message
>>>news:<lFxoc.7579$qP2.15966@news.indigo.ie>...
>>>
>>>
>>>>Hi all,

>>>>I have a uhf yagi uda antenna mounted on the roof I have all the element
>>>>(alu welding rods) clamped to a alu- boom except the active elements.
>>>>Does this effect the preformance of the antenna in that the reflector
>>>>and directors are all connected from an electric point of view?
>>>>
>>>>Cheers,
>>>>Xanax.
>>>>
>>>
>>>No. The driven element can be grounded to the boom also. Again, no
>>>change, except you add a matching device. The connection is at the
>>>high current/min voltage point. Being there is little voltage at the
>>>center of the 1/2 wave elements, the boom is pretty much ignored by
>>>the antenna. Also, it's at a 90 degree angle, which further reduces
>>>coupling to the elements. My cushcraft tri-band beam uses an insulated
>>>driven element, but most of the yagi's I build have all the elements
>>>grounded to the boom. My three el 6m yagi has all the elements welded
>>>to the boom, and the whole antenna, elements, boom, even the gamma
>>>match tube, are all hard copper tubing. It's a one piece antenna. Or a
>>>plumbers delight, as many call that method of construction... MK
>>
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.682 / Virus Database: 444 - Release Date: 11/05/2004
>
>

2224. Re: SteppIR 3 el Yagi vs. Force 12 XR5

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 00:49:40 UTC
From: Rob <noemail@pse.com>
Message-ID: <zLdpc.83145$FH5.1951187@news20.bellglobal.com>
Source record: 95278

H. Adam Stevens wrote:
> "Rob" <noemail@pse.com> wrote in message
> news:F4Wnc.9358$dr1.321814@news20.bellglobal.com...
>> J. McLaughlin wrote:
>>> Dear Rob (unknown call; unknown location; no E-mail address):
>>> Your questions are unanswerable.
>>> What constitutes the "best" antenna depends on many factors.
>>> You have only provided the information that you are "up north" and
>>> that you wish an antenna to survive Winter weather.
>>> It is unlikely that someone has "tried" both of the antennas you
>>> mention. If they had gone to that expense it would be to write a
>>> paper/book or because one of the antennas died.
>>> Winter survival depends on a number of factors (including luck).
>>> What is a reasonable design to place at 40 feet in an old, wooded
>>> subdivision is likely to be outrageous at 200 feet in open country.
>>> The ARRL has sold a book on the mechanical design of beams. It
>>> is a good reference to study. The mechanical standard for towers
>>> and antennas is 222F. It too should be consulted.
>>> It will be a few more years before the survival characteristics
>>> of the Step products starts to have statistical significance. I
>>> have heard from riggers that the F12 products do not do well in
>>> severe wind/weather conditions. (You may well not have such severe
>>> conditions.) A search using Google, or the like, will turn up
>>> more information.
>>> Be cautious of statements that contend that their antenna survived
>>> last Winter's storm. The writer's location may have shielded the
>>> antenna. I hope that this is of assistance.
>>> Regards, Mac N8TT
>>>
>>> "Rob" <noemail@pse.com> wrote in message
>>> news:FDzmc.57707$ZJ5.1729584@news20.bellglobal.com...
>>>> I am thinking of putting up a yagi antenna. I am considering
>>>> putting up either the SteppIR 3 el yagi or the Force 12 XR5.
>>>>
>>>> Does anyone have any opinions on which is the best antenna? Has
>>>> anyone tried both?
>>>>
>>>> Rob
>>>> P.S. I live up north where there is lots of snow and ice during
>>>> the winter. Will the SteppIR antenna survive such weather?
>>
>> Thanks for the reply. Well the most important factor for me is
>> survival. I live inside a National Park up in Canada where lots of
>> snow, ice, wind, etc occur during the long winter months. The

>> antenna will be located up in the clear. There will be not much
>> around to shield it from the winds.
>>
>> The SteppIR products looks interesting but they do not have much of
>> a track record. I used to use a Cushcraft R7000 but that only
>> lasted 3 winters. I am not that impressed with the strength of
>> Cushcraft products.
>>
>> Rob
>>
>>
>
> Hi Rob
> My SteppIR antennas have survived winds that destroyed nearby trees
> FWIW. I think the claimed wind survival ratings are realistic.
> Ice does not change the antenna's electrical behavior;
> The elements are inside a fiberglass tube.
> The elements can be fully retracted.
> If the fiberglass tube does fail it can be cheaply replaced.
> I'm upgrading my 3 to a 4.
> 73
> H.
> NQ5H

Thanks for the info. The SteppIR antenna is definitely one to consider.

Did you find it hard to construct?

73's
Rob

2225. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 00:57:11 UTC
From: Topaz305RK <2smoore@nemontel.net>
Message-ID: <WeqdnXCvW5kx9zjdRVn-jw@vnet-inc.com>
Source record: 95277
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Didn't bother mine, are you sure that is what did it?

PS The guys selling the antenna needs to have his doc check his meds - get real

2226. Re: HP 8405 probe repair

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 01:02:04 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <g_dpc.853$H_3.335@newsread1.news.pas.earthlink.net>
Source record: 95279

"Gary Schafer" <gaschafer@comcast.net> wrote in message
news:n1faa0h1ekbect6peg2ejofed7tk70mt58@4ax.com...
> Hi John,
>
> Thanks for the info. Also thanks to Richard for the link to sphere.
> They told me that people that have replaced those diodes used 1N5711.
> They are schottky diodes. Sphere wants $3.00 each for them and digi
> key has them for 39 cents each.
>
> I drug my probes out that I hadn't looked at in several years. I did
> find my manual and it does have a schematic of the probes but gives no
> part numbers for the diodes or the FET.
>
> In looking at my probe boards one has diodes that have numbers 392
> 717. They are the input diodes. The other set at the FET input have
> numbers 393 717. I don't know if they are original or replaced.
>
> The other probe has diodes marked HP on them and color bands. The
> input ones have yellow, green, gray. The ones at the FET input have
> yellow, violet, blue. Don't know if original or replaced.

The color bands you mention sound familiar to me. I think they may be
matched pairs.

> I see the input capacitor on one probe has been replaced and the 100k
> resistor.
>
> I checked the diodes with a meter and they all seem to have proper
> forward drop (around .3 volts or so) and high reverse reading. Maybe
> they are not bad? The problem may be the FET?

Yours May not be. I verified three of mine had reverse leakage.

> Haven't worked on the thing in years. Sure would like to get it going.
>
>
> >See a.b.s.e., subject HP 8405 Probe Schematic.
> What is a.b.s.e. ?

alt.binaries.schematics.electronic

> How did you check the FET to find out it was bad?

With a DVM. The schematic shows an N-channel junction FET. It should read
like a diode with the + lead on the gate and the - lead on the source. It
should show open with the leads reversed. It should show open with the +

lead on the drain and - lead on the source with the gate connected to source. Mine had reverse gate leakage.

> The sphere site has some HP house number cross references if you have
> some HP numbers.
>

They're not available to me right now.

> Wonder how you found the FET part number 2N3379 ?

The part number was stamped on the FET. I used a magnifying glass. Keep in mind that the FET may have been replaced by the previous owner.

> I have run across several people with 8405,s with bad probes. Would be
> nice to figure out how to get them going.

Yes, it would. You do know that the little probe boards unplug from the probe body, right? If you have a working probe on a working meter, you could try repairing the broken probe and try it on the working meter. I'm going to do that as soon as I can get the time.

> To email me direct make address garyschafer.
>
> Thanks for your help
> Gary K4FMX

And thank you for your help, too, Gary. Maybe together we can get something going eventually.

John KD5YI

2227. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 01:04:44 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <M0epc.50975$z06.7241959@attbi_s01>
Source record: 95280
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Topaz305RK wrote:

> Didn't bother mine, are you sure that is what did it?
>
> PS The guys selling the antenna needs to have his doc check his meds - get
> real
>
>

I don't know cause and effect. But my bookmarks blew up when I opted for "more movies" or what ever it was.

I ran PCPITSTOP.com and it says I'm clean. I then ran McAffee and it reported no worms or viruses. So, my bookmarks dissappeared and I'm not sure why!!

2228. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 02:03:12 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <2KudnQK5N63H5zjdRVn-vA@comcast.com>
Source record: 95281

"Jack Twilley" <jmt+usenet@twilley.org> wrote in message
news:86u0yi7o1m.fsf@duchess.twilley.org...
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> >>>>> "Richard" == Richard Clark <kb7qhc@comcast.net> writes:
>
> Jack> Anyone have any personal, real-life experience with a full-size,
> Jack> full-height HF dipole? Is it worth the cost?
>
> Richard> Hi Jack,
>
> Richard> There is no such thing. Full size and Full height for a band
> Richard> that has a frequencies spanning 15:1 is a contradiction. One
> Richard> antenna must be either significantly fuller sized or fuller
> Richard> heighted at some frequency, or suffer at another frequency as
> Richard> lesser sized or lesser heighted for the same reason.
>
> I regret that my message was insufficiently specific. I didn't say
> "all-bands HF", and I assumed that the potential respondents would
> know that I knew that no single dipole is ideal for more than one band
> (well, more than one *frequency*, but one band is close enough).
>
> Richard> You want a 10M dipole antenna up half a wave for 160M? Is
> Richard> half a wave full height? Is a 10M dipole full sized?
>
> I am interested in people who have first-hand experience with a
> full-length dipole mounted at the full height for any particular
> band. A 10M dipole is full-sized if it's the full length and mounted
> at the full height. Ditto for 160M.
>
> Richard> Describe your needs first, and then ask what would be
> Richard> reasonable.
>
> I hope the clarification above is enough -- if not, please let me
> know.
>
> Richard> 73's Richard Clark, KB7QHC
>
> Jack.

Jack,

Leaving out the question of "full height", I found that a 20m dipole at 55 feet was outperforming a Junior tribander at 40 feet for distances beyond 2000 miles. Broadside to the dipole, of course.

Tam/WB2TT

2229. Re: HP 8405 probe repair

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 02:29:37 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <lgfpc.302$oC6.252@newssvr23.news.prodigy.com>
Source record: 95282

Try this group on yahoo: hp_agilent_equipment@yahoogroups.com

Let me know if you find anything out as I have one with problems too.
tnx
Hank WD5JFR

"Gary Schafer" <gaschafer@comcast.net> wrote in message
news:8gb5a01a5vje0dtqj48o981f20unparsac@4ax.com...
> Can anyone tell me what type of diodes I should try as replacements in
> the HP 8405 vector voltmeter probes?
>
> Anyone have a schematic of the boards in the probes?
> I think I have a broken capacitor in one as well as bad diodes.
>
> Or, would anyone have replacement boards for the probes?
>
> Thanks for any help.
> Gary K4FMX

2230. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 02:32:24 UTC
From: William Warren <william_warren_nonoise@comcast.net>
Message-ID: <Yifpc.13554$6f5.1133223@attbi_s54>
Source record: 95283
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

"Topaz305RK" <2smoore@nemontel.net> wrote in message
news:WeqdnXCvW5kx9zjdRVn-jw@vnet-inc.com...
[snip]
>
> PS The guys selling the antenna needs to have his doc check his meds - get
> real

It looks to me like his meds are fine: after all, he is allowed to use a
razor.

That coil at the antenna base, though - _THAT_ is making me wonder ...

Bill

2231. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 03:35:38 UTC
From: "paulfriedman@comcast.net" <p.paulfriedman@comcast.net>
Message-ID: <eegpc.51551$z06.7339802@attbi_s01>
Source record: 95284
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

"William Warren" <william_warren_nonoise@comcast.net> wrote in message
news:Yifpc.13554$6f5.1133223@attbi_s54...
> "Topaz305RK" <2smoore@nemontel.net> wrote in message
> news:WeqdnXCvW5kx9zjdRVn-jw@vnet-inc.com...
> [snip]
> >
> > PS The guys selling the antenna needs to have his doc check his
meds - get
> > real
>
> It looks to me like his meds are fine: after all, he is allowed to
use a
> razor.
>
> That coil at the antenna base, though - _THAT_ is making me wonder
...
>
> Bill
>
>

That "coil" is an instantaneous translation device. jeeez, I thought
THAT was obvious.

Paul

2232. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 04:09:46 UTC
From: Gray Shockley <gray-87a@cybercoffee.org>
Message-ID: <WvKdnQcWc-uWBTjdRVn-uw@giganews.com>
Source record: 95285
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

On Fri, 14 May 2004 22:35:38 -0500, paulfriedman@comcast.net
wrote
(in article <eegpc.51551$z06.7339802@attbi_s01>):

> "William Warren" <william_warren_nonoise@comcast.net> wrote in message
> news:Yifpc.13554$6f5.1133223@attbi_s54...
>> "Topaz305RK" <2smoore@nemontel.net> wrote in message
>> news:WeqdnXCvW5kx9zjdRVn-jw@vnet-inc.com...
>> [snip]
>>>
>>> PS The guys selling the antenna needs to have his doc check his
> meds - get
>>> real
>>
>> It looks to me like his meds are fine: after all, he is allowed to
> use a
>> razor.
>>
>> That coil at the antenna base, though - _THAT_ is making me wonder
> ...
>>
>> Bill
>>
>>
>
> That "coil" is an instantaneous translation device. jeeez, I thought
> THAT was obvious.
>
> Paul
>
>

Did you notice that he also had some audio (30 minutes?) of
aliens?

I'm /almost/ tempted but with the way it's been so far this
Spring, it'd prolly sound like my neighbors <sigh>.

++ Gray //

2233. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 04:43:03 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86hdui712g.fsf@duchess.twilley.org>
Source record: 95286

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Richard" == Richard Clark <kb7qhc@comcast.net> writes:

Jack> I am interested in people who have first-hand experience with a
Jack> full-length dipole mounted at the full height for any particular
Jack> band. A 10M dipole is full-sized if it's the full length and
Jack> mounted at the full height. Ditto for 160M.

Richard> Describe your needs first, and then ask what would be
Richard> reasonable.

Jack> I hope the clarification above is enough -- if not, please let
Jack> me know.

Richard> Hi Jack,

Richard> This is still inspecific. "Full height" is actually
Richard> meaningless. Let's look at a 40M dipole antenna and choose a
Richard> modest 20° launch angle to compare against. 5M over real
Richard> ground: -2dBi 10M over real ground: 1.29dBi 15M over real
Richard> ground: 3.75dBi 20M over real ground: 6.27dBi 25M over real
Richard> ground: 8.08dBi 30M over real ground: 7.67dBi 35M over real
Richard> ground: 7.1dBi 40M over real ground: 7.52dBi

Where did the twenty-degree launch angle come from?

Richard> Well, let's see - best gain is NOT at any cardinal point such
Richard> as quarter wave, half wave, three quarter, nor full wave
Richard> above ground ANY of which "could" be interpreted as "full
Richard> height."

I'm not familiar with twenty-degrees as any particular canonical
value. As for what I meant by "full height", one-quarter wavelength
minimum should serve.

Richard> This exercise is easily within the limited feature set of the
Richard> free distribution of EZNEC.

I do not doubt that your calculations are within the capabilities of
EZNEC. However, I'm more interested in real-life experience, not
computer-generated simulations.

Richard> 73's Richard Clark, KB7QHC

Jack.
- --

Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFApZ/cGPFSfAB/ezgRAparAKDulUdO0dGqcrNrCxjkuBZPl203vQCgosND
+PUWZk0Lx5NTUyy7Av1quhY=
=ksOs
-----END PGP SIGNATURE-----

2234. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 04:59:13 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86d65670bi.fsf@duchess.twilley.org>
Source record: 95287

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Tarmo" == Tarmo Tammaru <t-tammaru@c0mca> writes:

[...]

Tarmo> Leaving out the question of "full height", I found that a 20m
Tarmo> dipole at 55 feet was outperforming a Junior tribander at 40
Tarmo> feet for distances beyond 2000 miles. Broadside to the dipole,
Tarmo> of course.

This is the kind of experience I had hoped to hear. Thank you.

Tarmo> Tam/WB2TT

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFApaOpGPFSfAB/ezgRAh+DAJ9x8hdoBNgkjtJP4QvnwzbToGd80gCgtPoU
1EcHdxvMWOpRzaWu2A3Dr8U=
=sCdx
-----END PGP SIGNATURE-----
```

2235. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 05:08:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <em8ba05bin0c8m9t4qh4vlqmlsssp8veu9@4ax.com>
Source record: 95288

On Fri, 14 May 2004 21:43:03 -0700, Jack Twilley
<jmt+usenet@twilley.org> wrote:

>
>I'm not familiar with twenty-degrees as any particular canonical
>value. As for what I meant by "full height", one-quarter wavelength
>minimum should serve.
>
>Richard> This exercise is easily within the limited feature set of the
>Richard> free distribution of EZNEC.
>
>I do not doubt that your calculations are within the capabilities of
>EZNEC. However, I'm more interested in real-life experience, not
>computer-generated simulations.

Hi Jack,

20ï¿½ serves as well as any and at least offers a basis of comparison.
This again turns to the matter of the inspecific. You cite no
particular application (DX v. NVIS) no particular band (that is
heavily swayed by ground given ground characteristics vary over
frequency) and offer a quarter wave height as "full height" which by
most standards is generally accepted as mediocre at best where half
wave height (twice full height?) offers better performance (which is
borne out in testimonial) and where higher sometimes offers worse
performance (also borne out in testimonial). Such issues are easily
isolated and compared through modeling and are consistent with
experience.

73's
Richard Clark, KB7QHC

2236. Re: HP 8405 probe repair

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 08:59:27 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <PZkpc.1149$H_3.324@newsread1.news.pas.earthlink.net>
Source record: 95289

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:lgfpc.302$oC6.252@newssvr23.news.prodigy.com...
> Try this group on yahoo: hp_agilent_equipment@yahoogroups.com
>
> Let me know if you find anything out as I have one with problems too.
> tnx
> Hank WD5JFR

Excellent lead, Hank. Thanks for your help.

John

> "Gary Schafer" <gaschafer@comcast.net> wrote in message
> news:8gb5a01a5vje0dtqj48o981f20unparsac@4ax.com...
> > Can anyone tell me what type of diodes I should try as replacements in
> > the HP 8405 vector voltmeter probes?
> >
> > Anyone have a schematic of the boards in the probes?
> > I think I have a broken capacitor in one as well as bad diodes.
> >
> > Or, would anyone have replacement boards for the probes?
> >
> > Thanks for any help.
> > Gary K4FMX
>
>

2237. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 10:25:30 UTC
From: rhf-say-bye-bye@pacbell.net
Message-ID: <ee137ed4.0405150225.7309d912@posting.google.com>
Source record: 95290
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

= = = "JOE" <JOEhatesEMAIL@hotmail.com> wrote in message
= = = news:<f91e209916d9e5d09ac3bfbdd2eda24b@news.meganetnews.com>...
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=41466&item=3096485287&rd=1
>
>
> What a hoot! No, it's not my auction. But very fun to read this one.
> Lots of
> folks in the groups could use this - maybe you can even talk to the black
> helicopters that hover in your back yard at night....
>
> JOE

JOE,

Thank You this was really worth the Look-See :o)

Check-Out the VIDEO - This guy is really "Phil-La-Del-FX"
"View a short video presentation to learn
how to use this device properly"
VIDEO=> http://www.mynameisphil.com/media/part6_high.wmv

Just for the Fun of It ~ RHF

.

2238. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 11:49:04 UTC
From: Ron <rc@roncrowley.dot.com>
Message-ID: <ottba0h0fopc256lsdlpdfp5hi28jbeqsn@4ax.com>
Source record: 95291

On Fri, 14 May 2004 20:44:40 -0400, Dave Holford
<mylastname@.deletethis.sympatico.ca> wrote:

>Interesting question. I have seen the dipoles used for HF communications
>with transatlantic air traffic from Gander, or at least one site which
>IIRC was the receiver site. Since this, and similar installations around
>the world, need reliable communications at a number of frequencies to
>provide coverage over a wide area and while they may have a kilowatt or
>so for transmit; on receive they are working with a station whose
>transmitter is unlikely to exceed 400W PEP and whose antenna is at best
>a poor compromise since the days of aircraft wire antennas are long
>gone.
>
>I don't know about other sites, but Gander certainly used to have a
>number of just plain old dipoles; and I have seen other simple dipoles
>at several other airports and airline installations so one would expect
>a fair amount of operational data to have been gathered over the years.

I worked at a station in Alaska that had a big antenna farm. The
station was designed to communicate with aircraft over distances from
zero to thousands of miles. We had very few limitations over what we
could do or build with unlimited space, and had two rhombic's for
communicating with two flights that took the same track every day.
Communication was mostly CW five letter group encryption. The
transmitters and receivers were separated by 20 miles or so.

The operators could choose which transmitter/antenna combination gave
them the best performance. The dipoles seemed to be the preferred
antenna. The rhombic's (the king of HF antennas) were seldom used,
probably because of the radiation pattern. The antenna is the most
unpredictable part of any installation.

I was the guy that tried to neutralize the big triodes, so you know
that was a while ago. (1950's). The globe was about the size of a
volleyball.

Ron, W1WBV

2239. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 14:52:15 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <z8qpc.24257$zq4.1491668@twister.southeast.rr.com>
Source record: 95292

"Jan Van Belle" <Jan.Van_Belle@advalvas.be> wrote in message
news:2gbmfeFtg9hU1@uni-berlin.de...
> Hello all,
>
> The last days I was searching for more info o how to build fratal
> antennas on the web. But besides lots of links to fractenna.com and a few
> powerpoint slides I found nothing.
>
> Has anyone sucessfully build such an antenna for HF? Is anyone using it?
>
> Kind regards,
>
> Jan, ON5DOA

A fractal antenna is just another antenna that uses lumped inductance to
shrink the size of the antenna along with destroying the radiation pattern.
The arrl has a nice explantion of why antennas radiate on their web site.
Aplly this info to fractals and small coils and it is easy to see why they
dont work worth a hoot.

2240. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 15:14:57 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <Rtqpc.24263$zq4.1495522@twister.southeast.rr.com>
Source record: 95294

"Larry D" <larry@may2004.com> wrote in message
news:JaqdnSLsOvcJmj_dRVn-uw@bright.net...
> I want to construct a 5/8 wave ground plane for 24 MHz.
> I am OK with the dimensions, but I can't get a grip on what
> the impedance at the feedpoint will be. Even the ARRL
> antenna book hasn't been much help.
>
> Can anyone tell me the impedance I can expect to see,
> also any tips on matching it? Thanks!
>
> Larry DiGioia N8KU
> N8KU at longwire.com

Larry, its been a while since I built one but I usually wind an 1/8 to 3/16wl of wire on my matching coil and feed this in series with as one would a base loaded antenna then start triming the coil for lowest SWR. I have one I built like that now on 10M SWR is about 1.5:1 . Cant say for sure but think the feed point impedance is above 50 or about 75 ohms at resonance. Have built these using the same technique for 6 and 2 . Seems like the impedance on these can vary quite a bit depending on the materials you build the antenna from. Thicker materials seems to give a lower impedance and a better match to 50 ohms. Ive never really gone into what was going on with the antenna that much and may be all wrong but right or wrong my way of doing it seems to get the job done for me. Perhaps some of the gurus around here would like to provide some more insight.

2241. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 15:17:35 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405150717.719165f@posting.google.com>
Source record: 95293

Jack Twilley <jmt+usenet@twilley.org> wrote in message
news:<86lljvx7mh.fsf@duchess.twilley.org>...
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> So who actually has the space and resources to set up an ideal
> horizontal dipole on HF with the full length and height as specified
> in all the formulas?

Thats all I use here.

Wouldn't it be cheaper and easier to set up a
> vertical if you could install something that high off the ground?

No.
>
> The only thing I've seen personally that looks like it meets the ideal
> is a small station tucked into the northeast cloverleaf of an exit off
> Interstate 93 near Boston, MA, and the station appeared to be a marker
> for Logan. Anyone have any personal, real-life experience with a
> full-size, full-height HF dipole? Is it worth the cost?

If you run a full size dipole, "I prefer coax fed in general", you
have a full sized dipole signal with very little losses. Well, unless
you have 500-1000 ft of coax... What more can I say... The antenna
cost is cheap. Wire and coax. I'm on a city lot. I presently have
160m,80m,40m dipoles up in parallel. Fed with one coax. The 160 dipole
is in a Z layout to fit the lot. The 80 and 40 are in straight lines
as normal, but spaced apart a good bit. Myself, I don't use anything
but full size coax fed dipoles, unless it's impossible. As far as
single band dipoles go, anything less is a step down as far as I'm
concerned. Loss wise and also ease of use. No tuner, no weather
hassles, etc...When I switch bands, there is nothing to do but key the
radio. MK

2242. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 15:33:50 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <zLqpc.37822$pJ1.33354@lakeread02>
Source record: 95295

"Jack Twilley" <jmt+usenet@twilley.org> wrote

> So who actually has the space and resources to set up an ideal
> horizontal dipole on HF with the full length and height as specified
> in all the formulas? Wouldn't it be cheaper and easier to set up a
> vertical if you could install something that high off the ground?

I thought a 1/2 wave dipole was "the standard". Standard meaning the traditional use of the dipole for efficiency and common use. I did not know it was a significant compromise from a full wave length long antenna which would be impossible to install in most backyards when you talk about 60 meters or higher. If a full wave length dipole is common I never see references to it either.

Jack Painter
Virginia Beach VA

2243. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 16:36:06 UTC
From: nick smith <NickS@ntlworld.com>
Message-ID: <nBspc.955$3M5.96@newsfe6-gui.server.ntli.net>
Source record: 95296

Has anyone got an ideal ground ??

Nick

2244. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 17:02:11 UTC
From: Marc Battyani <Marc.Battyani@fractalconcept.com>
Message-ID: <c85ic1$4c3@library2.airnews.net>
Source record: 95297

"Richard Clark" <kb7qhc@comcast.net> wrote
> On Fri, 14 May 2004 13:57:58 +0200, "Marc Battyani"
> <Marc.Battyani@fractalconcept.com> wrote:
>
> >Yes, this is exactly what I want to do : Inductive coupling.
> >Maybe you didn't see my first posts, what I want to do is transmit 3W of
> >power by induction over a 12mm distance.
>
> Then this returns us to the native Z of the source, the FET, and the
> sink Z of the load AFTER the link. Your link shows a 1:1 coupling (as
> best I can tell) and it follows that the load should be on the order
> of half an Ohm. It also follows that the characteristic Z of the FET
> load should also exhibit this value (it does not) as well as the
> coupling circuitry to the link.
>
> Move the primary loop back into the Drain lead to the positive rail
> path, and connect the 2200pF cap (which may be too much) from the
> Drain lead to ground path. The other circuitry is superfluous. The
> characteristic Z of this load is roughly equal to the FET; and as the
> FET on time is roughly 120°; and depending upon coupling, then you
> might find 60 - 80% efficiency. It will require some tuning as the
> Bandwidth will be 1 or 2 MHz around resonance. If you want some other
> actual load resistance other than half an Ohm, then you need to boost
> the transform ratio (it works by the square of the windings ratio).
>
> Give this a try and report your findings.

Much better!
A get 70% efficiency now :)
(with a 330pF cap)

Thanks

Marc

2245. Re: Loop Antenna for Class-E amplifier

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 17:48:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4dlca0tk37achgo1nh0i7vstro4a30ir70@4ax.com>
Source record: 95298

On Sat, 15 May 2004 19:02:11 +0200, "Marc Battyani"
<Marc.Battyani@fractalconcept.com> wrote:
>Much better!
>A get 70% efficiency now :)
>(with a 330pF cap)
>
>Thanks
>
>Marc

Hi Marc,

You are welcome.

73's
Richard Clark, KB7QHC

2246. Re: SteppIR 3 el Yagi vs. Force 12 XR5

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 19:31:32 UTC
From: "H. Adam Stevens" <mayaone@earthlink.net>
Message-ID: <oeupc.1536$H_3.662@newsread1.news.pas.earthlink.net>
Source record: 95299

"Rob" <noemail@pse.com> wrote in message
news:zLdpc.83145$FH5.1951187@news20.bellglobal.com...
> H. Adam Stevens wrote:
> > "Rob" <noemail@pse.com> wrote in message
> > news:F4Wnc.9358$dr1.321814@news20.bellglobal.com...
> >> J. McLaughlin wrote:
> >>> Dear Rob (unknown call; unknown location; no E-mail address):
> >>> Your questions are unanswerable.
> >>> What constitutes the "best" antenna depends on many factors.
> >>> You have only provided the information that you are "up north" and
> >>> that you wish an antenna to survive Winter weather.
> >>> It is unlikely that someone has "tried" both of the antennas you
> >>> mention. If they had gone to that expense it would be to write a
> >>> paper/book or because one of the antennas died.
> >>> Winter survival depends on a number of factors (including luck).
> >>> What is a reasonable design to place at 40 feet in an old, wooded
> >>> subdivision is likely to be outrageous at 200 feet in open country.
> >>> The ARRL has sold a book on the mechanical design of beams. It
> >>> is a good reference to study. The mechanical standard for towers
> >>> and antennas is 222F. It too should be consulted.
> >>> It will be a few more years before the survival characteristics
> >>> of the Step products starts to have statistical significance. I
> >>> have heard from riggers that the F12 products do not do well in
> >>> severe wind/weather conditions. (You may well not have such severe
> >>> conditions.) A search using Google, or the like, will turn up
> >>> more information.
> >>> Be cautious of statements that contend that their antenna survived
> >>> last Winter's storm. The writer's location may have shielded the
> >>> antenna. I hope that this is of assistance.
> >>> Regards, Mac N8TT
> >>>
> >>> "Rob" <noemail@pse.com> wrote in message
> >>> news:FDzmc.57707$ZJ5.1729584@news20.bellglobal.com...
> >>>> I am thinking of putting up a yagi antenna. I am considering
> >>>> putting up either the SteppIR 3 el yagi or the Force 12 XR5.
> >>>>
> >>>> Does anyone have any opinions on which is the best antenna? Has
> >>>> anyone tried both?
> >>>>
> >>>> Rob
> >>>> P.S. I live up north where there is lots of snow and ice during
> >>>> the winter. Will the SteppIR antenna survive such weather?
> >>
> >> Thanks for the reply. Well the most important factor for me is

> >> survival. I live inside a National Park up in Canada where lots of
> >> snow, ice, wind, etc occur during the long winter months. The
> >> antenna will be located up in the clear. There will be not much
> >> around to shield it from the winds.
> >>
> >> The SteppIR products looks interesting but they do not have much of
> >> a track record. I used to use a Cushcraft R7000 but that only
> >> lasted 3 winters. I am not that impressed with the strength of
> >> Cushcraft products.
> >>
> >> Rob
> >>
> >>
> >
> > Hi Rob
> > My SteppIR antennas have survived winds that destroyed nearby trees
> > FWIW. I think the claimed wind survival ratings are realistic.
> > Ice does not change the antenna's electrical behavior;
> > The elements are inside a fiberglass tube.
> > The elements can be fully retracted.
> > If the fiberglass tube does fail it can be cheaply replaced.
> > I'm upgrading my 3 to a 4.
> > 73
> > H.
> > NQ5H
>
> Thanks for the info. The SteppIR antenna is definitely one to consider.
>
> Did you find it hard to construct?
>
> 73's
> Rob
>
>
Straightforward and well built.
73
H.
NQ5H

2247. seen of EPOD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 20:46:19 UTC
From: Thierry <"Answer direct via http">
Message-ID: <40a6819b$1@news.vo.lu>
Source record: 95300
Cross-posted to: rec.radio.amateur.antenna,uk.radio.amateur

Hi,

Seen of "Earth Science Picture of the Day".
http://epod.usra.edu/archive/epodviewer.php3?oid=189600
A subject to rarely tackled on such website.

Thierry, ON4SKY, LX3SKY
http://www.astrosurf.com/menu-qsl.htm

2248. Re: seen of EPOD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-15 22:28:42 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3b6da0tc7oueg6k201f6drvaf44th696ag@4ax.com>
Source record: 95301
Cross-posted to: rec.radio.amateur.antenna,uk.radio.amateur

On Sat, 15 May 2004 22:46:19 +0200, "Thierry" <Answer direct via
http://www.astrosurf.com/lombry/post.htm> wrote:

>Hi,
>
>Seen of "Earth Science Picture of the Day".
>http://epod.usra.edu/archive/epodviewer.php3?oid=189600
>A subject to rarely tackled on such website.

Hi Thierry,

Nice write-up.

73's
Richard Clark, KB7QHC

2249. Re: SteppIR 3 el Yagi vs. Force 12 XR5

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 00:11:03 UTC
From: wm2f@pics.com
Message-ID: <74e1d9f2.0405151611.5ff80e49@posting.google.com>
Source record: 95302

Check out Mosley antenna's. They been around along time and I have
TA-33 tribander up at 75 feet for 20 years. Bought it used and
estimate its 30 years old. QTH is southern New Jersey, not the most
severe WX but over the 20 years its seen some tough summer storms.
Check out there web site. I forget the address but you can find it
with a search.

2250. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 02:29:58 UTC
From: kashe@sonic.net
Message-ID: <4fkda0h5vskmcf3qrcq6l8ab2ij8ii32s9@4ax.com>
Source record: 95303
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

On Sat, 15 May 2004 01:04:44 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Topaz305RK wrote:
>
>> Didn't bother mine, are you sure that is what did it?
>>
>> PS The guys selling the antenna needs to have his doc check his meds - get
>> real
>>
>>
>
>I don't know cause and effect. But my bookmarks blew up when I opted for
>"more movies" or what ever it was.
>
>I ran PCPITSTOP.com and it says I'm clean. I then ran McAffee and it
>reported no worms or viruses. So, my bookmarks dissappeared and I'm not
>sure why!!

Obviously tthe aliens don't want you eavesdropping on them.
This is only a first warning. Next -- the dead crow in your driveway.
Then -- the crop circle on your lawn.

2251. Re: Stubby car radio antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 03:07:12 UTC
From: Larry Loucks <Larry.Loucks@attglobal.net>
Message-ID: <40A6DB37.D9D4A5C2@attglobal.net>
Source record: 95304

On GM vehicles the short rod is for Onstar and the other one is for XM.

Larry

JLB wrote:
>
> I have been seeing some rather short stubby antennas on newer cars lately.
> Some of them are short rods about an inch or two long. Others are blades
> similar to what you sometimes see on large airplanes, an inhc or so tall and
> 2 or 3 inches long. Of course what I actually see appears to be just the
> 'radome' covering the actual antenna.
>
> They are way to short to be useable on AM/FM, so my guess is that they are
> actually:
>
> 1. Active antennas for AM/FM
>
> 2. The new 'satellite radio' antennas
>
> 3. Another conspiracy by the safety nuts who think that car radio antennas
> are dangerous and have convinced the NTSB that they (the NTSB, that is) are
> smarter than the rest of us and should tell us what we need.
>
> Any 'experts' out there that know what they are?
>
> --
> Jim
> N8EE
>
> to email directly, send to my call sign at arrl dot net

2252. F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 04:38:43 UTC
From: pdrunen@aol.com
Message-ID: <20040516003843.16549.00001462@mb-m04.aol.com>
Source record: 95305

Hi Group,

Many thanks for the input with the open and shorted transmission lines.

On another subject, F-connectors are used for just about everything video, with RG-59 being 75 ohms is the F-connector designed for 75-ohms or can I use this type of connector with 50 ohm systems?

de KJ4UO

2253. Anyone Using MFJ-1538 QUAD BAND VERT ANTENNA(6/2/220/440)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 04:47:51 UTC
From: "Dennis B.Sheaffer" <wy3f@dejazzd.com>
Message-ID: <nq-dnZaY85Xpbzvd4p2dnA@dejazzd.com>
Source record: 95306

Hello,Im interested in hearing from users of the NEW MFJ-1538 Pulsar
quad
band antenna that covers (6 MTRS,2MTRS,220MHZ & 440MHZ)
I use a Comet GP-15 now for 6/2/440. Over the winter I tried 220mhz
band.I use the mfj 921 tuner with the Comet GP-15 and it does so-so
on 220.I think maybe the MFJ-1538 would be better and I would have
better efficiency on 220mhz.
This is the only quad band base antenna made for 6/2/220/440 bands,so
it makes me a little leery on performance since Comet & Diamond do not
have a model like this,so I would like to hear reports from other users.
A local ham friend just got one and I went over to his place to check it
out,and it looks alot like my Comet.
Can this antenna be tuned for 6 mtrs like my Comet,I didn't see A set
screw for the tuning rod after the 6 mtr coil/radiator.
My ham friend didn't get it mounted yet outside and he said he is
in no rush either,so I can't get any reports on it yet,like how
is the swr or bandwith,And most of all performance.
I don't want to loose 6 mtrs while gaining 220 mhz.I enjoy 6 mtrs too.
Is this a real VHF/UHF antenna break through,and wondering if we will
see a mobile version?
Some may ask why not put up a separate 220 antenna? I have restrictions
1 for hf ,and 1 for vhf/uhf limit only 2 antennas.
Any users using the MFJ-1538 quad bander please respond,I would be
interested in hearing ur likes and dis-likes with this antenna.
73 de Dennis WY3F....

2254. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 04:54:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ajsda09esnuaqtli0ffgq3sirg62biqiss@4ax.com>
Source record: 95307

On 16 May 2004 04:38:43 GMT, pdrunen@aol.com (PDRUNEN) wrote:

>Hi Group,
>
>Many thanks for the input with the open and shorted transmission lines.
>
>On another subject, F-connectors are used for just about everything video, with
>RG-59 being 75 ohms is the F-connector designed for 75-ohms or can I use this
>type of connector with 50 ohm systems?
>
>de KJ4UO

Hi OM,

It would seem to me that the connector is in large part simply a
connecting shell where the line itself does the chore of mating to a
rather unsubstantial socket. Undoubtedly these things are intended
for low power, low physical demand applications. I suppose you could
force-fit them to rg58, or just use RCA connectors and skip the
tedious threading.

73's
Richard Clark, KB7QHC

2255. I use my genital hair as antenna !

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 09:07:17 UTC
From: nice_snipper@yahoo.co.nz
Message-ID: <536e17d9.0405160107.63299a84@posting.google.com>
Source record: 95308
Cross-posted to: rec.radio.amateur.antenna,alt.gods

Yes, it's very long.Good quality !

2256. Re: I use my genital hair as antenna !

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 10:38:05 UTC
From: "Heiner-P.Landsberg" <hlandsbe-die9weg-@tcrz.net>
Message-ID: <c87g61$6b1$00$1@news.t-online.com>
Source record: 94982
Cross-posted to: rec.radio.amateur.antenna,alt.gods

5kv ?
heiner

2257. Test

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 12:45:14 UTC
From: Jen_Joe_0 <jen1joeo@zianet.com>
Message-ID: <40a762ae$1@nntp.zianet.com>
Source record: 95309

[No readable article body recovered]

2258. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 13:34:29 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <JJadnW8-iolG8DrdRVn-hQ@comcast.com>
Source record: 95310

You would have trouble physically doing it. Remember, you need coax with a skinny solid center conductor. There is such RG58, but the shield diameter is too small. It might be possible to use 8X if you cut off part of the strands that make up the center conductor, and tin the remaining ones to make a rigid conductor.

Tam/WB2TT
"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20040516003843.16549.00001462@mb-m04.aol.com...
> Hi Group,
>
> Many thanks for the input with the open and shorted transmission lines.
>
> On another subject, F-connectors are used for just about everything video,
with
> RG-59 being 75 ohms is the F-connector designed for 75-ohms or can I use
this
> type of connector with 50 ohm systems?
>
> de KJ4UO

2259. Re: Ya gotta check this one out! Talk to aliens with this antenna on Ebay...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 14:50:21 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <McLpc.9837$gr.786713@attbi_s52>
Source record: 95311
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

kashe@sonic.net wrote:

SNIP
>
> Obviously tthe aliens don't want you eavesdropping on them.
> This is only a first warning. Next -- the dead crow in your driveway.
> Then -- the crop circle on your lawn.

I don't know!! Last night a house about 1 mile from here blew up when
the aliens hit it with about 50,000 amperes from their Ray Gun.

I wonder, since I'm on the top of the hill and the other house is in the
shadowed valley, if they missed my house?

Deacon Dave, W1MCE

2260. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 14:58:57 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <SkLpc.38962$pJ1.6234@lakeread02>
Source record: 95312

"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20040516003843.16549.00001462@mb-m04.aol.com...
> Hi Group,
>
> Many thanks for the input with the open and shorted transmission lines.
>
> On another subject, F-connectors are used for just about everything video,
with
> RG-59 being 75 ohms is the F-connector designed for 75-ohms or can I use
this
> type of connector with 50 ohm systems?
>
> de KJ4UO

Hi, the F-connector is 75 ohm, and I have had to mate it to PL-259 to connect Belden 9913 before. This required the awkward addition of an F-to-BNC then BNC-to-SO-239 connector. The line loss added to this arrangement was probably significant, but the reason was to adapt an inexpensive log periodic beam antenna. Although manufacturer claimed transmit capable, and I did test this on vhf-marine bands, the mismatch of connectors should be used for receive-only.

Jack Painter
Virginia Beach, Va

2261. Re: I use my genital hair as antenna !

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 17:00:44 UTC
From: g3pho@nospamblueyonder.co.uk
Message-ID: <40a89e30.69196221@news.blueyonder.co.uk>
Source record: 95313

On 16 May 2004 02:07:17 -0700, nice_snipper@yahoo.co.nz (Tom-Alex Soorhull) wrote:

>Yes, it's very long.Good quality !

Was it a pubical quad ??

2262. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 17:57:04 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c88a1ghhe1@titan.btinternet.com>
Source record: 95314

Provided the mechanical connection is sound, you can use any coaxial connectors you like, regardless of nominal impedance, at frequencies less than about 300 MHz without any observed ill effects.

2263. Re: I use my genital hair as antenna !

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 18:25:18 UTC
From: William Warren <william_warren_nonoise@comcast.net>
Message-ID: <imOpc.61023$xw3.3599330@attbi_s04>
Source record: 95315

<g3pho@nospamblueyonder.co.uk> wrote in message
news:40a89e30.69196221@news.blueyonder.co.uk...
> On 16 May 2004 02:07:17 -0700, nice_snipper@yahoo.co.nz (Tom-Alex
> Soorhull) wrote:
>
> >Yes, it's very long.Good quality !
>
> Was it a pubical quad ??

More like a monopole.

2264. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 18:46:04 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gpr73F5cgsrU1@uni-berlin.de>
Source record: 95316

"Reg Edwards" wrote
> Provided the mechanical connection is sound, you can use any coaxial
> connectors you like, regardless of nominal impedance, at frequencies less
> than about 300 MHz without any observed ill effects.

??? Using connectors that don't maintain the characteristic impedance of the transmission lines they connect _will_ produce undesired effects. The effects may be negligible to amateur radio operators used to operating transmitters into rather high mismatches, but they would never be tolerated in most professional operations, including high-power broadcast systems.

Years ago a common impedance for rigid transmission line used in broadcast systems was 51.5 ohms. Later the more common value was/is 50 ohms. While a mechanical adapter was available to allow connecting a 51.5 ohm inner conductor to 50 ohm inner conductor (SWR= 1.03), better installations installed an RF transformer section at these interfaces.

A 1.1 SWR at the input of a TV transmit antenna using ~500 or more feet of transmission line will produce a visible "ghost" in the transmitted picture, as seen by a careful observer. At 1.25 SWR it can be seen, and will objectionable to almost everyone.

RF

Visit http://rfry.org for FM broadcast RF system papers.

2265. Re: I use my genital hair as antenna !

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 20:00:06 UTC
From: joyce <joyce@joyce.net>
Message-ID: <40A7C844.7C7B6B03@joyce.net>
Source record: 95317

not a chance,

more like a stub !

joyce

William wrote:

> <g3pho@nospamblueyonder.co.uk> wrote in message
> news:40a89e30.69196221@news.blueyonder.co.uk...
> > On 16 May 2004 02:07:17 -0700, nice_snipper@yahoo.co.nz (Tom-Alex
> > Soorhull) wrote:
> >
> > >Yes, it's very long.Good quality !
> >
> > Was it a pubical quad ??
>
> More like a monopole.

2266. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 20:29:52 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c88j00sad1@sparta.btinternet.com>
Source record: 95318

To save the trouble of calculating it I'll take a guess. A connector less than 1" long of impedance 51.5 ohms in a 50 ohm system will NOT produce an SWR of 1.03:1 or anything anywhere near to it at frequencies less than 1000 MHz.

A 1" long connector WILL produce an SWR of 1.03:1 around 3 GHz but no worse. If you can reliably measure it.

What matters is the ratio of connector length to wavelength along the line.

For the same reason, at HF, bringing the two wires of an open wire line close together for the purpose of drawing them through a single small hole in the wall, will not produce any noticeable effect on line performance.

Reg.

==========

"Richard Fry" <rfry@adams.net> wrote in message
news:2gpr73F5cgsrU1@uni-berlin.de...
> "Reg Edwards" wrote
> > Provided the mechanical connection is sound, you can use any coaxial
> > connectors you like, regardless of nominal impedance, at frequencies
less
> > than about 300 MHz without any observed ill effects.
> _________________
>
> ??? Using connectors that don't maintain the characteristic impedance of
the
> transmission lines they connect _will_ produce undesired effects. The
> effects may be negligible to amateur radio operators used to operating
> transmitters into rather high mismatches, but they would never be
tolerated
> in most professional operations, including high-power broadcast systems.
>
> Years ago a common impedance for rigid transmission line used in broadcast
> systems was 51.5 ohms. Later the more common value was/is 50 ohms. While
a
> mechanical adapter was available to allow connecting a 51.5 ohm inner
> conductor to 50 ohm inner conductor (SWR= 1.03), better installations
> installed an RF transformer section at these interfaces.
>
> A 1.1 SWR at the input of a TV transmit antenna using ~500 or more feet of
> transmission line will produce a visible "ghost" in the transmitted
picture,
> as seen by a careful observer. At 1.25 SWR it can be seen, and will

> objectionable to almost everyone.
>
> RF
>
> Visit http://rfry.org for FM broadcast RF system papers.
>
>

2267. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 21:36:26 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <2gq56oF5e9drU1@uni-berlin.de>
Source record: 95121

Gernic antenna, if it is within 3:1 vswr then it is matched fairly well.
Gain is directional, this one should have a pattern that changes as one
moves up in frequency, more lobes.
good one to check on on EZNEC (demo free on internet)
Low Freq need a good ground.
Also this type of antenna was used in the 20's and 30's, and on the ships at
sea.

"R. David Steele" <steele.david@verizon.net/OMEGA> wrote in message
news:46mfa09nom6h51ebn8n2tiad6e0qamhihp@4ax.com...
> http://www.bwantennas.com/
>
> The military is using these antennas because of ALE (automatic
> linking) and NVIS. I gather that while they are very broad
> banded, they have less the best gain?
>
> Any feed back?
>

2268. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 22:10:35 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <rdpfa099ahp4bp526rl94d1g6lukov3kla@4ax.com>
Source record: 95122

On Sun, 16 May 2004 21:13:58 GMT, R. David Steele
<steele.david@verizon.net/OMEGA> wrote:

>http://www.bwantennas.com/
>
>The military is using these antennas because of ALE (automatic
>linking) and NVIS. I gather that while they are very broad
>banded, they have less the best gain?
>
>Any feed back?

According to a QST review about 20 years ago, the B&Ws are comparable
to a standard dipole from 20 meters and up; much less efficient than a
standard dipole, below 20 meters.

bob
k5qwg

2269. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 22:11:14 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <10afpns2p2bt80c@corp.supernews.com>
Source record: 95123

Right-- but WRONG! Wouldn't be too concerned about the IMPEDENCE mismatch
at this short distance,
but, in THIS case, as the center conductor of the coax
in the CENTER PIN of the CONNECTOR, might have problem with connection, or
SPREADING the female
center connector, so as to not make good connection with the proper coax in
the future! Jim NN7K

"Richard Fry" <rfry@adams.net> wrote in message
news:2gpr73F5cgsrU1@uni-berlin.de...
> "Reg Edwards" wrote
> > Provided the mechanical connection is sound, you can use any coaxial
> > connectors you like, regardless of nominal impedance, at frequencies
less
> > than about 300 MHz without any observed ill effects.
> _________________
>
> ??? Using connectors that don't maintain the characteristic impedance of
the
> transmission lines they connect _will_ produce undesired effects. The
> effects may be negligible to amateur radio operators used to operating
> transmitters into rather high mismatches, but they would never be
tolerated
> in most professional operations, including high-power broadcast systems.
>
> Years ago a common impedance for rigid transmission line used in broadcast
> systems was 51.5 ohms. Later the more common value was/is 50 ohms. While
a
> mechanical adapter was available to allow connecting a 51.5 ohm inner
> conductor to 50 ohm inner conductor (SWR= 1.03), better installations
> installed an RF transformer section at these interfaces.
>
> A 1.1 SWR at the input of a TV transmit antenna using ~500 or more feet of
> transmission line will produce a visible "ghost" in the transmitted
picture,
> as seen by a careful observer. At 1.25 SWR it can be seen, and will
> objectionable to almost everyone.
>
> RF
>
> Visit http://rfry.org for FM broadcast RF system papers.
>
>

2270. Cobwebb Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 22:45:30 UTC
From: Paul Logan <paul.logan4@btinternet.com>
Message-ID: <c88qu9$99n$1@hercules.btinternet.com>
Source record: 95124

Hi all,

anyone got any experience of using the small multi band Cobwebb antenna- and
how does it perform-

thanks

--
Paul Logan, MI3LDO,
Lisnaskea, N. Ireland.
Location: 54 - 15 N, 7 - 27 W in IO64GG

Low VHF & FM DX Page:
www.geocities.com/yogi540

2271. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 22:49:24 UTC
From: jgboyles@aol.com
Message-ID: <20040516184924.21784.00001643@mb-m07.aol.com>
Source record: 95125

>According to a QST review about 20 years ago, the B&Ws are comparable
>to a standard dipole from 20 meters and up; much less efficient than a
>standard dipole, below 20 meters.

Yep, a short 80m antenna does ok on 20m. The Military, in their quest to get a signal out, in the smallest space possible devised a scheme that used a very inefficient antenna. From what I have read, it was a 20 kw transmitter with matching auto-tuner that tuned from 2-30 mhz.
One makes up for the -6db loss on 4mhz with brute force. The B&W has 6db or more loss on 80m. As a ham, I hope my antenna is very efficient. When I am mobile that is not possible, but fixed, I want an efficient antenna.

73 Gary N4AST

2272. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-16 22:50:45 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gq9hrF5jcmlU1@uni-berlin.de>
Source record: 95126

"Reg Edwards" wrote

>A 1" long connector WILL produce an SWR of 1.03:1 around 3 GHz
>but no worse. If you can reliably measure it.

AND

> Connector salesmen (and no doubt ladies) have the habit of exaggerating
the
> importance and magitude of SWR ON THE LINE associated with the precision
of
> connector manufacture. The habit transfers itself into magazine articles
> without any supporting practical experiments.

REG: Please consider this.

Most TV transmit antenna systems have an adjustable RF transformer installed at the antenna input connector. This transformer consists of 4 or 5 brass "pins" of about 5/8" diameter spread evenly across a 90 degree section of rigid transmission line. These pins can be inserted radially into the space between the outer and inner conductors of that line section. When the pins are withdrawn fully, they have no affect on the natural impedance of that line section, but can produce a spatially discrete SWR as function of their insertion distance into the line.

I, personally, and many other broadcast engineers have been involved in the adjustment of such RF transformers to optimize the match between the main transmission line and the antenna input [including its elbow complex(es)], at the frequencies used in commercial VHF/UHF television -- which start at 54 MHz.

This requires (1) purchase and installation of the transformer, (2) deployment of a tower crew to adjust it, and (3) use of a qualified field engineer in the tx bldg with the appropriate test equipment and field experience to direct the adjustment of that variable transformer.

Obviously, these processes are not inexpensive, and would not be undertaken if there was no reason. The reason: to optimize the match between the main line and the antenna, and thus to transmit the "cleanest" video.

This PRACTICAL experience illustrates that an impedance change even in a 54-60MHz TV channel occurring within a physical space of less than one inch can produce important and commercially supportable system benefits, despite your statements quoted above.

I invite you to post the contrary result(s) of your own "practical
experiments," and/or those of others.

RF

Visit http://rfry.org for FM broadcast RF system papers.

2273. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 00:20:15 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c890fv$gf6$1@hercules.btinternet.com>
Source record: 95127

Richard, I have no reason to doubt anything you say.
I have no reason to doubt what I have said.
But why imply there's serious disagreement when there is none?

From the tone of your comments I correctly guessed you were a 'magazine'
author.

Are you also a spare-time connector salesman? ;o) ;o)

Reg, G4FGQ

2274. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 00:38:52 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c891irsno1@titan.btinternet.com>
Source record: 95128

Richard, WE just look at PL259's from somewhat different viewpoints and see
different magnitudes of the factors involved, with different objectives,
even different costs.

Reg, G4FGQ

2275. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 00:39:32 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <OfGdnYm4MfjvlzXd4p2dnA@ctc.net>
Source record: 95129

"Richard Fry" <rfry@adams.net> wrote in message
news:2gpr73F5cgsrU1@uni-berlin.de...
> "Reg Edwards" wrote
> > Provided the mechanical connection is sound, you can use any coaxial
> > connectors you like, regardless of nominal impedance, at frequencies
less
> > than about 300 MHz without any observed ill effects.
> _________________
>
> ??? Using connectors that don't maintain the characteristic impedance of
the
> transmission lines they connect _will_ produce undesired effects. The
> effects may be negligible to amateur radio operators used to operating
> transmitters into rather high mismatches, but they would never be
tolerated
> in most professional operations, including high-power broadcast systems.

Connectors available off the shelf are not perfect, especially the pl259
type that are usually used by many.
While I don't doubt the problems to TV signals, this is an amateur group
type discussion.
Many antennas are nowhere near the 50 ohms that the cable is. Most any
connector will not cause any more problems than the coax/antenna mismatch
will in all but the most demanding systems (maybe EME or some satellite
work).

2276. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 02:00:43 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A81CCB.A8669A3C@cwis.net>
Source record: 95130

David,
The bottom line is that it's a terrible 'amateur' antenna for
the price.
'Doc

2277. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 03:02:15 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86zn8769jc.fsf@duchess.twilley.org>
Source record: 95131

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Doc" == w5lz <w5lz@cwis.net> writes:

[... David mentioned B&W antennas ...]

Doc> David, The bottom line is that it's a terrible 'amateur' antenna
Doc> for the price. 'Doc

Out of curiosity, what other antenna provides a better cost-benefit
ratio while maintaining the same constraints with respect to power,
size, and construction?

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAqCs8GPFSfAB/ezgRAs6KAKCrBspPVZNGVycGY8LrSmotdVTjCgCfaKHT
gNzRDEBBv0WOb0rRB856QcY=
=DG7W
-----END PGP SIGNATURE-----
```

2278. Re: HF VHF UHF LOG PERIODIC 20 TO 1.2 GHZ

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 04:14:55 UTC
From: Kevin & Natalia Mitchell <sparcman@hotmail.com>
Message-ID: <40a83b77$1@news.iconz.co.nz>
Source record: 95132

Maybe once you have sold it you might be willing to post the plans for the antenna??
Sorry I am unable to bid on it, cost for shipping is too high.

Kevin ZL1UDD

"Fumper" <fumper@aol.com> wrote in message news:20040511072528.12117.00000014@mb-m26.aol.com...
> SEE THIS ON EBAY
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2244030632

2279. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 07:03:33 UTC
From: Jan Van Belle <Jan.Van_Belle@advalvas.be>
Message-ID: <2gr6e6F5e45sU1@uni-berlin.de>
Source record: 95133

Richard Clark wrote:
> In open competition between an Amateur and the professional fractal
> builder, the professional lost against 6 designs that trounced the
> best professional fractal on the basis of gain for the smallest
> footprint. That is to say, all seven antennas were bound within a
> prescribed "small" area (such as you describe), and the fractal came
> in dead last.
>
> 73's
> Richard Clark, KB7QHC

Sorry,

I've had a little accident while sporting and since I've only
a quick connection at the QRL, I couldn't check my mail and this newsgroup.

OK, thanx for the explanation. It seems I can leave it now! I thought it
would be a nice solution: a big amount of wire on a small area. But if
performance is even lower as other antennas and I can only come out on QRP
(I've got an FT-817) it is probably not the thing to choose for in first
instance.

Thanks all for the replies, links, etc. !!

73's de Jan, ON5DOA

2280. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 11:36:43 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2grme0F60m4tU1@uni-berlin.de>
Source record: 95134

"Reg Edwards" wrote
> Richard, I have no reason to doubt anything you say.
> I have no reason to doubt what I have said.
> But why imply there's serious disagreement when there is none?

RE: Clips from our previous posts (below) -

I don't know what constitutes a "serious disagreement" to you, Reg, but I think most readers would say that we have opposite conclusions about this topic.

If you have no reason to doubt what I wrote about this, how can you continue to support what you wrote? Our statements are mutually exclusive.

YOU: "Provided the mechanical connection is sound, you can use any coaxial connectors you like, regardless of nominal impedance, at frequencies less than about 300 MHz without any observed ill effects. A connector less than 1" long of impedance 51.5 ohms in a 50 ohm system will NOT produce an SWR of 1.03:1 or anything anywhere near to it at frequencies less than 1000 MHz."

ME: "This PRACTICAL experience illustrates that an impedance change even in a 54-60MHz TV channel occurring within a physical space of less than one inch can produce important and commercially supportable system benefits, despite your statements quoted above."

- RF

2281. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 11:57:02 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A8A88E.EA1D21B@cwis.net>
Source record: 95135

David,
You're at least partially right, I don't have the slightest idea of what 'ALE' is (although I do have an idea). As a previous owner of one of the subject antennas, I also have a pretty good idea of it's worth to the average amateur.
'Doc

2282. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 12:00:01 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A8A941.76AEEC9A@cwis.net>
Source record: 95136

```
Jack Twilley wrote:
>
> Out of curiosity, what other antenna provides a better cost-benefit
> ratio while maintaining the same constraints with respect to power,
> size, and construction?
>
> Jack.

Jack,
Almost anything! The only 'one' who benefits from this
antenna's
'cost-benefit' is the manufacturor...
'Doc
```

2283. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 12:35:46 UTC
From: Larry D <larry@may2004.com>
Message-ID: <faGdneIF7p8cLDXdRVn-ug@bright.net>
Source record: 95137

Dave Shrader wrote:
> Z is close to +58-j138 ohms.
>
> A small inductor of 0.88 uH in series with the antenna should provide a
> pretty good match to 50 ohm coax.
>
> Larry D wrote:
>
>> I want to construct a 5/8 wave ground plane for 24 MHz.

Wow, after all that, a simple answer. Thanks!

The reason I wanted to try 5/8 wave is because I have had
the Solarcon A99 1/2-wave ground plane for 10 meters up
for about 5 years, and it is an excellent antenna for DX. This
is, according to the product blurb, a "1/2 wave, voltage-fed"
design.

The radiation patterns in the antenna book give the
impression that 5/8 wave should be "even better" for DX.

Of course, a lot of that performance had to do with who is
on 10 meters in the first place, and conditions over the past
5 years as well.

It is finally falling apart (radials coming loose,) and the
prospects for 10m in the next few years don't look so good.
I wanted to switch to a similar antenna, but for 24 MHz.

I notice that some of the answers here were geared toward a
ground-mount, which is not what I meant by "ground plane,"
this antenna will be at 30', and probably will have full-size,
1/4 wave (?) sloping radials.

As it turns out, at the antenna forum in Dayton, Dean Straw,
the author of the ARRL antenna book, talked me out of using
5/8 wave. He feels that it will not appreciably enhance DX,
compared to 1/4 wave.

He also talked me into getting the latest version of the
antenna book, which alas, still does not mention doing what
you suggest, not even in the VHF section, as one person
mentioned, but at least I have the answer now. Thanks again.

Larry DiGioia N8KU

2284. Re: I use my genital hair as antenna !

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 13:25:15 UTC
From: Kyle2 <kyle@gtx.net>
Message-ID: <SW3qc.59$LH3.4@newsfe1-win>
Source record: 95138
Cross-posted to: rec.radio.amateur.antenna,alt.gods

Hello,

Glad to hear it, what is the SWR while you're sitting on the aerial then?
Was the removal painful? I almost forgot - you shouldn't try speaking out
of the same hole.

"Tom-Alex Soorhull" <nice_snipper@yahoo.co.nz> wrote in message
news:536e17d9.0405160107.63299a84@posting.google.com...
> Yes, it's very long.Good quality !

2285. Re: I use my genital hair as antenna !

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 13:25:54 UTC
From: Kyle2 <kyle@gtx.net>
Message-ID: <uX3qc.60$LH3.42@newsfe1-win>
Source record: 95139

Or it maybe an internal antenna depending on which team he bats for.

"joyce" <joyce@joyce.net> wrote in message
news:40A7C844.7C7B6B03@joyce.net...
> not a chance,
>
> more like a stub !
>
>
> joyce
>
> William wrote:
>
> > <g3pho@nospamblueyonder.co.uk> wrote in message
> > news:40a89e30.69196221@news.blueyonder.co.uk...
> > > On 16 May 2004 02:07:17 -0700, nice_snipper@yahoo.co.nz (Tom-Alex
> > > Soorhull) wrote:
> > >
> > > >Yes, it's very long.Good quality !
> > >
> > > Was it a pubical quad ??
> >
> > More like a monopole.
>

2286. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 13:27:17 UTC
From: Kyle2 <kyle@gtx.net>
Message-ID: <NY3qc.62$LH3.28@newsfe1-win>
Source record: 95140

God knows how you thought that one up! I think you know you're wrong.

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c88a1ghhe1@titan.btinternet.com...
> Provided the mechanical connection is sound, you can use any coaxial
> connectors you like, regardless of nominal impedance, at frequencies less
> than about 300 MHz without any observed ill effects.
>
>

2287. Antenna Suggestion Requested: Receiving Only, Up To 30 MHz, & Omni Directional ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 13:36:57 UTC
From: Robert11 <rgsxrose@comcast.net>
Message-ID: <vp-dnaBgycB1IjXdRVn-vA@comcast.com>
Source record: 95141

Hello:

Thinking about replacing my present random-length antenna which I have strung around the 4 sides (open loop; 40x25x40x25 approx.) of my attic.

Do listening only. Receiver is grounded to a cold water pipe.

Want omni directional, and wide continual freq. coverage; few hundred KHz up to 30 MHz.

Is there an antenna I can purchase for my yard that would offer the "possibility" of significantly
improved reception ?

Don't want a tower, or something overly large that would take up my entire yard !

Thanks,
Bob

2288. Re: Antenna Suggestion Requested: Receiving Only, Up To 30 MHz, & Omni Directional ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 14:33:32 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <2gs0poF64170U1@uni-berlin.de>
Source record: 95142

A good preamp (with FM, TV rejection) using your current antenna would work
as good or better that a larger antenna.

"Robert11" <rgsxrose@comcast.net> wrote in message
news:vp-dnaBgycB1IjXdRVn-vA@comcast.com...
> Hello:
>
> Thinking about replacing my present random-length antenna which I have
> strung around the 4 sides (open loop; 40x25x40x25 approx.) of my attic.
>
> Do listening only. Receiver is grounded to a cold water pipe.
>
> Want omni directional, and wide continual freq. coverage; few hundred KHz
up
> to 30 MHz.
>
> Is there an antenna I can purchase for my yard that would offer the
> "possibility" of significantly
> improved reception ?
>
> Don't want a tower, or something overly large that would take up my entire
> yard !
>
> Thanks,
> Bob
>
>

2289. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 14:51:17 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <Gj4qc.43044$pJ1.24343@lakeread02>
Source record: 95143

"R. David Steele" wrote about the B&W design:

> Remember that the military does two things. One is NVIS which
> has the antenna mounted about 1/4 wavelength above ground. This
> gives a good ground effect from 2 MHz to 12 MHz out to 300 miles.
>
> The other is ALE, automatic link, which switches frequencies
> automatically to insure the best path. An antenna with tuner
> would just be too slow.

David, even for purposes of this discussion, that is a bit oversimplified. Perhaps that type of broadband temporary antenna installation is acceptable for field units, but have never seen one of them in a permanent installation. I happen to be around several hundred HF antenna installations, and neither NVIS nor ALE operating units use anything of the kind. Maybe you were referring to field units, as above, not sure. Also, ATU/couplers are always used for ALE systems, with the memory-response times measured in milliseconds. This applies to air, ground and marine units for all armed services. There is no magic antenna for all bands ALE, and units using NVIS would have little need for ALE in the first place. That doesn't mean the military hasn't wasted money on it somewhere for short range use, it just wouldn't realize it's potential for reliable medium to long range linking.

Jack Painter
Virginia Beach, Va

2290. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 15:42:49 UTC
From: richardharrison@webtv.net
Message-ID: <16110-40A8DD79-427@storefull-3258.bay.webtv.net>
Source record: 95144

Larry D. wrote:
"The reason I wanted to try 5/8 wave is because I have had the Solarcon A 99 1/2 wave ground plane for 10 meters up for about 5 years and it is an excellent antenna for DX."

OK. A comparison of unattenuated field strengths at one mile from various verticals is given on page 20 of the "Vertical Antenna Handbook" by Capt. Paul H. Lee, USNR, K6TS:

1/4-wave, 196 mv/m

1/2-wave, 236 mv/m

5/8-wave, 276 mv/m

Power varies as the square of the voltage. One can see the difference in the field strength is hardly worth the effort for an amateur to try to increase the length of his antenna. It`s about a 3 dB gain from 1/4-wave to 5/8 wave.

A 5/8-wave at 10 meters is 1/2-wave at 12.5-meters (24 MHz).

A 1/2-wave at 10-meters is 0.4 wavelength at 12.5-meters (24 MHz). One could resonate it with a series capacitance at the antenna.

Best regards, Richard Harrison, KB5WZI

2291. Re: Antenna Suggestion Requested: Receiving Only, Up To 30 MHz, & Omni Directional ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 16:31:12 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrncahq6f.99p.bit-bucket@localhost.config.com>
Source record: 95145

```
On Mon, 17 May 2004 09:36:57 -0400, Robert11 hath writ:
> Hello:
>
> Thinking about replacing my present random-length antenna which I have
> strung around the 4 sides (open loop; 40x25x40x25 approx.) of my attic.
>
> Do listening only. Receiver is grounded to a cold water pipe.
>
> Want omni directional, and wide continual freq. coverage; few hundred KHz up
> to 30 MHz.

Depending on what you mean by "... few hundred KHz ...", a large,
indoor, tuneable, rotateable loop antenna may be a good augmentation
to your current, adequate "... random-length antenna ..."
This-a-way, you can rotate to maximize signal reception, or rotate
to minimize interference.

With a little additional "complexity", you might install such a
loop in the attic, as well.

HTH
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | config.com | DM68mn SK
```

2292. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 17:01:22 UTC
From: dplatt@radagast.org
Message-ID: <10ahrv2iijhna4b@corp.supernews.com>
Source record: 94983

In article <Gj4qc.43044$pJ1.24343@lakeread02>,
Jack Painter <223bthp@cox.net> wrote:

>> Remember that the military does two things. One is NVIS which
>> has the antenna mounted about 1/4 wavelength above ground. This
>> gives a good ground effect from 2 MHz to 12 MHz out to 300 miles.
>>
>> The other is ALE, automatic link, which switches frequencies
>> automatically to insure the best path. An antenna with tuner
>> would just be too slow.
>
>David, even for purposes of this discussion, that is a bit oversimplified.
>Perhaps that type of broadband temporary antenna installation is acceptable
>for field units, but have never seen one of them in a permanent
>installation.

My wife and I recently spent several weeks touring around Peru (just
got back last week).

I was intrigued to observe a _lot_ of modest-size HF wire antennas
scattered around... and these all appeared to be of this same basic
"terminated, folded dipole" variety. I saw a couple at the Cuzco
airport, one at a village on the Amazon, one or two in Aguas Calientes
(the village right below Machu Picchu), etc. They were usually
mounted in an inverted-V configuration, and appeared to be permanent
installations rather than short-term field-use installations.

The applications were probably NVIS, with working ranges out to a few
hundred miles.

I can't say for certain that they _were_ T2FDs, as I had no way to go
up on the towers and confirm that the device at the center of the
upper part of the dipole was a terminating resistor. I've never seen
a folded dipole with an open-circuiting insulator at the center of the
upper span, though.

My guess is that these antennas were chosen because of their "one size
fits all" nature - they can be installed and used without trimming,
don't require SWR-matching at the transmitter, and their relatively
low efficiency may not be an issue in these applications.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2293. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 18:43:07 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8b13r$sj5$1@titan.btinternet.com>
Source record: 95146

Richard,

A radio amateur, by an easy mistake, uses a 75-ohm plug and socket in a 50-ohm coaxial transmission system. The total length of the plug plus socket is 1"

As a result of the mismatch what is the SWR produced on the 50-ohm line at 2 MHz. At 30 MHz? At 150 MHz?

Is the amateur, or anyone else, likely to be aware of any difference in performance?

No need to make measurements. If you are unable to make a simple calculation and answer the question then you are not qualified to continue the discussion.

Reg, G4FGQ

2294. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 18:53:09 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8b1ml$e4t$1@hercules.btinternet.com>
Source record: 95147

> God knows how you thought that one up! I think you know you're wrong.
>
==========

I can see you are not accustomed to thinking in terms of magnitudes and numbers.

A QUOTATION:

"When you can measure what you are speaking about and express it in numbers you know something about it. But when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind. It may be the beginning of knowledge but you have scarcely in your thoughts advanced to the state of science."

: William Thomson, Lord Kelvin, 1824-1907.

Reg, G4FGQ

2295. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 19:06:36 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8b2fsntj1@sparta.btinternet.com>
Source record: 95148

They conform to the manufacturer's specifications.

But the manufacturer's specifications do not mention, at least in numerical terms, the most important parameter - antenna GAIN.

The omission can mean only one thing - very poor gain at the lower frequencies.

But that is easily corrected by pumping in 10 Kwatts.

2296. Re: 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 19:09:15 UTC
From: theplanters95@aol.comnospam
Message-ID: <20040517150915.28263.00000635@mb-m28.aol.com>
Source record: 95149

Hi Cecil,

Would the coil act as a trap and only the first 32 ft be used on the other bands?

2297. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 20:02:19 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gsk1vF63fqiU1@uni-berlin.de>
Source record: 95150

"Reg Edwards" wrote>
> No need to make measurements. If you are unable to make a simple
calculation
> and answer the question then you are not qualified to continue the
> discussion.

How convenient. Why _would_ you want to make measurements, and prove
yourself wrong?

2298. Re: HF VHF UHF LOG PERIODIC 20 TO 1.2 GHZ

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 20:12:45 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <w09qc.38108$%o1.32172@lakeread03>
Source record: 95151

Must be interesting as the rear elements start approaching
odd-multiples of the wavelength of the operating frequency..

"Kevin & Natalia Mitchell" <sparcman@hotmail.com> wrote in message
news:40a83b77$1@news.iconz.co.nz...
> Maybe once you have sold it you might be willing to post the plans for the
> antenna??
> Sorry I am unable to bid on it, cost for shipping is too high.
>
> Kevin ZL1UDD
>
> "Fumper" <fumper@aol.com> wrote in message
> news:20040511072528.12117.00000014@mb-m26.aol.com...
> > SEE THIS ON EBAY
> > http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2244030632
>
>

2299. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 20:16:22 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <f67ia0l6re0c9m9161bbngrhpm48aot341@4ax.com>
Source record: 95152

On Mon, 17 May 2004 06:36:43 -0500, "Richard Fry" <rfry@adams.net>
wrote:
>If you have no reason to doubt what I wrote about this, how can you continue
>to support what you wrote? Our statements are mutually exclusive.

Ah Richard!!

Tell me, please, this is the FIRST time you have read our master fence
sitter (in the American historical context otherwise known as a
Mugwump: someone who has his mug on one side of the fence and his wump
on the other).

73's
Richard Clark, KB7QHC

2300. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 20:24:33 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gslbkF69ra2U1@uni-berlin.de>
Source record: 95153

Reg,

You sent the 2nd post below within ten minutes of the 1st one below.

Exactly WHAT is your position on this subject?

- RF

"Reg Edwards" wrote first:
>>
> No need to make measurements. If you are unable to make a simple
>calculation and answer the question then you are not qualified to
>continue the discussion.

AND THEN, quoting Lord Kelvin:

>"When you can measure what you are speaking about and express
>it in numbers you know something about it. But when you cannot
>measure it, when you cannot express it in numbers, your knowledge
>is of a meagre and unsatisfactory kind. It may be the beginning of
>knowledge but you have scarcely in your thoughts advanced to the
>state of science."

2301. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 20:30:15 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gslmcF5oqmhU1@uni-berlin.de>
Source record: 95154

"Richard Clark" wrote
>
> Tell me, please, this is the FIRST time you have read our master
> fence sitter (in the American historical context otherwise known as a
> Mugwump: someone who has his mug on one side of the fence and
> his wump on the other).

No, which is the prime reason I chose to confront him.

- RF

2302. Re: HF VHF UHF LOG PERIODIC 20 TO 1.2 GHZ

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 21:01:29 UTC
From: fractenna@aol.com
Message-ID: <20040517170129.11380.00001758@mb-m18.aol.com>
Source record: 95155

>Must be interesting as the rear elements start approaching
>odd-multiples of the wavelength of the operating frequency..
>

Many ways to deal with this. Shorting is one.

73,
Chip N1IR

2303. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 22:27:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gqeia01irl3bjr3heok99ijbh9r78s2s8j@4ax.com>
Source record: 95156

On Mon, 17 May 2004 15:02:19 -0500, "Richard Fry" <rfry@adams.net>
wrote:

>"Reg Edwards" wrote>
>> No need to make measurements. If you are unable to make a simple
>calculation
>> and answer the question then you are not qualified to continue the
>> discussion.
>_________________
>
>How convenient. Why _would_ you want to make measurements, and prove
>yourself wrong?

Ah Richard!

Confrontation? Feeble at best when I doubt you could even get his
recipe for RF Mud. ;-)

Poor Reggie can quote Dead White Scientists like Lord Kelvinator with
high dudgeon and still ignore the tenet of the plagiarized message.

73's
Richard Clark, KB7QHC

2304. Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 22:55:13 UTC
From: jgboyles@aol.com
Message-ID: <20040517185513.12062.00001698@mb-m02.aol.com>
Source record: 95157

Hi,
Since much has been made of the pros and cons of the B&W dipole or T2FD, I thought it would be interesting to see if other amateurs have managed to homebrew one of these. The B&W costs $200 USD. Seems like one could make something that has the same amount of inefficiency for a lot less dollars. Maybe use resistance wire (nichrome?), or connect a light bulb at the feedpoint. The Isotron has been mentioned, but it costs too much. Any ideas?
73 Gary N4AST

2305. Re: 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 23:10:23 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40A9465F.C922EF29@uci.edu>
Source record: 95162

Cecil Moore wrote:
>
> Jim Kelley wrote:
> >
> > Cecil Moore wrote:
> >>This is one of tricks that Mother Nature plays on us hams. XL goes
> >>the "wrong" way with frequency but (pardon my Russian) "tough shitsky",
> >>that's the only way it goes.
> >
> > Could a loading coil be used more like a trap?
>
> Traps are a different subject. Self-resonant coils should only
> be used at a current minimum point. IMO, they are much too lossy
> to be used at a current maximum point.

But a trap needn't be any more self-resonant and lossy that a loading coil. A loading coil could function as both if it were in the proper position for the upper band(s). No?

73, Jim AC6XG

2306. Re: 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 23:18:43 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a94917_2@corp.newsgroups.com>
Source record: 95159

Jim Kelley wrote:
>
> Cecil Moore wrote:
>>This is one of tricks that Mother Nature plays on us hams. XL goes
>>the "wrong" way with frequency but (pardon my Russian) "tough shitsky",
>>that's the only way it goes.
>
> Could a loading coil be used more like a trap?

Traps are a different subject. Self-resonant coils should only
be used at a current minimum point. IMO, they are much too lossy
to be used at a current maximum point.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2307. Re: HF VHF UHF LOG PERIODIC 20 TO 1.2 GHZ

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 23:19:30 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <6Mbqc.25515$6f5.2537650@attbi_s54>
Source record: 95158

Uncle Peter wrote:

> Must be interesting as the rear elements start approaching
> odd-multiples of the wavelength of the operating frequency..
>
>

LPs don't care!!

They are a driven array and fed from the shortest wavelength. So, as the active region becomes resonant the RF Power is radiated by the active region. The portion of the energy that 'sneaks by' the active region is negligible.

Check the Tennadyne site: <http://www.tennadyne.com> and the ARRL Antenna Handbook.

2308. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 23:55:35 UTC
From: jgboyles@aol.com
Message-ID: <20040517195535.12062.00001704@mb-m02.aol.com>
Source record: 95160

>Take a dummy load and attach a piece of wire on some kind of a windup
>system. To increase the efficiency, let out more wire and vice versa.

Good Idea, and we want to decrease efficiency, so the wind-up system may just may be what is needed. What I was looking for is antenna materials that decrease efficiency.
If we could come up with something as bad as the B&W dipole for a lot less money, then we may have something.
73 Gary N4AST

2309. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-17 23:56:05 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40A95115.8355B3FE@uci.edu>
Source record: 95166

JGBOYLES wrote:
>
> >Take a dummy load and attach a piece of wire on some kind of a windup
> >system. To increase the efficiency, let out more wire and vice versa.
>
> Good Idea, and we want to decrease efficiency, so the wind-up system may just
> may be what is needed. What I was looking for is antenna materials that
> decrease efficiency.
> If we could come up with something as bad as the B&W dipole for a lot less
> money, then we may have something.
> 73 Gary N4AST

Kite string and a lawn sprinkler? :-)

73, jk ac6xg

2310. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 00:09:41 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <4eqdnQsgtNmkyTTdRVn-sw@comcast.com>
Source record: 95161

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20040517185513.12062.00001698@mb-m02.aol.com...
> Hi,
> Since much has been made of the pros and cons of the B&W dipole or T2FD,
I
> thought it would be interesting to see if other amateurs have managed to
> homebrew one of these. The B&W costs $200 USD. Seems like one could make
> something that has the same amount of inefficiency for a lot less dollars.
> Maybe use resistance wire (nichrome?), or connect a light bulb at the
> feedpoint. The Isotron has been mentioned, but it costs too much. Any
ideas?
> 73 Gary N4AST

Try this: a 16 Ohm resistor in series with each side of the dipole, and a
100 Ohm resistor across the feedpoint. Unless I messed up, this will give
you SWR =< 2:1 for all conditions including shorted, and absent dipoles.
Tam/WB2TT

2311. Re: 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 00:41:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a95c6f_7@corp.newsgroups.com>
Source record: 95163

Jim Kelley wrote:
>
> Cecil Moore wrote:
>>Traps are a different subject. Self-resonant coils should only
>>be used at a current minimum point. IMO, they are much too lossy
>>to be used at a current maximum point.
>
> But a trap needn't be any more self-resonant and lossy that a loading
> coil. A loading coil could function as both if it were in the proper
> position for the upper band(s). No?

I'm not sure about "both". It's more than obvious that a resonant
coil+cap will (almost) always be more efficient than a self-resonant
coil.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2312. Re: HF VHF UHF LOG PERIODIC 20 TO 1.2 GHZ

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 00:44:08 UTC
From: fractenna@aol.com
Message-ID: <20040517204408.22305.00000880@mb-m20.aol.com>
Source record: 95164

>LPs don't care!!
>
>They are a driven array and fed from the shortest wavelength. So, as the
>active region becomes resonant the RF Power is radiated by the active
>region. The portion of the energy that 'sneaks by' the active region is
>negligible.
>
>Check the Tennadyne site: <http://www.tennadyne.com> and the ARRL
>Antenna Handbook.
>

Actually Dave, it is a problem in some LPDA's:-). The self scaling of the active region can degrade without a fix on some designs. Most commercial LPDA's, such as the itty bitty WLAN LPDA's, have an inductive via as a short to stop the back-resonance.

I'm sure they talk about this in one of the Antenna Compendiums. I can recall the discussion but not the volume.

73,
Chip N1IR

2313. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 00:45:19 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40a95d62_7@corp.newsgroups.com>
Source record: 95165

Tam/WB2TT wrote:
> Try this: a 16 Ohm resistor in series with each side of the dipole, and a
> 100 Ohm resistor across the feedpoint. Unless I messed up, this will give
> you SWR =< 2:1 for all conditions including shorted, and absent dipoles.

Why stop there? A single Bird Termaline will guarantee a 1:1 SWR over a
1:100 frequency range.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2314. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 01:13:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A96354.E9B156D8@cwis.net>
Source record: 95167

David,
Huh! I would have sworn that was just what was asked.
'Doc

2315. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 01:28:16 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <SqGdnSYBOsA5-zTdRVn-jg@comcast.com>
Source record: 95168

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40a95d62_7@corp.newsgroups.com...
> Tam/WB2TT wrote:
> > Try this: a 16 Ohm resistor in series with each side of the dipole, and
a
> > 100 Ohm resistor across the feedpoint. Unless I messed up, this will
give
> > you SWR =< 2:1 for all conditions including shorted, and absent dipoles.
>
> Why stop there? A single Bird Termaline will guarantee a 1:1 SWR over a
> 1:100 frequency range.

But mine will actually radiate. Efficiency could easily be 33% for some
dipole lengths/frequency combinations.
Tam
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2316. Re: 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 01:41:58 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40A969E6.6212771@uci.edu>
Source record: 95169

Cecil Moore wrote:
>
> Jim Kelley wrote:
> >
> > Cecil Moore wrote:
> >>Traps are a different subject. Self-resonant coils should only
> >>be used at a current minimum point. IMO, they are much too lossy
> >>to be used at a current maximum point.
> >
> > But a trap needn't be any more self-resonant and lossy that a loading
> > coil. A loading coil could function as both if it were in the proper
> > position for the upper band(s). No?
>
> I'm not sure about "both".

What would it take to get you to be sure about it?

> It's more than obvious that a resonant
> coil+cap will (almost) always be more efficient than a self-resonant
> coil.

And I though it more than obvious that a series inductor could function
as a low pass filter.

73, Jim ac6xg

2317. W8JI "shines" at Hamvention

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 02:01:47 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040517220147.19642.00001118@mb-m03.aol.com>
Source record: 95170

I was "privileged" to be a witness to more "wisdom" from the antenna "guru"
W8JI at the Dayton Hamvention Antenna forum.
Based on his "unshakable" knowledge that current in the antenna loading coil is
constant, he proclaimed that it doesn't matter where the loading coil in the
antenna is, on the bottom, middle or close to the top.

Yuri

2318. Re: W8JI "shines" at Hamvention

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 03:12:18 UTC
From: * <*@*.com>
Message-ID: <2gtd8dF6gglnU1@uni-berlin.de>
Source record: 95071

Does make a big difference, no current at the top!
The wire ends there, so current must stop.
Most current typically near the bottom, and feed, but can be higher up
depending upon bands.
Perhaps he is addressing the degenerate cases of antenna very long, and
antenna too short?

"Yuri Blanarovich" <k3bu@aol.comNoUsama> wrote in message
news:20040517220147.19642.00001118@mb-m03.aol.com...
> I was "privileged" to be a witness to more "wisdom" from the antenna
"guru"
> W8JI at the Dayton Hamvention Antenna forum.
> Based on his "unshakable" knowledge that current in the antenna loading
coil is
> constant, he proclaimed that it doesn't matter where the loading coil in
the
> antenna is, on the bottom, middle or close to the top.
>
> Yuri
>
>

2319. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 04:16:34 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <D6gqc.43706$pJ1.15936@lakeread02>
Source record: 95072

"R. David Steele" wrote in message

> Remember that the military does two things. One is NVIS which
> has the antenna mounted about 1/4 wavelength above ground. This
> gives a good ground effect from 2 MHz to 12 MHz out to 300 miles.
>
> The other is ALE, automatic link, which switches frequencies
> automatically to insure the best path. An antenna with tuner
> would just be too slow.

David, even for purposes of this discussion, that is a bit oversimplified. Perhaps that type of broadband temporary antenna installation is acceptable for field units, but I never noticed one of them in a permanent (U.S.) installation. I happen to be around several hundred HF antenna installations, and neither NVIS nor ALE operating units use anything of the kind. Maybe you were referring to field units, as above, not sure. Also, ATU/couplers are always used for ALE systems, with the memory-response times measured in milliseconds. This applies to air, ground and marine units for all armed services. There is no magic antenna for all bands ALE, and units using NVIS would have little need for ALE. That doesn't
mean the military hasn't wasted money on it somewhere for short range use, it just wouldn't realize it's potential for reliable medium to long range linking.

73,

Jack Painter
Virginia Beach, Va

2320. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 04:33:21 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86iseu5p7y.fsf@duchess.twilley.org>
Source record: 95073

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Mike" == Mike Coslo <mjc5@psu.edu> writes:

[... David mentioned B&W antennas ...]

Doc> David, The bottom line is that it's a terrible 'amateur' antenna
Doc> for the price. 'Doc

Jack> Out of curiosity, what other antenna provides a better
Jack> cost-benefit ratio while maintaining the same constraints with
Jack> respect to power, size, and construction?

Mike> Hmmm, How about an Isotron? 8^) Man, there is a small antenna!

They're too spooky for me. I don't understand how they work.

Mike> If you take the bands that the B&W performs adequately on, the
Mike> size ratio between it an a halfwave dipole isn't quite so
Mike> good. I suppose the FD that is most comparable to my antenna is
Mike> the BWD 90. It's 90 feet, as we might figure. My dipole is 96
Mike> feet.

I guess it depends on what you consider "adequate". If your 96-ft
dipole provides comparable SWR matches across all the bands the B&W
antennas allegedly provide, that'd be pretty impressive. Like the
other poster, I noticed that there were no gain figures in the B&W
literature, and that does make me suspicious.

Mike> My dipole cost less than 30 dollars to make. If you count the
Mike> tuner, I still spent less money.

Sure, so did I. And my antenna was messed up the following spring,
due to stretched wire, water leaking into critical bits, and more. If
you spent less than thirty dollars and used copperweld or stainless
steel, then I'd like to know what trucks that wire falls off so I can
chase them around town.

Mike> - Mike KB3EIA -

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

```
iD8DBQFAqZIWGPFSfAB/ezgRAvFkAJ9zTZ4ZD9qTOoceEi5ICQwBhk6C1ACgiKev
Zr1I+ORR6RZutXp2ypQiKvI=
=ybp2
-----END PGP SIGNATURE-----
```

2321. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 05:05:09 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40A99985.6848877A@cwis.net>
Source record: 95074

```
Jack,
'AES' has copperweld, 18 ga., 250 feet, about $18.00. No
idea where to find stainless steel wire, don't need it...
'Doc
```

2322. Re: 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 06:18:17 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0405172218.15a43c3a@posting.google.com>
Source record: 95075

> > Could a loading coil be used more like a trap?
>
> Traps are a different subject. Self-resonant coils should only
> be used at a current minimum point. IMO, they are much too lossy
> to be used at a current maximum point.

IMHO a trap behaves like a disconnection (high series impedance) at its resonant frequency, effectively shortening the antenna wire. It behaves as a loading coil at any lower frequency. For example a trapped 40 + 80 metres dipole is shorter than a full-size single-band 80 metres one due to the loading effect of the traps. The losses in a trap on LOWER THAN RESONANT frequencies are an issue, of course - the trap is placed off a minimum current point at these frequencies ! Maybe coax traps (e.g. http://members.shaw.ca/ve6yp/CoaxTrap.html) would be fine ?

73 Ivan OK1SIP

2323. Re: shorted 1/8 wave transmission line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 06:54:52 UTC
From: no_mail@here.com
Message-ID: <40a9b314.10491653@news.west.earthlink.net>
Source record: 95076

Hi Roy, see you're still at it! Just stopped by to say
hello; hope you're doing well.

Regards,
Jack
WB3U

On Tue, 11 May 2004 17:55:48 -0700, Roy Lewallen
<w7el@eznec.com> wrote:

>The impedance would be +j50 ohms, that is, 50 ohms of

2324. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 08:18:31 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <P0zPQlJXbcqAFA5O@ifwtech.co.uk>
Source record: 95077

Reg Edwards wrote:
>Richard,
>
>A radio amateur, by an easy mistake, uses a 75-ohm plug and socket in a
>50-ohm coaxial transmission system. The total length of the plug plus
>socket is 1"
>
>As a result of the mismatch what is the SWR produced on the 50-ohm line at 2
>MHz. At 30 MHz? At 150 MHz?
>
>Is the amateur, or anyone else, likely to be aware of any difference in
>performance?
>

The practical answer for amateurs is somewhere between the two extreme positions that Richard and Reg are taking.

Richard quotes a case where even very small impedance bumps do matter; but it's in full-quality TV broadcasting, not amateur radio.

Reg, on the other hand, wants to dumb it down too far. There *are* cases in amateur radio where small impedance bumps are at least noticeable.

At 2MHz or 30MHz, the effect is so small that no amateur would notice it. Even using professional test equipment, you'd be hard-pressed to measure the effect of a single connector of the wrong impedance.

At 150(144)MHz, even a single connector is noticeable... but that's not the problem.

The real problem is that if people believe a simple slogan like "connector impedances don't matter", they will probably go ahead and use *several* mismatched connectors, at various places along the line.

Then they start to find bewildering problems at 144MHz and above, such as indicated SWR and power output values that vary according to the length of the coax jumpers that they use. It still may not matter in terms of the contacts they can make, but they are completely unable to understand what is happening - and that *does* matter!

(What is happening, by the way, is that the lengths of the line sections between the mismatched connectors will determine how the small reflections from each one combine together. If you're lucky with the line lengths, they may tend to cancel; if you're not, they may tend to add... and usually it's somewhere in between.)

>No need to make measurements.

In this particular case, that's true. When the impedance bump is small,
it is easier and more accurate to calculate the effect than to measure
it.

--
73 from Ian G3SEK
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

2325. Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 08:26:59 UTC
From: Claude Frantz <r31dmaeu@unibw-muenchen.de>
Message-ID: <40a9c8d4$1@news.unibw-muenchen.de>
Source record: 95078

Some years ago experiments have be done using trees as antennas. Where
can I find references about ? Do fellows here known about the results ?

Claude

2326. Re: W8JI "shines" at Hamvention

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 10:13:50 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405180213.3e77fc93@posting.google.com>
Source record: 95079

k3bu@aol.comNoUsama (Yuri Blanarovich) wrote in message
news:<20040517220147.19642.00001118@mb-m03.aol.com>...
> I was "privileged" to be a witness to more "wisdom" from the antenna "guru"
> W8JI at the Dayton Hamvention Antenna forum.
> Based on his "unshakable" knowledge that current in the antenna loading coil is
> constant, he proclaimed that it doesn't matter where the loading coil in the
> antenna is, on the bottom, middle or close to the top.
>
> Yuri

I bet that includes a large capacity hat though. If he is using a large hat, what he says is true. If he is not using a hat, it is not true. And I'm sure he knows that. Any current taper through the coil in itself, has little bearing on the best location of the coil and performance. Taper, or no taper, it's location will greatly effect efficiency when NO hat is used. No doubt about it. But, if you are using a large hat, what he says is fairly true. The location of the coil really doesn't matter near as much, because the current distribution is fairly linear even with the coil at the base, middle or top. There might be slight improvements by raising the coil on a large hatted system, but it will be minor compared to the no-hat version. MK

2327. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 10:30:57 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405180230.5aa56015@posting.google.com>
Source record: 95082

Dan Richardson <<ChangeThisToCallSign>@mendolink.com> wrote in message
news:<3asha0hjfb2llh87hjagra0h4fr3pg0t2o@4ax.com>...
> On Mon, 17 May 2004 10:42:49 -0500, richardharrison@webtv.net (Richard
> Harrison) wrote:
> [snip]
> >Power varies as the square of the voltage. One can see the difference in
> >the field strength is hardly worth the effort for an amateur to try to
> >increase the length of his antenna. It`s about a 3 dB gain from 1/4-wave
> >to 5/8 wave.
> [snip]
>
> The 3 dB gain figure is valid when mounted on theoretical perfect
> ground. For a ground-plane elevated above real ground you'll find the
> gain to be rarely greater than 1 dB.

Dunno. My real world tests don't quite agree. In using 30 mile ground
wave tests across town, I tested 1/4 GP's, 1/2 waves including
decoupling sections, and a 5/8 GP with 3/4 wave radials. All at 36 ft.
The 5/8 ate the 1/4 GP for lunch. Probably 2 plus S units better than
the 1/4 GP. The 5/8 beat the 1/2 wave by 1.5 S units. And this was
tested and repeated over a period of months. Never varied. Ground wave
testing is quite stable, and accurate for those low angles involved.
Much more accurate than trying to compare using constantly varying
skywaves. In real world gains, thats more than 1 db. 5/8 antennas are
weird animals. On 2m, they suck. On HF, they can do fairly well, cuz
the angles involved are not as critical. I used a 5/8 GP on 17m for
2-3 years. "also at 36 ft at the base".
It mangled every other antenna I had on that band. On 10m, the 5/8
beat any other length radiator quite handily. Again, on the critical
2m band, peeeyooooo.....they stink. BTW, on skywave, using a quick A/B
test, all preferred the 5/8, over the other antennas. So it wasn't a
low angle ground wave fluke. MK

2328. Re: 10.512MHZ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 10:53:00 UTC
From: lethal <sa.ukspamtrap@virgin.net>
Message-ID: <GNmqc.131$gB5.24@newsfe3-win.server.ntli.net>
Source record: 95080
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,alt.radio.uk,rec.radio.amateur.antenna,rec.radio.scanner,uk.radio.amateur

i expect this is old news now but as an addition bit of info to this incase anyone is interested go to this like
http://www.cvni.net/radio/e2k/ and click on backward music station

--

****
i want to die peacefully in my sleep , same as my grandad - not like his passengers,all screaming and shouting
****
"zpk" <zpk_pkearn_class_a@multi_band_cb_is_here.eircom.es.it.net> wrote in message news:40a9387d.17818707@news1.eircom.net...
> On Sun, 16 May 2004 22:10:28 +0000 (UTC), "Stu"
> <samalex@eidosnet.co.uk> wrote:
>
> >BETELGEUSE (Alpha Orionis). The great star Betelgeuse is one of the two that
> >dominate mighty Orion of winter, the other Rigel, the pair respectively
> >called Alpha and Beta Orionis.
>
>
> ahhhh the auld days...
>
> me(kid) with me cheap plastic binoculars and me ladybird book
> of the sky at night....
>
>

2329. Re: 10.512 MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 10:55:47 UTC
From: lethal <sa.ukspamtrap@virgin.net>
Message-ID: <hQmqc.132$gB5.91@newsfe3-win.server.ntli.net>
Source record: 95081
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,alt.radio.uk,rec.radio.amateur.antenna,rec.radio.scanner,uk.radio.amateur

forget my last posting....

this is the link. http://dspace.dial.pipex.com/brogers/page6.html

follow this and listen to the sound clip

--

****
****
i want to die peacefully in my sleep , same as my grandad - not like his passengers,all screaming and shouting
****
****
"Duncan Munro" <postmaster@duncanamps.com> wrote in message news:1w0lbz96e8g7d.1t5m3oc1p9dxh.dlg@40tude.net...
> I've had an email from the OM tonight, "Have a listen on 10.512 MHz (USB).
> What do you make of it?"
>
> It sounds like 'nightmare music' from a low budget film - does anyone know
> what on earth it is?
>
> --
> Duncan Munro M0KGK
> http://amateur.duncanamps.com/
> BOF #023 FISTS #10815

2330. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 13:19:50 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405180519.7539441c@posting.google.com>
Source record: 95083

Dan Richardson <<ChangeThisToCallSign>@mendolink.com> wrote in message
news:<3asha0hjfb2llh87hjagra0h4fr3pg0t2o@4ax.com>...
> On Mon, 17 May 2004 10:42:49 -0500, richardharrison@webtv.net (Richard
> Harrison) wrote:
> [snip]
> >Power varies as the square of the voltage. One can see the difference in
> >the field strength is hardly worth the effort for an amateur to try to
> >increase the length of his antenna. It`s about a 3 dB gain from 1/4-wave
> >to 5/8 wave.
> [snip]
>
> The 3 dB gain figure is valid when mounted on theoretical perfect
> ground. For a ground-plane elevated above real ground you'll find the
> gain to be rarely greater than 1 dB.
>
> Modeling 1/4 & 5/8-wave ground planes at 30 feet above ground (@ 24
> MHz) as was described earlier NEC reports the following maximum gain:
>
> 1/4-wave 2.35 dB
>
> 5/8-wave 3.06 dB

Then howcum my 5/8 wave mag mount 2m mobile antenna very significantly
outperforms the 1/4 wave mag mount antenna I used to use? Same ground
condx, same power, same feeder length, same vehicle, etc. I suspect
it's in the differences in the TO angles.

> 73
> Danny, K6MHE

Brian w3rv

2331. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 13:37:19 UTC
From: joyce <joyce@nospam.com>
Message-ID: <40AA118E.A42F7FCD@nospam.com>
Source record: 95084

hi claude,

since trees have a lot of water in them, they do not make good antennas.

joyce.

Claude wrote:

> Some years ago experiments have be done using trees as antennas. Where
> can I find references about ? Do fellows here known about the results ?
>
> Claude

2332. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 13:58:22 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <o9udnZyNdMjlizfdRVn-vA@comcast.com>
Source record: 95085

"Claude Frantz" <r31dmaeu@unibw-muenchen.de> wrote in message
news:40a9c8d4$1@news.unibw-muenchen.de...
> Some years ago experiments have be done using trees as antennas. Where
> can I find references about ? Do fellows here known about the results ?
>
> Claude

they are fractal, I think someone might sue you for infringement. :)

2333. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 13:59:19 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8d4rngqh1@hercules.btinternet.com>
Source record: 95086

Let's do what nobody has ever done before, not even in the ARRL handbooks or in Terman, and get an idea of the magnitudes involved.

Examine two cases over a range of frequencies.

Case (1). In a 50-ohm system, use of a poor connector having an impedance deviating 10 percent from its nominal value of 50 ohms.

Case (2). Making the mistake of using a 75-ohm connector in a 50-ohm system.

In both cases the connector, plug and socket, is 1" (25.4mm) long.

We first calculate the input impedance of a 75-ohm transmission line, 1" long, terminated with 50 ohms. Zin will not be very much different from 50 ohms.

We then calculate the SWR on a 50-ohm line which is terminated by the afore-mentioned input impedance.

RESULTS of calculation

MHz	SWR Case 1	SWR Case 2
2	1.0002	1.0009
30	1.0028	1.0146
150	1.014	1.073
300	1.029	1.145
1000	1.105	1.524

It is seen that results do not become significant to a radio amateur, and almost everybody else, until he has made the serious mistake of using the wrong impedance connector, and the frequency has risen to 1000 MHz for which he hasn't an SWR meter anyway.

Below 300 MHz the results are submerged well beneath the uncertainty of an SWR meter. Now we can take a balanced view of the situation.

Reg, G4FGQ

2334. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 14:35:23 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <d_Gdnf73t9qCgjfdRVn-sA@comcast.com>
Source record: 95087

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c8d4rngqh1@hercules.btinternet.com...
> Let's do what nobody has ever done before, not even in the ARRL handbooks
or
> in Terman, and get an idea of the magnitudes involved.
>
> Examine two cases over a range of frequencies.
>
> Case (1). In a 50-ohm system, use of a poor connector having an impedance
> deviating 10 percent from its nominal value of 50 ohms.
>
> Case (2). Making the mistake of using a 75-ohm connector in a 50-ohm
> system.
>
> In both cases the connector, plug and socket, is 1" (25.4mm) long.
>
> We first calculate the input impedance of a 75-ohm transmission line, 1"
> long, terminated with 50 ohms. Zin will not be very much different from
50
> ohms.
>
> We then calculate the SWR on a 50-ohm line which is terminated by the
> afore-mentioned input impedance.
>
> RESULTS of calculation
>
> MHz SWR Case 1 SWR Case 2
> ------ ----------------- ----------------
> 2 1.0002 1.0009
> 30 1.0028 1.0146
> 150 1.014 1.073
> 300 1.029 1.145
> 1000 1.105 1.524
>
> It is seen that results do not become significant to a radio amateur, and
> almost everybody else, until he has made the serious mistake of using the
> wrong impedance connector, and the frequency has risen to 1000 MHz for
which
> he hasn't an SWR meter anyway.
>
> Below 300 MHz the results are submerged well beneath the uncertainty of an
> SWR meter. Now we can take a balanced view of the situation.
> ----
> Reg, G4FGQ

>
>
Reg,

I suspect your 1 inch length is overly pessimistic. Clearly, for an F connector, it is more like 1/2 inch. Lastly, if the load at the end is not 50.0, then any small deviation in the feedline could just as well improve things, as make it worse; this is probably not true for pulses or video. Think of an antenna tuner. It does nothing to the SWR on the main piece of line.

Tam/WB2TT

2335. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 15:19:13 UTC
From: Rick Karlquist N6RK <richard@karlquist.removethis.com>
Message-ID: <RPpqc.72454$536.11756705@attbi_s03>
Source record: 95088

Been there, done that, many times. If the vertical is
a half wave, you can just use the shield of the coax
feeding it as the little bit of counterpoise you need.
In direct A/B comparisons to quarter wave verticals
over good ground screens, the no ground vertical
half wave is so close in performance you can't measure
the difference.

Coil loss is not an issue if you use the proper coil.

Rick N6RK

"larry d clark" <buddycl@swbell.net> wrote in message
news:ftaoc.26400$iD7.16433@newssvr22.news.prodigy.com...
> in a never ending quest to acquire antenna knowledge
> i've been doing some reading of a paper back book
> by a well know antenna guru who's now a sk.
> he claims that if a vertical antenna is fed at it's base
> with a parallel resonant l/c circuit and tapped on the
> inductor to to get an appropriate swr match, it's
> rf ground can be no more than a 3'x3' screen combined
> with a rod in the ground.
>
> in my mind, this seems to be something for nothing. if true
> why do i read about the importance of having a number
> of radials?
>
> questions, comments, pronouncements from the gurus on high
> most welcome. brickbats & complaints, etc 2>&1 /dev/null
>
> larry
> kd5foy
>
>

2336. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:02:30 UTC
From: Jerry <joxendi@bellsouth.net>
Message-ID: <9oqqc.634$YB6.274@bignews3.bellsouth.net>
Source record: 95089

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40a95d62_7@corp.newsgroups.com...
> Tam/WB2TT wrote:
> > Try this: a 16 Ohm resistor in series with each side of the dipole, and
a
> > 100 Ohm resistor across the feedpoint. Unless I messed up, this will
give
> > you SWR =< 2:1 for all conditions including shorted, and absent dipoles.
>
> Why stop there? A single Bird Termaline will guarantee a 1:1 SWR over a
> 1:100 frequency range.
> --
> 73, Cecil http://www.qsl.net/w5dxp

I got a B & W Dummy Load/Wattmeter. Would that do? LOL?

Jerry

>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2337. Back to the drawing board....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:07:34 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40AA34C5.A81B2614@sonic.net>
Source record: 95090

I didn't do a great engineering job on my first 50' mast, just one of 5 I will be eventually putting up for a loop skywire. Now I will have to take this one down and do it right (big headache). Anyone know a good source (good prices), for those high quality nautical type pulleys? What is best type of wire for guys?

Meanwhile I did finally get on the air with my 80M OCF up 35', got over some initial mic shyness, and hopefully will go back for more, after I brush up on not sounding like a lid.

Bill K6TAJ

2338. The best HF dipole antenna ever invented

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:10:42 UTC
From: vk3kcg <nospam>
Message-ID: <40aa3576$0$31680$afc38c87@news.optusnet.com.au>
Source record: 95091

I purchased one of these and I cant get over the performance.All bands and
NO TUNER!

http://dxantennas.com

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.687 / Virus Database: 448 - Release Date: 17/05/2004

2339. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:11:15 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40AA35A2.FA2E5748@sonic.net>
Source record: 95092

How about a couple of Pole Beans fed from the middle, as they grow you can tune longer bands.

Bill K6TAJ

Claude Frantz wrote:

> Some years ago experiments have be done using trees as antennas. Where
> can I find references about ? Do fellows here known about the results ?
>
> Claude

2340. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:23:52 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gpcka09r4gvmitpqfjahmf3oht8j0qhdcf@4ax.com>
Source record: 95093

On Tue, 18 May 2004 08:58:22 -0500, "Dave VanHorn"
<dvanhorn@cedar.net> wrote:

>they are fractal,

Which then leads to one of many entries to this explicit topic found
in:
http://groups.google.com/groups?hl=en&lr=&ie=UTF-8&threadm=19970120003701.TAA23186%40ladde
r01.news.aol.com&rnum=9&prev=/groups%3Fq%3Dtree%2Bgroup:rec.radio.amateur.antenna%26hl%3De
n%26lr%3D%26ie%3DUTF-8%26as_drrb%3Db%26as_mind%3D12%26as_minm%3D5%26as_miny%3D1981%26as_ma
xd%3D18%26as_maxm%3D5%26as_maxy%3D1998%26selm%3D19970120003701.TAA23186%2540ladder01.news.
aol.com%26rnum%3D9

>>Yes; I knew when I made rocks and trees into antennas I was going to get
>>some flack.
which served ego rather more than technical discussion.

This thread still remains as one of the most comic pieces published in
this group and worth reading the 59 entries. Where the comedy lapses
into technical content (rare), it provides specific information about
plants and RF interaction. I am glad to have run into specific
conductivities comparisons showing how the vaunted "conductivity" of
sea water is 200000 times worse than nichrome (or 10000000 times worse
than copper).

This one was not the only thread confined to this topic, but I would
wager all the rest amount to tedious repetition of the usual
population count of angels on a pin-head.

73's
Richard Clark, KB7QHC

2341. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:24:06 UTC
From: Caveat Lector <CV@zimo.net>
Message-ID: <GMqqc.69477$Fl5.9261@okepread04>
Source record: 95094

By hearsay and legend -- In W W 1, an Army Field manual recommended feeding
a tree for an antenna when the real antennas were shot down.

Since I am not aware of any 50 ohm trees (hi-hi), probably use ladder line
and a tuner.

And remember, as an old timer discovered when he loaded his bed springs ---
RF GOTTA GO SOMEWHERE

Let us know which trees worked best (:-)

--
Caveat Lector Ya All

"Amateur Radio is the best back-up
communications system in the world,
and that's the way it is." -- Walter Cronkite

"zeno" <zeno@sonic.net> wrote in message news:40AA35A2.FA2E5748@sonic.net...
> How about a couple of Pole Beans fed from the middle, as they grow you can
> tune longer bands.
>
>
> Bill K6TAJ
>
>
>
> Claude Frantz wrote:
>
> > Some years ago experiments have be done using trees as antennas. Where
> > can I find references about ? Do fellows here known about the results ?
> >
> > Claude
>

2342. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:24:40 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gurnbF6rnrjU1@uni-berlin.de>
Source record: 95095

Reg,

Your math example does not illustrate the >> reality << that the impedance change produced by a ~5/8" OD brass pin inserted radially into the dielectric space of coaxial transmission line can match that line into an adjacent termination of fairly high SWR (1.3:1 or so), at frequencies as low as 54MHz.

As I wrote earlier, this technique is widely and successfully used to match the main transmission line of broadcast TV and FM stations to the net input impedance of their antenna (including its input elbows).

- RF

2343. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:29:46 UTC
From: Vito <vito@crosslink.net>
Message-ID: <40aa39fb$0$6525@dingus.crosslink.net>
Source record: 95096

I agree completely. Question is, if modeling and prediction is so unreliable
why do we bother?

"Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
news:jb5ka0l0mvbfmu9rdjg3j6j803r0jvjv6v@4ax.com...
> On 18 May 2004 06:19:50 -0700, kelly@dvol.com (Brian Kelly) wrote:
>
> >Then howcum my 5/8 wave mag mount 2m mobile antenna very significantly
> >outperforms the 1/4 wave mag mount antenna I used to use? ....
>
> My previous response was for a ground plan antenna mounted above
> ground and you are addressing a mobile installation. They are different.
>
> ... I found that the vehicle's size, shape and whip location
> plays a major part in performance.
>
> .... it was possible to find azimuth directions that a 5/8-wave would
> produced almost 3 db gain over itself ....
>
> I don't feel you can accurately predict how a the whips will perform
> on a vehicle based upon operation on another vehicle....

2344. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:45:43 UTC
From: Caveat Lector <CV@zimo.net>
Message-ID: <X4rqc.14667$65.13684@lakeread06>
Source record: 95097

Well -- I have found that modelling gets you in the ball park (an
approximation)
A good SWR meter will allow you to tweak it up.

For 1/4 wave vs 5/8 wave 2M antennas -- I have found empirically -- that
when in an area surriunded by big mountain tops -- like Silicon Valley in
the CA Bay area -- the 1/4 wave works better due to its higher angle of
radiation of the 1/4 wave

When on the open road where terrain is flat and the mountains are far
away -- the 5/8 wave works best -- lower angle of radiation.

This is just my empirical observation --- your radiation angle may vary --
hi hi.

--
Caveat Lector Ya All

"Amateur Radio is the best back-up
communications system in the world,
and that's the way it is." -- Walter Cronkite

"Vito" <vito@crosslink.net> wrote in message
news:40aa39fb$0$6525@dingus.crosslink.net...
> I agree completely. Question is, if modeling and prediction is so
unreliable
> why do we bother?
>
> "Dan Richardson @mendolink.com>" <<ChangeThisToCallSign> wrote in message
> news:jb5ka0l0mvbfmu9rdjg3j6j803r0jvjv6v@4ax.com...
> > On 18 May 2004 06:19:50 -0700, kelly@dvol.com (Brian Kelly) wrote:
> >
> > >Then howcum my 5/8 wave mag mount 2m mobile antenna very significantly
> > >outperforms the 1/4 wave mag mount antenna I used to use? ....
> >
> > My previous response was for a ground plan antenna mounted above
> > ground and you are addressing a mobile installation. They are different.
> >
> > ... I found that the vehicle's size, shape and whip location
> > plays a major part in performance.
> >
> > .... it was possible to find azimuth directions that a 5/8-wave would
> > produced almost 3 db gain over itself ....
> >
> > I don't feel you can accurately predict how a the whips will perform
> > on a vehicle based upon operation on another vehicle....

>
>
>

2345. Spam! Was: The best HF dipole antenna ever invented

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 16:51:45 UTC
From: Minnie Bannister <GoonButNotForgotten@NottheBBC.org>
Message-ID: <10akfp23r5oclcf@corp.supernews.com>
Source record: 95098

This is strange: The contact email address for this company includes the
callsign of the person who posted this link claiming to have purchased
one of these oh-so-wonderful antennas.

What a compelling unsolicited testimonial!

Alan AB2OS

On 05/18/04 12:10 pm vk3kcg put fingers to keyboard and launched the
following message into cyberspace:

> I purchased one of these and I cant get over the performance.All bands and
> NO TUNER!
>
> http://dxantennas.com

2346. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 17:03:58 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40AA41FE.9030007@psu.edu>
Source record: 95099

Jack Twilley wrote:
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
>
>>>>>>"Mike" == Mike Coslo <mjc5@psu.edu> writes:
>>>>>
>
> [... David mentioned B&W antennas ...]
>
> Doc> David, The bottom line is that it's a terrible 'amateur' antenna
> Doc> for the price. 'Doc
>
> Jack> Out of curiosity, what other antenna provides a better
> Jack> cost-benefit ratio while maintaining the same constraints with
> Jack> respect to power, size, and construction?
>
> Mike> Hmmm, How about an Isotron? 8^) Man, there is a small antenna!
>
> They're too spooky for me. I don't understand how they work.

No majik there, they work about as well as you would expect an antenna
that size to work. That is, not very well. They look cool though!

> Mike> If you take the bands that the B&W performs adequately on, the
> Mike> size ratio between it an a halfwave dipole isn't quite so
> Mike> good. I suppose the FD that is most comparable to my antenna is
> Mike> the BWD 90. It's 90 feet, as we might figure. My dipole is 96
> Mike> feet.
>
> I guess it depends on what you consider "adequate". If your 96-ft
> dipole provides comparable SWR matches across all the bands the B&W
> antennas allegedly provide, that'd be pretty impressive. Like the
> other poster, I noticed that there were no gain figures in the B&W
> literature, and that does make me suspicious.

Right, the two antennas are not quite comparable. I have to use a tuner
on my antenna. But that really isn't a handicap IMO. I contest with my
rig, and although I have to be careful on 80 meters, I can change bands
and set the knobs to their proper positions in just a couple seconds.

> Mike> My dipole cost less than 30 dollars to make. If you count the
> Mike> tuner, I still spent less money.
>
> Sure, so did I. And my antenna was messed up the following spring,

> due to stretched wire, water leaking into critical bits, and more. If
> you spent less than thirty dollars and used copperweld or stainless
> steel, then I'd like to know what trucks that wire falls off so I can
> chase them around town.

Never used copperweld, except for twinlead. You can get it pretty
easily though.

The trick with regular copper is to pre-stretch it. You get a helper or
two on each end, and give a good steady pull to stretch it.

And yeah, Mother Nature can be a b***h sometimes. My dipole has been up
over 2 years now, and is still surviving. That is probably as much luck
as my construction genius! 8^) I'll be taking it down for some
modifications - I'm going to lengthen it so I can tune 80 meters better,
so I'll see soon how the plastic parts held up.

I think what I am driving at here is that everything comes at a price,
some monetary, some functional. Antennas like the B&W FD are great if
you want minimal fuss. That comes at a price in performance though. I
went real cheap. The price I pay is using a tuner. That doesn't bother
me at all - I'm an inveterate knob twiddler!

- Mike KB3EIA -

2347. Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 17:09:48 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40AA435C.3050707@psu.edu>
Source record: 95100

I recently bought several toroids, and unfortunately, one of them dropped and broke in half.

Is it possible to super glue the thing back together? It's a clean break.

I was figuring that since toroid coils are often stacked, it would be similar in effect.

- Mike KB3EIA -

2348. Re: 10.512 MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 17:10:43 UTC
From: * <*@*.com>
Message-ID: <2guuchF7b7ibU1@uni-berlin.de>
Source record: 95105
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,alt.radio.uk,rec.radio.amateur.antenna,rec.radio.scanner,uk.radio.amateur

Strange sound, not heterodynes. SSB can do some funny stuff demodulating a
shifting (other type of) modulated carrior.

"lethal" <sa.ukspamtrap@virgin.net> wrote in message
news:hQmqc.132$gB5.91@newsfe3-win.server.ntli.net...
> forget my last posting....
>
> this is the link. http://dspace.dial.pipex.com/brogers/page6.html
>
> follow this and listen to the sound clip
>
> --
>
>
>
****
****
> i want to die peacefully in my sleep , same as my grandad - not like his
passengers,all screaming and shouting
>
****
****
> "Duncan Munro" <postmaster@duncanamps.com> wrote in message
news:1w0lbz96e8g7d.1t5m3oc1p9dxh.dlg@40tude.net...
> > I've had an email from the OM tonight, "Have a listen on 10.512 MHz
(USB).
> > What do you make of it?"
> >
> > It sounds like 'nightmare music' from a low budget film - does anyone
know
> > what on earth it is?
> >
> > --
> > Duncan Munro M0KGK
> > http://amateur.duncanamps.com/
> > BOF #023 FISTS #10815
>
>

2349. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 17:36:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <vmhka0dlmtnnlt04q122hj2r1dm4nt0oem@4ax.com>
Source record: 95101

On Tue, 18 May 2004 12:29:46 -0400, "Vito" <vito@crosslink.net> wrote:
>I agree completely. Question is, if modeling and prediction is so unreliable
>why do we bother?
>
Hi OM,

There is modeling, and then there are modelers. 99.9% of errors are found with the second. A simple example that explains the illusion of disparity may be tested with the free version of EZNEC (as is generally the case).

Model a ground plane antenna at ground level (or simply an inch or cm above it); and then raise the same antenna a quarter wave (not so difficult to manage at these breathless reports from VHF-land).

Difference approaches 6dB for this trivial exercise alone. Models answer the differences quite well, modelers can be found in commercials wearing lab coats saying "I'm not a doctor, but...."

73's
Richard Clark, KB7QHC

2350. Re: Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 17:37:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qdika0547r5fud3jbpp3tnjc5poig3kka8@4ax.com>
Source record: 95102

On Tue, 18 May 2004 13:09:48 -0400, Mike Coslo <mjc5@psu.edu> wrote:
>Is it possible to super glue the thing back together? It's a clean break.
Yes, split cores work quite well too.

2351. Re: Spam! Was: The best HF dipole antenna ever invented

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 17:47:46 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <6%rqc.279$Tn6.156@newsread1.news.pas.earthlink.net>
Source record: 95103

Are you saying (sudden intake of air) he bought one from *himself*?

"Minnie Bannister" <GoonButNotForgotten@NottheBBC.org> wrote in message
news:10akfp23r5oclcf@corp.supernews.com...
> This is strange: The contact email address for this company includes the
> callsign of the person who posted this link claiming to have purchased
> one of these oh-so-wonderful antennas.
>
> What a compelling unsolicited testimonial!
>
> Alan AB2OS
>
>
> On 05/18/04 12:10 pm vk3kcg put fingers to keyboard and launched the
> following message into cyberspace:
>
> > I purchased one of these and I cant get over the performance.All bands
and
> > NO TUNER!
> >
> > http://dxantennas.com

2352. Re: Spam! Was: The best HF dipole antenna ever invented

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 17:55:50 UTC
From: "paulfriedman@comcast.net" <p.paulfriedman@comcast.net>
Message-ID: <C6sqc.1432$zw.460@attbi_s01>
Source record: 95104

No, that is impossible, John, as it would be against the rules of this user group. The only possible explanation is that VK3KCG fell in love with this magic radiator so much that he simply had to buy the company. Of course, this purchase happened BETWEEN his testimonial and when Alan saw his callsign on the web site.

A little simple deductive reasoning solved the problem.

Paul AB0SI

"The other John Smith" <jocjo-john@yooha.com> wrote in message news:6%rqc.279$Tn6.156@newsread1.news.pas.earthlink.net...
> Are you saying (sudden intake of air) he bought one from *himself*?
>
>
> "Minnie Bannister" <GoonButNotForgotten@NottheBBC.org> wrote in message
> news:10akfp23r5oclcf@corp.supernews.com...
> > This is strange: The contact email address for this company includes the
> > callsign of the person who posted this link claiming to have purchased
> > one of these oh-so-wonderful antennas.
> >
> > What a compelling unsolicited testimonial!
> >
> > Alan AB2OS
> >
> >
> > On 05/18/04 12:10 pm vk3kcg put fingers to keyboard and launched the
> > following message into cyberspace:
> >
> > > I purchased one of these and I cant get over the performance.All bands
> and
> > > NO TUNER!
> > >
> > > http://dxantennas.com
>
>

2353. TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 18:17:10 UTC
From: F8BOE <f8boe-8@bluemail.ch>
Message-ID: <40aa52ff$0$9355$636a15ce@news.free.fr>
Source record: 95106

No, I've got the best miracle antenna... And it needs no tuner on the frequency it is set!

I invented the dummy load too!

"vk3kcg" <nospam> a écrit dans le troll de news:40aa3576$0$31680$afc38c87@news.optusnet.com.au...
> I purchased one of these and I cant get over the performance.All bands and
> NO TUNER!
>
> http://dxantennas.com
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.687 / Virus Database: 448 - Release Date: 17/05/2004
>
>

2354. Re: 80 m short end feed

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 18:19:51 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40aa548e_6@corp.newsgroups.com>
Source record: 95107

Jim Kelley wrote:
> What would it take to get you to be sure about it?

If "loading coil" and "trap" had the same definition?

> And I thought it more than obvious that a series inductor could function
> as a low pass filter.

My point exactly. Hence the previous rule of thumb
stated two different ways.

1. Don't use a 75m loading coil while operating on
higher frequencies.

2. Don't use a low-pass filter on *operating* frequencies
above its passband.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2355. Re: Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 18:42:34 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40AA591A.2010605@psu.edu>
Source record: 95110

Richard Clark wrote:
> On Tue, 18 May 2004 13:09:48 -0400, Mike Coslo <mjc5@psu.edu> wrote:
>
>>Is it possible to super glue the thing back together? It's a clean break.
>
> Yes, split cores work quite well too.

Ahh, Thanks Richard. I guess it's the ham in me, but I hate to waste anything!

- Mike KB3EIA -

2356. Re: W8JI "shines" at Hamvention

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 18:47:31 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40aa5b0a$1_6@corp.newsgroups.com>
Source record: 95108

Yuri Blanarovich wrote:
> Based on his "unshakable" knowledge that current in the antenna loading coil is
> constant, ...

Strange, every measured experiment he himself conducted on real-world
air-core coils proved that the current at each end of the coil is NOT
constant.

Did he say if one puts the loading coil at the top of the antenna,
with no stinger, currents at the top of the coil and bottom of the
coil are equal?

When will otherwise rational engineers stop trying to use circuit
model math on distributed network problems? The current in a standing-
wave antenna wire is NOT constant, varies inch by inch, and that's a
straight piece of wire. So if we use more wire coiled up, the current
then becomes constant magnitude/phase and instantaneous? (faster than
light?) To speed up computer buses all we have to do is install coils
in series?

Did you notice W8JI changed his web page? The once outrageous statements
have been considerably modified.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2357. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 18:49:34 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8dlru$5um$1@sparta.btinternet.com>
Source record: 95109

> Your math example does not illustrate the >> reality << that the impedance
> change produced by a ~5/8" OD brass pin inserted radially into the
> dielectric space of coaxial transmission line can match that line into an
> adjacent termination of fairly high SWR (1.3:1 or so), at frequencies as
> low as 54MHz.
>
==========

It's not intended to.

But I'm sure you are right. Try not to worry about it.

2358. Great Dangling Dipoles!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 18:50:35 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40AA5AFB.4050301@psu.edu>
Source record: 95111

I have a dipole hung from trees in my yard. I am going to lengthen my dipole by hanging more wire off the end. Will I be better off to run the wires to other trees, kind of creating a Z shape, or a C shape, or is it just as well to allow the ends to dangle?

- Mike KB3EIA -

2359. Re: Spam! Was: The best HF dipole antenna ever invented

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 18:57:19 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40aa5d55$1_6@corp.newsgroups.com>
Source record: 95112

Minnie Bannister wrote:
> This is strange: The contact email address for this company includes the
> callsign of the person who posted this link claiming to have purchased
> one of these oh-so-wonderful antennas.

Hope he got a good discount. :-)

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2360. Re: Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 18:59:30 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40aa5dd9_6@corp.newsgroups.com>
Source record: 95113

Mike Coslo wrote:

> I recently bought several toroids, and unfortunately, one of them
> dropped and broke in half.
>
> Is it possible to super glue the thing back together? It's a clean
> break.

I use a very tight tie wrap around the outside.
--
73, Cecil http://www.qsl.net/w5dxp

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2361. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 19:08:17 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40aa5fe9_6@corp.newsgroups.com>
Source record: 95114

F8BOE wrote:

> No, I've got the best miracle antenna... And it needs no tuner on the
> frequency it is set!
>
> I invented the dummy load too!
>
> "vk3kcg" <nospam> a ï¿½crit dans le troll de
> news:40aa3576$0$31680$afc38c87@news.optusnet.com.au...
>
>>I purchased one of these and I cant get over the performance.All bands and
>>NO TUNER!

I've had antennas that I couldn't get over the performance.
Of course, it was because the performance was so bad. :-)
A certain 40m vertical with elevated radials comes to mind.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2362. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 19:16:54 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <Gitqc.27456$zq4.1859598@twister.southeast.rr.com>
Source record: 95115

"Jack Twilley" <jmt+usenet@twilley.org> wrote in message
news:86hdui712g.fsf@duchess.twilley.org...
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Richard" == Richard Clark <kb7qhc@comcast.net> writes:

Jack> I am interested in people who have first-hand experience with a
Jack> full-length dipole mounted at the full height for any particular
Jack> band. A 10M dipole is full-sized if it's the full length and
Jack> mounted at the full height. Ditto for 160M.

Richard> Describe your needs first, and then ask what would be
Richard> reasonable.

Jack> I hope the clarification above is enough -- if not, please let
Jack> me know.

Richard> Hi Jack,

Richard> This is still inspecific. "Full height" is actually
Richard> meaningless. Let's look at a 40M dipole antenna and choose a
Richard> modest 20° launch angle to compare against. 5M over real
Richard> ground: -2dBi 10M over real ground: 1.29dBi 15M over real
Richard> ground: 3.75dBi 20M over real ground: 6.27dBi 25M over real
Richard> ground: 8.08dBi 30M over real ground: 7.67dBi 35M over real
Richard> ground: 7.1dBi 40M over real ground: 7.52dBi

Where did the twenty-degree launch angle come from?

Richard> Well, let's see - best gain is NOT at any cardinal point such
Richard> as quarter wave, half wave, three quarter, nor full wave
Richard> above ground ANY of which "could" be interpreted as "full
Richard> height."

I'm not familiar with twenty-degrees as any particular canonical
value. As for what I meant by "full height", one-quarter wavelength
minimum should serve.

Richard> This exercise is easily within the limited feature set of the
Richard> free distribution of EZNEC.

I do not doubt that your calculations are within the capabilities of
EZNEC. However, I'm more interested in real-life experience, not
computer-generated simulations.

EZNEC will probably give you a better idea of whats going on than anecdotal
opinions. There of course is always the GiGo factor but this applies to both

computer and human analysis alike.

2363. Re: Great Dangling Dipoles!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 19:38:27 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8donj$c90$1@sparta.btinternet.com>
Source record: 95116

"Mike Coslo" wrote
> I have a dipole hung from trees in my yard. I am going to lengthen my
> dipole by hanging more wire off the end. Will I be better off to run the
> wires to other trees, kind of creating a Z shape, or a C shape, or is it
> just as well to allow the ends to dangle?
>
> - Mike KB3EIA -
>
==========

Depending on how much longer your antenna will be, you may notice a modest improvement in signal strengths on the lowest frequency band. But you might notice a small decrease in signal strengths on the highest frequency band. On the other hand, you may notice nothing at all except a change in tuner settings. But a change in tuner settings can be beneficial.

I would prefer a Z or C shape. This maintains a high average height for the antenna and so increases the probabilty of improvement in signal strengths.

The directions in which the ends are extended will have a slight effect on radiation patterns which you will NOT be aware of. As your dipole is non-rotatable it won't matter anyway. For practical purposes, taking one band with another, you can still refer your antenna as being omni-directional.

Reciprocity ensures whatever happens on receive will apply equally to transmit.

Reg, G4FGQ

2364. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 19:41:42 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405181141.862b8c9@posting.google.com>
Source record: 95117

Wait a minute here... Seems to me that Reg is talking about two opposing steps separated by a very short distance, and Richard is talking about a single step from one impedance to another. Clearly, Richard's case results in uncancelled echos related to the ratio of the impedances at the step. In fact, Reg's example results in significant uncancelled echos if the steps are separated by enough distance: worst at odd multiples of pi/2 electrical degrees. When the connector is only perhaps a few electrical degrees long, the steps nearly cancel. How long is 1", in electrical degrees? Well, at 1000MHz and a v.f. of perhaps 0.7, longer than one might have anticipated: almost 45 degrees long. So in fact at 1000MHz, a 1" section of 51.5 ohm connector might introduce a bit more than 1.03:1 SWR. But didn't we start out talking about a much lower frequency, and a much larger impedance difference? Another example I ran was 4 electrical degrees of connector...perhaps a bit less than an inch at 150MHz...where it's 75 ohms in a 50 ohm system. The swr for that came out about 1.06:1.

The TV broadcast engineer should worry about things like that. The typical ham doesn't have equipment calibrated accurately enough that s/he should be worried about it, and it's unlikely to make any substantive difference anyway in typical ham work.

Cheers,
Tom

"Richard Fry" <rfry@adams.net> wrote in message news:<2grme0F60m4tU1@uni-berlin.de>...
> "Reg Edwards" wrote
> > Richard, I have no reason to doubt anything you say.
> > I have no reason to doubt what I have said.
> > But why imply there's serious disagreement when there is none?
> ----------
>
> RE: Clips from our previous posts (below) -
>
> I don't know what constitutes a "serious disagreement" to you, Reg, but I
> think most readers would say that we have opposite conclusions about this
> topic.
>
> If you have no reason to doubt what I wrote about this, how can you continue
> to support what you wrote? Our statements are mutually exclusive.
>
> YOU: "Provided the mechanical connection is sound, you can use any coaxial
> connectors you like, regardless of nominal impedance, at frequencies less
> than about 300 MHz without any observed ill effects. A connector less than

> 1" long of impedance 51.5 ohms in a 50 ohm system will NOT produce an SWR of
> 1.03:1 or anything anywhere near to it at frequencies less than 1000 MHz."
>
> ME: "This PRACTICAL experience illustrates that an impedance change even in
> a 54-60MHz TV channel occurring within a physical space of less than one
> inch can produce important and commercially supportable system benefits,
> despite your statements quoted above."
>
> - RF

2365. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 19:45:12 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405181145.d3cecee@posting.google.com>
Source record: 95118

Dan Richardson <<ChangeThisToCallSign>@mendolink.com> wrote in message
news:<jb5ka0l0mvbfmu9rdjg3j6j803r0jvjv6v@4ax.com>...
> On 18 May 2004 06:19:50 -0700, kelly@dvol.com (Brian Kelly) wrote:
>
> >Then howcum my 5/8 wave mag mount 2m mobile antenna very significantly
> >outperforms the 1/4 wave mag mount antenna I used to use? Same ground
> >condx, same power, same feeder length, same vehicle, etc. I suspect
> >it's in the differences in the TO angles.
> >
>
> My previous response was for a ground plane antenna mounted above
> ground and you are addressing a mobile installation. They are
> different.

Agreed.

> I've done modeling of 1/4,1/2 and 5/8-wave whips using several wire
> grid models for vehicles (small and mid-sized car, small pickup truck
> and a SUV). I found that the vehicle's size, shape and whip location
> plays a major part in performance.

No surprise there although my instincts tell me that once some number
of "critical" square feet of vehicle sheet metal is "achieved" the
size of the vehicle has a less pronounced effect particulary at VHF
and UHF freqs. But modeling has the annoying ability to deflate
instincts.

> I also noted, on the average, the 5/8 produce a slight gain over all,
> but it was possible to find azimuth directions that a 5/8-wave would
> produced almost 3 db gain over itself - depending what vehicle it was
> mounted on.

That would easily explain my offhand experiences. In fact I did it
again last weekend. An buddy of mine is temporarily laid up in a
skilled care facility so I got his home 2M FM station running in his
room. I installed his 1/4 wave magmount whip on one of those typical
steel-shrouded HVAC units often found under the windows of patient
rooms. He couldn't hit the repeater. I went back later and installed
my 5/8 wave whip and yup, now he can hit the repeater.

> The most outstanding feature I saw was a 5/8-wave whip azimuth pattern
> was less influenced by the vehicle geometry.
>
> The operation is more like a lop-sided dipole with the vehicle body
> being on leg.
>

> I don't feel you can accurately predict how a the whips will perform
> on a vehicle based upon operation on another vehicle - unless both
> vehicles and the antenna locations are the same.
>
> I should add for all models the whips where placed top-dead-center of
> the vehicle's roof.

100% agreed and it all fits. Tnx.
>
> 73,
> Danny, K6MHE

Brian w3rv

2366. Re: Spam! Was: The best HF dipole antenna ever invented

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 19:46:44 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8dp74jfd1@titan.btinternet.com>
Source record: 95119

It must be his very first antenna if he knows of nothing else to beat it.

2367. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 19:53:49 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40AA69CD.4746FEDF@cwis.net>
Source record: 95120

...Hmm. Now, if you could figure a way to use 'kudzoo'(sp)...
'Doc

2368. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 20:05:37 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8dqah$m7c$1@titan.btinternet.com>
Source record: 95021

> Why do you feel modeling is "so unreliable"?
>
==========

Because 99.99 percent of models are never properly tested in practice and in an anateur's back yard, if they WERE tested, the radiation patterns would only bear a vague resemblance to predictions.

Predictions are mostly wishful thinking. Nevertheless, they can be a satisfying intellectual activity.

Reg.

2369. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 20:06:54 UTC
From: dplatt@radagast.org
Message-ID: <10akr6u7fn80p32@corp.supernews.com>
Source record: 95022

>...Hmm. Now, if you could figure a way to use 'kudzoo'(sp)...
> 'Doc

Yeah, kudzu could have some advantages. Lots of it available, and
you'd probably end up with a dense-fractal design.

It'd have the disadvantage of de-tuning itself every day or so, due to
the rapid growth, unless you transmit with enough power to burn off
the growing tips. Lends a new meaning to "pruning your antenna".

The three rules of growing kudzu:

- Although it's capable of growing on solid concrete, it'll do
somewhat better if there's at least a little soil in the mix.

- Always plant kudzu at night, by the dark of the moon. Otherwise,
your neighbors might figure out what you're doing, and start
throwing rocks at you.

- Fertilization is not required. However, the kutzu vines will
definitely appreciate having the bottoms of the smaller leaves
lubricated with 10W40 motor oil - this reduces abrasion and chafing
when the vines grow rapidly across the ground.

[Taken from an old Whole Earth Catalog]

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2370. Re: W8JI "shines" at Hamvention

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 20:09:21 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40AA6D71.5433B732@uci.edu>
Source record: 95023

Cecil Moore wrote:
> The current in a standing-
> wave antenna wire is NOT constant, varies inch by inch, and that's a
> *straight* piece of wire.

Or more precisely, the amplitude of the mathematical superposition of
forward and reverse traveling wave currents in a half-wave dipole
antenna varies inch by inch.
It is the EM fields produced by the traveling wave currents that in fact
superpose. That superposition results in a net field which is identical
to the field which would be produced if a 'standing wave current' could
in fact radiate.

> Did you notice W8JI changed his web page? The once outrageous statements
> have been considerably modified.

I've noticed fewer of them on your web page as well, Cecil. Perhaps the
world is coming to equilibrium. :-)

73, Jim AC6XG

2371. Re: Great Dangling Dipoles!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 20:37:00 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40AA73EC.6090801@psu.edu>
Source record: 95024

Reg Edwards wrote:
> "Mike Coslo" wrote
> > I have a dipole hung from trees in my yard. I am going to lengthen my
>
>>dipole by hanging more wire off the end. Will I be better off to run the
>>wires to other trees, kind of creating a Z shape, or a C shape, or is it
>>just as well to allow the ends to dangle?
>>
>>- Mike KB3EIA -
>>
>
> ============================
>
> Depending on how much longer your antenna will be, you may notice a modest
> improvement in signal strengths on the lowest frequency band. But you might
> notice a small decrease in signal strengths on the highest frequency band.
> On the other hand, you may notice nothing at all except a change in tuner
> settings. But a change in tuner settings can be beneficial.

That is the main thing I am trying to do. The tuning is pretty sharp on 80-75 meters. (the dipole is 96 feet at present) It works okay, but since I am going to experiment with higher powers, it seemed like a more forgiving tuner environment might be a big plus. Plus of course not having to use as much inductance.

> I would prefer a Z or C shape. This maintains a high average height for the
> antenna and so increases the probabilty of improvement in signal strengths.

Makes sense.

> The directions in which the ends are extended will have a slight effect on
> radiation patterns which you will NOT be aware of. As your dipole is
> non-rotatable it won't matter anyway. For practical purposes, taking one
> band with another, you can still refer your antenna as being
> omni-directional.
>
> Reciprocity ensures whatever happens on receive will apply equally to
> transmit.
> ----
> Reg, G4FGQ

Thanks much! - Mike KB3EIA -

2372. Re: W8JI "shines" at Hamvention

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 20:39:03 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40AA7467.5040406@psu.edu>
Source record: 95025

Cecil Moore wrote:
> Yuri Blanarovich wrote:
>
>> Based on his "unshakable" knowledge that current in the antenna
>> loading coil is
>> constant, ...
>
>
> Strange, every measured experiment he himself conducted on real-world
> air-core coils proved that the current at each end of the coil is NOT
> constant.
>
> Did he say if one puts the loading coil at the top of the antenna,
> with no stinger, currents at the top of the coil and bottom of the
> coil are equal?
>
> When will otherwise rational engineers stop trying to use circuit
> model math on distributed network problems? The current in a standing-
> wave antenna wire is NOT constant, varies inch by inch, and that's a
> *straight* piece of wire. So if we use more wire coiled up, the current
> then becomes constant magnitude/phase and instantaneous?

I'm worried - even I understand that!

- Mike KB3EIA -

2373. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 20:51:30 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gvba3F7bnuhU1@uni-berlin.de>
Source record: 95026

I won't "worry about it," as long as you refrain from posting absolute statements about this that are demonstrably untrue.

- RF

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message news:c8dlru$5um$1@sparta.btinternet.com...
>
> > Your math example does not illustrate the >> reality << that the impedance
> > change produced by a ~5/8" OD brass pin inserted radially into the
> > dielectric space of coaxial transmission line can match that line into an
> > adjacent termination of fairly high SWR (1.3:1 or so), at frequencies as
> > low as 54MHz.
> >
> ============================
>
> It's not intended to.
>
> But I'm sure you are right. Try not to worry about it.

2374. Re: Spam! Was: The best HF dipole antenna ever invented

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 21:06:36 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40aa7ba2_4@corp.newsgroups.com>
Source record: 95027

Reg Edwards wrote:
> It must be his very first antenna if he knows of nothing else to beat it.

Reg, he didn't even say whether the performance was good or bad.
I have been surprised at the performance of bad antennas. :-)
--
73, Cecil http://www.qsl.net/w5dxp

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2375. Re: W8JI "shines" at Hamvention

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 21:16:15 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40aa7de6_4@corp.newsgroups.com>
Source record: 95028

Jim Kelley wrote:

> Cecil Moore wrote:
>>The current in a standing-
>>wave antenna wire is NOT constant, varies inch by inch, and that's a
>>*straight* piece of wire.
>
> Or more precisely, the amplitude of the mathematical superposition of
> forward and reverse traveling wave currents in a half-wave dipole
> antenna varies inch by inch.
> It is the EM fields produced by the traveling wave currents that in fact
> superpose.

Of course, I was referring to *net* current which is a superposition
of forward and reflected currents, or H-fields if you prefer. The bottom
line is that if magnitude and phase vary inch by inch in a straight piece
of wire used in a standing-wave antenna, are we to believe that the variation
can be reduced by adding more wire, just in a spiral?

>>Did you notice W8JI changed his web page? The once outrageous statements
>>have been considerably modified.
>
> I've noticed fewer of them on your web page as well, Cecil. Perhaps the
> world is coming to equilibrium. :-)

My web page problem is the definition of the reflection coefficient.
RHO and S11 have different definitions. Stand by for an explanation that
even you can understand. :-)
--
73, Cecil http://www.qsl.net/w5dxp

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2376. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 21:31:17 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86n0454e3e.fsf@duchess.twilley.org>
Source record: 95029

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Mike" == Mike Coslo <mjc5@psu.edu> writes:

[...]

Mike> I think what I am driving at here is that everything comes at a
Mike> price, some monetary, some functional. Antennas like the B&W FD
Mike> are great if you want minimal fuss. That comes at a price in
Mike> performance though. I went real cheap. The price I pay is using
Mike> a tuner. That doesn't bother me at all - I'm an inveterate knob
Mike> twiddler!

I wholeheartedly agree. There's a price to be paid for every setup --
if you're not paying out of your wallet, you're paying out of your
time, or out of your loss of capabilities. It's one of those basic
facts of life. I also went dollar-cheap, and I'm getting what I pay
for. I'm considering going for something like the B&W for my next
location should it be appropriate, to see if I can get my money's
worth out of it. Worst case, it ends up getting sold second-hand on
eBay. Best case, well, we can all dream. :-)

Mike> - Mike KB3EIA -

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAqoCpGPFSfAB/ezgRAiuZAKDPcpJKvKr1eiSj6+4d30dGuCsQaQCg0X/2
v/pEGeHTOHAryu0ry+/QQyw=
=3Y62
-----END PGP SIGNATURE-----

2377. Re: W8JI "shines" at Hamvention

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 21:35:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40AA819C.F97F074C@uci.edu>
Source record: 95030

Cecil Moore wrote:
> Of course, I was referring to *net* current which is a superposition
> of forward and reflected currents, or H-fields if you prefer.

And with H you get E to boot!

> My web page problem is the definition of the reflection coefficient.

Great. I'm interested to read it.

> RHO and S11 have different definitions.

Do you remember when you and I talked about that?

> Stand by for an explanation that
> even you can understand. :-)

That's the best kind! :-)

73, Jim AC6XG

2378. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 21:51:33 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2gveqmF7em06U1@uni-berlin.de>
Source record: 95031

Below is my response to an off-list e-mail I received on this topic, which to some readers may add additional perspective on this topic.

RF

Visit http://rfry.org for FM broadcast RF system papers.

Thanks for your comments.

The reason I chimed in originally was because of Reg's absolute statement that preserving system Z throughout the transmission line and its connectors was unimportant below 1GHz (later 300MHz?). He said further that an impedance change across a 1" length of transmission line was irrelevant in that same spectrum.

That is demonstrably untrue, as I pointed out by a real-world example taken from the broadcast industry.

The net terminating Z of a TV/FM transmit antenna with its input elbows usually is not exactly 50 ohms, even though that is the impedance value that the hardware was designed to provide. Manufacturing, assembly and installation issues can and do change it. The main transmission line normally is closer to 50 ohms across the relevant bandwidth than the antenna/elbow termination connected to the far end of that line.

The Z-matching hardware I described is effective at optimizing this far-end match, it _does_ improve the quality of the radiated signal, and it minimizes the stress on the main transmission line and the transmitter. And it does so by changing the impedance in a 1" or less length of transmission line adjacent to the antenna input, regardless of Reg's beliefs.

Hams operating on the HF bands may not wish or even need to consider this, as I mentioned in an earlier post to this thread. But that is not license for Reg or anyone else to write that such disregard is universally justified.

- RF

2379. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 22:29:52 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40AA8E67.5D7D71AF@shaw.ca>
Source record: 95032

Claude Frantz wrote:
>
> Some years ago experiments have be done using trees as antennas. Where
> can I find references about ? Do fellows here known about the results ?
>
> Claude

If you feed it with fertilizers containing lots of metallic elements, you should end up with a tall metallic pole with built in radials (the roots). You should be able to gamma match it by placing a metallic spike at the appropriate height.
You can trim the branches, however leaving them in place should provide a great deal more bandwidth. When you move, just cut down the tree, but save a few cuttings so that you can grow an antenna farm at the new location. With careful spacing, you might be able to produce some great arrays. I don't know about feeding them with open wire line, but surely Cecil with find a way. You might even be able to sell some of the antenna cuttings on e-bay!

Irv VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

2380. FS at AUCTION: MFJ-224 2M Analyzer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 22:55:32 UTC
From: fractenna@aol.com
Message-ID: <20040518185532.08632.00001478@mb-m11.aol.com>
Source record: 95033

Perfect for antenna testing!

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5700693114&category=467
1&sspagename=STRK%3AMESSE%3AIT&rd=1

73,
Chip N1IR

2381. Re: Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 22:58:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <os4la017dbmqabebodschlqf1vbbkp7qi5@4ax.com>
Source record: 95034

On Tue, 18 May 2004 14:42:34 -0400, Mike Coslo <mjc5@psu.edu> wrote:

>Richard Clark wrote:
>> On Tue, 18 May 2004 13:09:48 -0400, Mike Coslo <mjc5@psu.edu> wrote:
>>
>>>Is it possible to super glue the thing back together? It's a clean break.
>>
>> Yes, split cores work quite well too.
>
> Ahh, Thanks Richard. I guess it's the ham in me, but I hate to waste
>anything!
>
>
> - Mike KB3EIA -

Hi Mike,

The trick is to keep any gaps small. However, if I recall my magnetics right, an air gap, although lowering the magnetic properties (smaller inductance), also extends them (greater dynamic range, harder to saturate). This is the principle behind a "swinging choke." This, however, is not to say that it would offer any benefit to your application. The reason I say this is because ferrites we use for line chokes do not typically support enough flux to saturate in the first place (or if they do, you have one hell of a problem); rather, the ferrite characteristic of bulk resistance is employed and inductance is a fairly trivial side benefit.

73's
Richard Clark, KB7QHC

2382. Re: Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 22:59:26 UTC
From: k7itm@aol.com
Message-ID: <3200347.0405181459.748377d2@posting.google.com>
Source record: 95035

What sort of toroids? If they're powdered iron, it should be no
problem. If they are relatively low mu ferrite, it should be a minor
problem at worst if you keep the glue line thin. If they are mu=6000
toroids, then a thousandth of an inch gap in an inch long path is
quite significant. If you relieved stresses, the break may not fit
back together with "zero" gap; it's something to check. A gap isn't
necessarily bad, just something to consider. In fact, gapped cores
can store more energy than ungapped.

Cheers,
Tom

Mike Coslo <mjc5@psu.edu> wrote in message news:<40AA435C.3050707@psu.edu>...
> I recently bought several toroids, and unfortunately, one of them
> dropped and broke in half.
>
> Is it possible to super glue the thing back together? It's a clean break.
>
> I was figuring that since toroid coils are often stacked, it would be
> similar in effect.
>
> - Mike KB3EIA -

2383. Re: Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 23:28:47 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <P_wqc.32167$6f5.3043717@attbi_s54>
Source record: 95036

YEP!!

Mike Coslo wrote:
> I recently bought several toroids, and unfortunately, one of them
> dropped and broke in half.
>
> Is it possible to super glue the thing back together? It's a clean
> break.
>
> I was figuring that since toroid coils are often stacked, it would
> be similar in effect.
>
> - Mike KB3EIA -
>

2384. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-18 23:50:17 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8e7fp$dt7$1@sparta.btinternet.com>
Source record: 95037

"Dan Richardson wrote >
> >> Why do you feel modeling is "so unreliable"?
> >>
> >>=========================
> >
> >Because 99.99 percent of models are never properly tested in practice and
in
> >an anateur's back yard, if they WERE tested, the radiation patterns would
> >only bear a vague resemblance to predictions.
> >
> >Predictions are mostly wishful thinking. Nevertheless, they can be a
> >satisfying intellectual activity.
> >----
> >Reg.
> >
>
> I see........ Then I assume then that your diagnosis of computer
> modeling applies to your antenna computer programs as well?
>
> Danny
>
==================================

Danny, there's nothing wrong with antenna pattern-prediction progams. There are good nunber-crunched side effects. It's only their practical application by people in their own back yards which is unreliable. It cannot be helped. It's a fact of life. The environment and performance of an antenna cannot be accurately predicted unless it is at a height of several wavelengths above and away from obstructions.

Not a single one of my programs predicts a radiation pattern. Only an exceedingly few professional antenna design engineers would ever make real use of such facilities even if I could write them. I don't like wasting time. I havn't all that amount of time anyway. Nobody has produced a new type of antenna for many decades. (Not even Fractal). It's all been done before.

But, as I say, radiation prediction programs are entertaining, educational and satisfying. Enjoy them while you can.

Nevertheless, unreliable is a fair practical description.

Reg, G4FGQ

2385. Re: F-connectors

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 00:28:52 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8e9o4$q8v$1@hercules.btinternet.com>
Source record: 95038

A QUOTATION:

"When you can measure what you are speaking about and express it in numbers you know something about it. But when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind. It may be the beginning of knowledge but you have scarcely in your thoughts advanced to the state of science."

: William Thomson, Lord Kelvin, 1824-1907.

Think in terms of magnitudes and frequency of occurrence of the effects. One 1" brass slug in a TV transmitting station, even if the subject of a learned paper, is surely of less consequence than millions of amateur and other SWR meters.

Beware of unnecessarily frightening amateurs by inadvertently exaggerating the importance of SWR due to ordinary variation in connector plugs and sockets.

Reg, G4FGQ

2386. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 00:48:15 UTC
From: jgboyles@aol.com
Message-ID: <20040518204815.01933.00001649@mb-m05.aol.com>
Source record: 95039

>Some years ago experiments have be done using trees as antennas. Where
>can I find references about ? Do fellows here known about the results ?

Seems like I remember an article in the 70's in 73 magazine (what else?)
about this very subject. I don't have time to look back thru my old mags., but
I bet the results indicated trees don't work well as antennas. If they did, a
lot more hams would be using them. I don't think I have ever had a contact
with someone using a tree.
73 Gary N4AST

2387. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 01:01:51 UTC
From: Allan Butler <ka0ies@hotmail.com>
Message-ID: <3myqc.32329$6f5.3093488@attbi_s54>
Source record: 95040

F8BOE wrote:

> No, I've got the best miracle antenna... And it needs no tuner on the
> frequency it is set!
>
> I invented the dummy load too!

Oh come on!

Everyone knows that Al Gore invented the dummy load right before he invented the Internet! ;-)

2388. Re: W8JI "shines" at Hamvention

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 01:07:06 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040518210706.21846.00001649@mb-m15.aol.com>
Source record: 95041

>
>Did he say if one puts the loading coil at the top of the antenna,
>with no stinger, currents at the top of the coil and bottom of the
>coil are equal?
>

Not specifically.

>When will otherwise rational engineers stop trying to use circuit
>model math on distributed network problems? The current in a standing-
>wave antenna wire is NOT constant, varies inch by inch, and that's a
>*straight* piece of wire. So if we use more wire coiled up, the current
>then becomes constant magnitude/phase and instantaneous? (faster than
>light?) To speed up computer buses all we have to do is install coils
>in series?
>

When they can read their diplomas, maybe? :-)

>Did you notice W8JI changed his web page? The once outrageous statements
>have been considerably modified.
>--
>73, Cecil http://www.qsl.net/w5dxp
>

No, but I will have a look. I have saved the "before" pages, so it will be interesting to compare. This would be typical of him. First ho goes quiet for a while, then he changes his beliefs, then he emerges as a guru, teaching the stupid about the virtues of his "inventions" (stolen, plagiarized from others.)

When I brought this to attention of K3LR, antenna forum moderator, he countered with "he wins contests and works DX"
and N6BV: "he is right". So I was grounded and dummyfounded :-)

Now that snow melted and I got my Radiomobile's brake lines fixed, I should do the experiments and get some real data and do that article. Just that I got sucked to another project, designing "Dream Radio" that I am more excited, especially after seeing pieces of (radio) furniture by the JA biggies.

I am sorry I missed W7EL booth, would have loved to say HI in person. Just gotta order the upgrade to EZNEC, I can use the new insulated wire modeling feature.

73 Yuri, www.K3BU.us
www.computeradio.us home of Dream Radio One

2389. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 01:14:03 UTC
From: William Warren <william_warren_nonoise@comcast.net>
Message-ID: <vxyqc.74832$536.12162395@attbi_s03>
Source record: 95042

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20040518204815.01933.00001649@mb-m05.aol.com...
> >Some years ago experiments have be done using trees as antennas. Where
> >can I find references about ? Do fellows here known about the results ?
>
> Seems like I remember an article in the 70's in 73 magazine (what else?)
> about this very subject. I don't have time to look back thru my old
mags., but
> I bet the results indicated trees don't work well as antennas. If they
did, a
> lot more hams would be using them. I don't think I have ever had a
contact
> with someone using a tree.
> 73 Gary N4AST

Maybe we can open a new branch of science, and solve some knotty problems.

Please, don't say "What a sap!". This is serious: we've got a trunkful of knowledge here in the group, and we can put the crown on this whole idea.

I'm not just barking at the moon.

Bill

2390. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 01:43:53 UTC
From: fractenna@aol.com
Message-ID: <20040518214353.27526.00001738@mb-m11.aol.com>
Source record: 95043

>Please, don't say "What a sap!". This is serious: we've got a trunkful of
>knowledge here in the group, and we can put the crown on this whole idea.
>
>I'm not just barking at the moon.
>
>Bill
>

Tough finding many different tree species in OK. But everyone enjoys OK's wide open spaces.

73,
Chip N1IR

2391. Re: Back to the drawing board....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 01:52:48 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405181752.3e7acb41@posting.google.com>
Source record: 95044

zeno <zeno@sonic.net> wrote in message news:<40AA34C5.A81B2614@sonic.net>...
> I didn't do a great engineering job on my first 50' mast,
> just one of 5 I will be eventually putting up for a loop
> skywire. Now I will have to take this one down and do it
> right (big headache). Anyone know a good source

http://www.harkenstore.com/uniface.urd/scwlcmw1.showPage

> (good
> prices), for those high quality nautical type pulleys?

Hit the "clearance" menu and surf. Your vison of "good prices" . . ah,
never mind . . I've bought some of their small blocks and they are
defintely a couple cuts above and are worth every dime I spent on 'em.
Despite what they cost . .

> What
> is best type of wire for guys?

Dacron rope.

> Meanwhile I did finally get on the air with my 80M OCF up
> 35', got over some initial mic shyness, and hopefully will go
> back for more, after I brush up on not sounding like a lid.

This'll fix yer mic fright problem.

http://www.wavehunter.com/kentpadl.htm

>
> Bill K6TAJ

w3rv

2392. Re: Great Dangling Dipoles!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 01:53:57 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8eenl$2l4$1@hercules.btinternet.com>
Source record: 95045

> > On the other hand, you may notice nothing at all except a change in
tuner
> > settings. But a change in tuner settings can be beneficial.
>
> That is the main thing I am trying to do. The tuning is pretty sharp on
> 80-75 meters. (the dipole is 96 feet at present) It works okay, but
> since I am going to experiment with higher powers, it seemed like a more
> forgiving tuner environment might be a big plus. Plus of course not
> having to use as much inductance.
>
========================

Mike, because you have a random length dipole you already have an idea of the relative importance of tuner settings. Increasing antenna length nearly always improves tuner efficiency on the lowest frequency band which, very often, is the most used band of an antenna.

Don't concern yourself unduly with actual value of tuner roller inductance. The main problem on the 160m and 80m bands is whether there's enough of it. If you wish to adjust antenna length to any particular value make sure its tunable with whatever the maximum tuner inductance happens to be.

Adjusting length of the transmission line can also be of great help.

I mention this hopefully for the benefit of less-experienced readers.

Reg, G4FGQ

2393. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 02:12:52 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40aac254$0$437$5cbedd26@news.real-time.com>
Source record: 95046

You are only sort of correct.

At HF where the local world is as large as your antenna, that statement is true, at 6m it starts to become less of an issue as the outside world becomes big and somewhat ignorable. At 2m it is quite ignorable, and at 70cm it pretty much isn't there. Yagis I have designed for 432 perform exactly as predicted by the software, with the exception of the ones too long for the antenna range, where the only discrepency was the gain tests a bit lower than the model predicts. And then it was .3 dB on an 18.4 dBd prediction.

It is possible to predict antenna gain and pattern very accurately if you do it at a frequency that does not interact with the local environment to a any large degree. It is also possible to build those antennas and have them perform the same time and time again. I've built dozens of long boom yagis for 2, 222, and 432, and after the first one, you don't even have to measure the SWR before setting the T match shorts unless you are anal or an EME're. Oops, same thing, I guess. ;) And every antenna I've ever range tested (thank you Central States VHF) has been within .1 dB of predicted except one.

The designs I have built over the last 15 years didn't need to be adjusted at all from the model plus predicted boom corrections. The only variable was the matching system on the driven element, which none of the modeling programs handles very well.

And for you picky folks, yes, the losses from foliage, etc. aren't ignorable, but the antenna system still performs as predicted unless you mount it in the center of a tree.

And I do realize I'm preaching to the non-choir here, since this group is (apparently) not very interested in anything above 10m. :)

tom
K0TAR

Reg Edwards wrote:

>>
>
> ==========
>
> Danny, there's nothing wrong with antenna pattern-prediction progams. There
> are good nunber-crunched side effects. It's only their practical application
> by people in their own back yards which is unreliable. It cannot be helped.
> It's a fact of life. The environment and performance of an antenna cannot
> be accurately predicted unless it is at a height of several wavelengths

> above and away from obstructions.
>
> Not a single one of my programs predicts a radiation pattern. Only an
> exceedingly few professional antenna design engineers would ever make real
> use of such facilities even if I could write them. I don't like wasting
> time. I havn't all that amount of time anyway. Nobody has produced a new
> type of antenna for many decades. (Not even Fractal). It's all been done
> before.
>
> But, as I say, radiation prediction programs are entertaining, educational
> and satisfying. Enjoy them while you can.
>
> Nevertheless, unreliable is a fair practical description.
> ----
> Reg, G4FGQ
>
>
>

2394. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 02:20:50 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40aac427$0$437$5cbedd26@news.real-time.com>
Source record: 95047

Oh, I forgot the important bit - I did it in my back yard.

tom
K0TAR

Tom Ring wrote:

> You are only sort of correct.
>
> At HF where the local world is as large as your antenna, that statement
> is true, at 6m it starts to become less of an issue as the outside world
> becomes big and somewhat ignorable. At 2m it is quite ignorable, and at
> 70cm it pretty much isn't there. Yagis I have designed for 432 perform
> exactly as predicted by the software, with the exception of the ones too
> long for the antenna range, where the only discrepency was the gain
> tests a bit lower than the model predicts. And then it was .3 dB on an
> 18.4 dBd prediction.
>
> It is possible to predict antenna gain and pattern very accurately if
> you do it at a frequency that does not interact with the local
> environment to a any large degree. It is also possible to build those
> antennas and have them perform the same time and time again. I've built
> dozens of long boom yagis for 2, 222, and 432, and after the first one,
> you don't even have to measure the SWR before setting the T match shorts
> unless you are anal or an EME're. Oops, same thing, I guess. ;) And
> every antenna I've ever range tested (thank you Central States VHF) has
> been within .1 dB of predicted except one.
>
> The designs I have built over the last 15 years didn't need to be
> adjusted at all from the model plus predicted boom corrections. The
> only variable was the matching system on the driven element, which none
> of the modeling programs handles very well.
>
> And for you picky folks, yes, the losses from foliage, etc. aren't
> ignorable, but the antenna system still performs as predicted unless you
> mount it in the center of a tree.
>
> And I do realize I'm preaching to the non-choir here, since this group
> is (apparently) not very interested in anything above 10m. :)
>
> tom
> K0TAR
>
> Reg Edwards wrote:
>

>
>>>
>>
>> ===================================
>>
>> Danny, there's nothing wrong with antenna pattern-prediction progams.
>> There
>> are good nunber-crunched side effects. It's only their practical
>> application
>> by people in their own back yards which is unreliable. It cannot be
>> helped.
>> It's a fact of life. The environment and performance of an antenna
>> cannot
>> be accurately predicted unless it is at a height of several wavelengths
>> above and away from obstructions.
>>
>> Not a single one of my programs predicts a radiation pattern. Only an
>> exceedingly few professional antenna design engineers would ever make
>> real
>> use of such facilities even if I could write them. I don't like wasting
>> time. I havn't all that amount of time anyway. Nobody has produced a
>> new
>> type of antenna for many decades. (Not even Fractal). It's all been done
>> before.
>>
>> But, as I say, radiation prediction programs are entertaining,
>> educational
>> and satisfying. Enjoy them while you can.
>>
>> Nevertheless, unreliable is a fair practical description.
>> ----
>> Reg, G4FGQ
>>
>>
>>
>

2395. Re: Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 02:33:29 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <B5OdnR6IIY7IWjfdRVn-gg@adelphia.com>
Source record: 95048

Tom Bruhns wrote:
> What sort of toroids? If they're powdered iron, it should be no
> problem. If they are relatively low mu ferrite, it should be a minor
> problem at worst if you keep the glue line thin.

They are the powedered iron type. I'll give it a shot, and see what
happens.

If they are mu=6000
> toroids, then a thousandth of an inch gap in an inch long path is
> quite significant. If you relieved stresses, the break may not fit
> back together with "zero" gap; it's something to check. A gap isn't
> necessarily bad, just something to consider. In fact, gapped cores
> can store more energy than ungapped.

73, de Mike KB3EIA -

2396. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 02:49:48 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <8KCdnb8xvJnWVjfdRVn-sA@adelphia.com>
Source record: 95049

Allan Butler wrote:

> F8BOE wrote:
>
>
>>No, I've got the best miracle antenna... And it needs no tuner on the
>>frequency it is set!
>>
>>I invented the dummy load too!
>
>
> Oh come on!
>
> Everyone knows that Al Gore invented the dummy load right before he invented
> the Internet! ;-)

References pleeze re: inventing the internet?

- Mike KB3EIA -

2397. Re: Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 02:59:02 UTC
From: Gary Schafer <gaschafer@comcast.net>
Message-ID: <t5jla0dea4kbr502kosqd191a51k1oiueu@4ax.com>
Source record: 95050

On Tue, 18 May 2004 22:58:15 GMT, Richard Clark <kb7qhc@comcast.net>
wrote:

>On Tue, 18 May 2004 14:42:34 -0400, Mike Coslo <mjc5@psu.edu> wrote:
>
>>Richard Clark wrote:
>>> On Tue, 18 May 2004 13:09:48 -0400, Mike Coslo <mjc5@psu.edu> wrote:
>>>
>>>>Is it possible to super glue the thing back together? It's a clean break.
>>>
>>> Yes, split cores work quite well too.
>>
>> Ahh, Thanks Richard. I guess it's the ham in me, but I hate to waste
>>anything!
>>
>>
>> - Mike KB3EIA -
>
>Hi Mike,
>
>The trick is to keep any gaps small. However, if I recall my
>magnetics right, an air gap, although lowering the magnetic properties
>(smaller inductance), also extends them (greater dynamic range, harder
>to saturate). This is the principle behind a "swinging choke." This,
>however, is not to say that it would offer any benefit to your
>application. The reason I say this is because ferrites we use for
>line chokes do not typically support enough flux to saturate in the
>first place (or if they do, you have one hell of a problem); rather,
>the ferrite characteristic of bulk resistance is employed and
>inductance is a fairly trivial side benefit.
>
>73's
>Richard Clark, KB7QHC

Hi Richard,

Isn't it the other way around? If I recall a swinging choke does not
have a gap, which allows it to saturate sooner, changing the
inductance. A regular choke does have a gap. Speaking of stacked iron
plate type.

73
Gary K4FMX

2398. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 03:26:24 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com>
Source record: 95051

On Tue, 18 May 2004 22:49:48 -0400, Mike Coslo <mcoslo@adelphia.net>
wrote:

>Allan Butler wrote:
>
>> F8BOE wrote:
>>
>>
>>>No, I've got the best miracle antenna... And it needs no tuner on the
>>>frequency it is set!
>>>
>>>I invented the dummy load too!
>>
>>
>> Oh come on!
>>
>> Everyone knows that Al Gore invented the dummy load right before he invented
>> the Internet! ;-)
>
>
>References pleeze re: inventing the internet?
>
> - Mike KB3EIA -

Gore didn't invent the Internet, but as a congressman, he did pass
bills that provided large amounts of federal funding for the
communications system that later came to be called the Internet. We
might not have an "Internet" without Gore.

bob
k5qwg

2399. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 03:40:59 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <10allqcl315ie25@corp.supernews.com>
Source record: 95052

Actually, at one time was a antenna_ shortened "Dipole", claimed worst match was 3:1 literally from
dc to light! turned out, inside the center "insulator", was a 50 ohm resistor! now, thats lousey effeciency! Jim

--
No trees were killed in the sending of this message. However, a large number of electrons were terribly inconvenienced !

" People who never get carried away, should be! " --- Malcom Forbes

"JGBOYLES" <jgboyles@aol.com> wrote in message news:20040517195535.12062.00001704@mb-m02.aol.com...
> >Take a dummy load and attach a piece of wire on some kind of a windup
> >system. To increase the efficiency, let out more wire and vice versa.
>
> Good Idea, and we want to decrease efficiency, so the wind-up system may just
> may be what is needed. What I was looking for is antenna materials that
> decrease efficiency.
> If we could come up with something as bad as the B&W dipole for a lot less
> money, then we may have something.
> 73 Gary N4AST

2400. Re: Toroid! Toroid! Toroid!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 04:57:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <77qla09o1c04ndu9aei81d0blht56dvkg6@4ax.com>
Source record: 95053

On Wed, 19 May 2004 02:59:02 GMT, Gary Schafer <gaschafer@comcast.net>
wrote:

>On Tue, 18 May 2004 22:58:15 GMT, Richard Clark <kb7qhc@comcast.net>
>wrote:
>
>>On Tue, 18 May 2004 14:42:34 -0400, Mike Coslo <mjc5@psu.edu> wrote:
>>
>>>Richard Clark wrote:
>>>> On Tue, 18 May 2004 13:09:48 -0400, Mike Coslo <mjc5@psu.edu> wrote:
>>>>
>>>>>Is it possible to super glue the thing back together? It's a clean break.
>>>>
>>>> Yes, split cores work quite well too.
>>>
>>> Ahh, Thanks Richard. I guess it's the ham in me, but I hate to waste
>>>anything!
>>>
>>>
>>> - Mike KB3EIA -
>>
>>Hi Mike,
>>
>>The trick is to keep any gaps small. However, if I recall my
>>magnetics right, an air gap, although lowering the magnetic properties
>>(smaller inductance), also extends them (greater dynamic range, harder
>>to saturate). This is the principle behind a "swinging choke." This,
>>however, is not to say that it would offer any benefit to your
>>application. The reason I say this is because ferrites we use for
>>line chokes do not typically support enough flux to saturate in the
>>first place (or if they do, you have one hell of a problem); rather,
>>the ferrite characteristic of bulk resistance is employed and
>>inductance is a fairly trivial side benefit.
>>
>>73's
>>Richard Clark, KB7QHC
>
>
>Hi Richard,
>
>Isn't it the other way around? If I recall a swinging choke does not
>have a gap, which allows it to saturate sooner, changing the
>inductance. A regular choke does have a gap. Speaking of stacked iron
>plate type.

>
>
>73
>Gary K4FMX

Hi Gary,

You are right, the description of effects is OK, but the naming is backwards.

73's
Richard Clark, KB7QHC

2401. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 05:00:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ldqla0dtocseqptjfsmnm2dja33v8c119e@4ax.com>
Source record: 95054

On 18 May 2004 19:56:34 -0700, k4wge@arrl.net (k4wge) wrote:
>From: prozma@aol.com (Prozma)
Ah Yes, the Mutt of the Mutt 'n' Jeff comedy act.

2402. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 05:32:17 UTC
From: Claude Frantz <r31dmaeu@unibw-muenchen.de>
Message-ID: <40aaf161$1@news.unibw-muenchen.de>
Source record: 95055

Many thanks for all the responses.

I remember that in the experiment I have mentioned, the coupling to the tree was via an toroidal coil which was mounted around the tree, the tree beeing in the axis.

Sure, a tree cannot be a good antenna. Any "real" antenna will probably always be better. But often the question is: no antenna at all or anything which does not seem to be an antenna. Perhaps a tree can be such a thing. Further, in portable operation, it is not always easy to install a "real" antenna.

Claude

2403. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 09:53:18 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405190153.10a20aac@posting.google.com>
Source record: 95057

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40a13981_3@corp.newsgroups.com>...

>
> Two words - coil loss. A center-fed 1/2WL vertical would
> probably be better - no coil.

Probably fed, the coil loss is very low. The version I prefer is a
single turn coil, and a coax capacitor if needed. Very low coil
losses. I've used loads of the base fed half waves. Also have used a
center fed 1/2 wave. Never could notice any real difference between
the two in performance. The only advantage to a center fed I could
see, is possible use on other bands using a tuner. Many people do this
with the center fed 1/2 wave A-99 CB antennas. Trying to work multi
bands with a base fed antenna is not going to work very well. But I
don't recommend that anyway... MK

2404. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 10:40:15 UTC
From: Murray <me@powerup.com.au>
Message-ID: <40ab3999$0$16598$5a62ac22@freenews.iinet.net.au>
Source record: 95059

I regret I cannot give you an exzact reference but the WIA
magazine Amateur Radio, some years ago had such an article
and the results thereof. It worked quite well for what it was (a tree)
and there were even suggestions as to which species were better than
others! AFAIK it wasn't an April edition.

Some of the gum trees here are 150+ feet high and the trick seemed to
be tapping in at the right level from the ground.

Some unhelpfull folk later suggested the 8' of coax to the matching
network was the radiator :-(

I have no way of finding this info - maybe you can search the net?

Cheers
Murray vk4aok

Claude Frantz wrote:
> Many thanks for all the responses.
>
> I remember that in the experiment I have mentioned, the coupling to the
> tree was via an toroidal coil which was mounted around the tree, the
> tree beeing in the axis.
>
> Sure, a tree cannot be a good antenna. Any "real" antenna will probably
> always be better. But often the question is: no antenna at all or
> anything which does not seem to be an antenna. Perhaps a tree can be
> such a thing. Further, in portable operation, it is not always easy to
> install a "real" antenna.
>
> Claude

2405. Horz Loop vs Half Square

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 10:42:48 UTC
From: Scott Gordon <sgordon@gordonsweb.net>
Message-ID: <ISGqc.232$jd5.168@newssvr33.news.prodigy.com>
Source record: 95058

I am looking to put up either a 75 meter Horizontal loop fed with 450 ohm ladder line or a 40 meter Half Square. I would only be able to get either antenna up less than 40 feet. I have had the loop up in the past and it was a great preformer even at low heights.

Looking for antenna that would allow me to work into Europe as well as better signal to West Coast.

Would appreciate your thoughts and any websites that you know of that detail out a Half Square.

Thanks,
Scott
http://www.kq8rp.com

2406. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 10:58:08 UTC
From: fractenna@aol.com
Message-ID: <20040519065808.05458.00001056@mb-m22.aol.com>
Source record: 95060

>Sure, a tree cannot be a good antenna. Any "real" antenna will probably
>always be better. But often the question is: no antenna at all or
>anything which does not seem to be an antenna. Perhaps a tree can be
>such a thing. Further, in portable operation, it is not always easy to
>install a "real" antenna.
>
>Claude
>

Trees are, as already noted, usable as VHF antennas when properly 'fed'...whether you should or shouldn't use a tree is your decision. It is hardly a new idea. Certainly placing a bona fide VHF antenna--in the clear--on top of the tree is the better of the two options.

The interesting question is: how does a tree compare to a ground-based monopole?

There is a reason why VHF monopole antennas are not on the ground, whereas MF ones are.

Experiment for more info. Many have been down this path before. I don't know a sap or a chump in the bunch.

73,
Chip N1IR

2407. Q: DC motor for MFJ-1786.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 11:57:07 UTC
From: Vandmand <vandmand@loveletters.dk>
Message-ID: <40ab4b77$0$218$edfadb0f@dread16.news.tele.dk>
Source record: 95061

Hi
I have to replace the DC motor in my MFJ-1786 Magnetic Loop antenna. Does anyone have information about spare part number, a replacement motor and where to by?
73 de OZ1JZV John

2408. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 12:00:55 UTC
From: HUMBUG <humbug@bit.bucket>
Message-ID: <nsurn1-m53.ln1@deep.bit.bucket>
Source record: 95063

On Tue, 18 May 2004 14:31:17 -0700, Jack Twilley <jmt+usenet@twilley.org> Wrote :
<snip>

>
> I wholeheartedly agree. There's a price to be paid for every setup --

Same old story isn't it - "cheap", "well made" and "effective" - choose
any two. ie. If it's cheap and effective it aint gonna last...:-)

--

Humbug

2409. Re: DC motor for MFJ-1786.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 12:08:03 UTC
From: Norbert <pa7nrNNOSPAMMM@qsl.net>
Message-ID: <T6Iqc.1357$Bb6.20558@zonnet-reader-1>
Source record: 95062

"Vandmand" <vandmand@loveletters.dk> schreef in bericht
news:40ab4b77$0$218$edfadb0f@dread16.news.tele.dk...
> Hi
> I have to replace the DC motor in my MFJ-1786 Magnetic Loop antenna. Does
> anyone have information about spare part number, a replacement motor and
> where to by?
> 73 de OZ1JZV John
>
>

John,

Call the MFJ factory customer service and order the DC motor. It's easy. I did it and the price is fair.

http://www.mfjenterprises.com/index.php

It can be useful to also replace the 2 microswitches near the DC motor. They are cheap when you order them together with the DC motor and they get also influenced by weather conditions and might need to be replaced soon.

73, Norbert (PA7NR)
http://www.qsl.net/pa7nr/index.html

2410. Re: 10.512 MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 16:36:06 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c8g2hl$m2s$1@newshost.mot.com>
Source record: 95056
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,alt.radio.uk,rec.radio.amateur.antenna,rec.radio.scanner,uk.radio.amateur

Sounds like music tuned upside down. Has anyone tried listening on LSB and
tuning 3 kc higher?...whatzat," 10.515?

--
Steve N, K,9;d, c. i My email has no u's.

"lethal" <sa.ukspamtrap@virgin.net> wrote in message
news:hQmqc.132$gB5.91@newsfe3-win.server.ntli.net...
> forget my last posting....
>
> this is the link. http://dspace.dial.pipex.com/brogers/page6.html
>
> follow this and listen to the sound clip
>
> --
>
>
>
****
****
> i want to die peacefully in my sleep , same as my grandad - not like his
passengers,all screaming and shouting
>
****
****
> "Duncan Munro" <postmaster@duncanamps.com> wrote in message
news:1w0lbz96e8g7d.1t5m3oc1p9dxh.dlg@40tude.net...
> > I've had an email from the OM tonight, "Have a listen on 10.512 MHz
(USB).
> > What do you make of it?"
> >
> > It sounds like 'nightmare music' from a low budget film - does anyone
know
> > what on earth it is?
> >
> > --
> > Duncan Munro M0KGK
> > http://amateur.duncanamps.com/
> > BOF #023 FISTS #10815
>
>

2411. Re: Who has an ideal horizontal dipole for HF?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 16:42:08 UTC
From: richardharrison@webtv.net
Message-ID: <10045-40AB8E60-51@storefull-3252.bay.webtv.net>
Source record: 95064

Jack Twilley wrote:
"This is the kind of experience I had hoped to hear."

A look at the vertical radiation patterns of half-wave horizontals broadside to the antenna wire such as that shown on page 3-11 of the 19th edition of the ARRL Antenna Book provides evidence of the best height.

A vertical angle of 50-degrees gives a first reflection target distance of 80 to 500 miles, depending on the height of the reflecting layer, from the graph on page 92 of Ed Laport`s "Antenna Engineering". A vertical angle of 5-degrees gives a target distance of 700 to 2500 miles according to the same graph.

For angles between 5 and 50-degrees, a dipole height of 1/2-wave maximizes radiation around a vertical angle of about 30-degrees.

Best regards, Richard Harrison, KB5WZI

2412. Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 18:19:21 UTC
From: David Browne <dddd@ddd>
Message-ID: <20040519142134.286$fc@news.newsreader.com>
Source record: 95065

hi just got this ant,what is the best hight to mount this at,
there site says mount 8 feet, will it work better mounted 30 feet of ground
thanks dave browne

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004

2413. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 19:39:43 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40ABB7FF.8020409@psu.edu>
Source record: 95066

Jim Higgins wrote:
> On Sun, 16 May 2004 21:13:58 GMT, in
> <46mfa09nom6h51ebn8n2tiad6e0qamhihp@4ax.com>, R. David Steele
> <steele.david@verizon.net/OMEGA> wrote:
>
>
>>http://www.bwantennas.com/
>>
>>The military is using these antennas because of ALE (automatic
>>linking) and NVIS. I gather that while they are very broad
>>banded, they have less the best gain?
>>
>>Any feed back?
>
>
> I tend to compare the claims for any antenna to the
> characteristics of a dummy load and then remember the principle
> of reciprocity.
>
> So for the BW dipole let's see. It's really quiet, esp on the
> lower frequencies. It's really broad banded. It's not for me.
>

Dummy loads are pretty quiet too aren't they? ;^)

- Mike KB3EIA -

2414. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 19:41:22 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40ABB862.6070305@psu.edu>
Source record: 95068

Jim Higgins wrote:
> On Sun, 16 May 2004 21:13:58 GMT, in
> <46mfa09nom6h51ebn8n2tiad6e0qamhihp@4ax.com>, R. David Steele
> <steele.david@verizon.net/OMEGA> wrote:
>
>
>>http://www.bwantennas.com/
>>
>>The military is using these antennas because of ALE (automatic
>>linking) and NVIS. I gather that while they are very broad
>>banded, they have less the best gain?
>>
>>Any feed back?
>
>
> I tend to compare the claims for any antenna to the
> characteristics of a dummy load and then remember the principle
> of reciprocity.
>
> So for the BW dipole let's see. It's really quiet, esp on the
> lower frequencies. It's really broad banded. It's not for me.
>

Doh! I guess that was your point!

- Mike KB3EIA -

2415. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 19:45:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <f5ena0lhpvnc61n4g7i1h2buds9q4ds9u2@4ax.com>
Source record: 95067

On Wed, 19 May 2004 19:19:21 +0100, "David Browne" <dddd@ddd> wrote:
>hi just got this ant,what is the best hight to mount this at,
>there site says mount 8 feet, will it work better mounted 30 feet of ground
Hi David,

It may take a little more adjustment to tune, but that should be the
only down-side. You should at least tune it at 8 feet (or similar,
convenient height) first to confirm its construction.

73's
Richard Clark, KB7QHC

2416. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 20:05:32 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0405191205.21d69eb7@posting.google.com>
Source record: 95069

Jack Twilley <jmt+usenet@twilley.org> wrote in message
news:<86zn8769jc.fsf@duchess.twilley.org>...
>
> Out of curiosity, what other antenna provides a better cost-benefit
> ratio while maintaining the same constraints with respect to power,
> size, and construction?
>
A well made G5RV, for one. A well-made W3DZZ trap dipole, for another.
W5DXP's "linear tuner" dipole, for a third. Or the classic
dipole-with-openline-and-a-real-balanced-tuner for a fourth. All are
much more efficient than a T2FD of the same size.

The B&W/T2FD is discussed in detail on W4RNL's excellent site (which
see). In short, its efficiency is quite low on the lower bands and
gets to be almost as good as a halfwave dipole on the upper bands.
Their one and only advantage is low SWR over the frequency range.

73 de Jim, N2EY

2417. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 20:31:20 UTC
From: Thierry <"Answer direct via http">
Message-ID: <40abc41a$1@news.vo.lu>
Source record: 95070

Hi,

I used one.
At ground level it needs many flexible radials burried into the ground to
give good results.
Then I placed it on top of a small tower 10m high without its flexible
radials, the result is much better.
I remember than R1ANF was on 20m, I call him in SSB only a few seconds
using my TX barefoot, and I had my QSL !
This is not a proof that the R7 works well, but in all cases, there is
nothing to tell against it. This is probably one of the best vertical on the
place.
But try to place it in height, that will improve the radiation pattern.

about radials : http://www.astrosurf.com/lombry/qsl-radials.htm

73
Thierry, ON4SKY
http://www.astrosurf.com/lombry/

"David Browne" <dddd@ddd> wrote in message
news:20040519142134.286$fc@news.newsreader.com...
> hi just got this ant,what is the best hight to mount this at,
> there site says mount 8 feet, will it work better mounted 30 feet of
ground
> thanks dave browne
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004
>
>
>

2418. Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 21:38:42 UTC
From: Skimpybag@hotmail.com
Message-ID: <50bc4c9a.0405191338.1d920d23@posting.google.com>
Source record: 94921

I have a "T" antenna tuner (two capacitors on each side of the roller coil). The coil goes to ground.
Should I adjust for maximum inductance (farthest from ground) or minimum inductance (closest to ground) on the inductor? It tunes well on both ends of the coil.
I don't want to pump it full of watts and see it smoke.

Thanks in advance, Scott

2419. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 21:59:41 UTC
From: Just Another Opinion <JAO@somewhere.net>
Message-ID: <hNQqc.40713$Lm3.7717@lakeread04>
Source record: 94922

Au Contraire -- this is NOT a quarter wave vertical -- it is a half wave end fed antenna and if you read the Cushcraft manual it explicitly states "The R7 should not be attached to a ground radial system". The feed point is a high impedance point and the black box matches the 50-Ohm coax to this high impedance - thus no radials are required -- in fact adding radials will screw up the antenna.

As for height -- mine is 8 feet off the ground and works very well. A friend had one up about 25 feet and we got very nearly the same reports in on the air checks. BUT -- there are a lot of variables in all this -- ground conductivity, obstructions, terrain, etc -- so mounting higher MAY give better results -- I know users who found this to be true at their location.

BUT if increasing height will help clear obstructions -- then by all means mount it up higher.

The flexible rods at the bottom of the antenna are according to Cushcraft "Counterpoises" to isolate the antenna from ground. They are not long enough to be resonant radials on any band.

Before doing anything -- READ THE MANUAL!
URL:
http://www.cushcraft.com/support/pdf/r7.pdf

Your results may vary -- let the reader beware.
--
From one currently in the Cloaked Mode

Any clod can have the facts, but having opinions is an Art.
Charles McCabe (1856 -), San Francisco Chronicle

"Thierry" <Answer direct via http://www.astrosurf.com/lombry/post.htm> wrote in message news:40abc41a$1@news.vo.lu...
> Hi,
>
> I used one.
> At ground level it needs many flexible radials burried into the ground to
> give good results.
> Then I placed it on top of a small tower 10m high without its flexible
> radials, the result is much better.
> I remember than R1ANF was on 20m, I call him in SSB only a few seconds
> using my TX barefoot, and I had my QSL !
> This is not a proof that the R7 works well, but in all cases, there is
> nothing to tell against it. This is probably one of the best vertical on
the
> place.

> But try to place it in height, that will improve the radiation pattern.
>
> about radials : http://www.astrosurf.com/lombry/qsl-radials.htm
>
> 73
> Thierry, ON4SKY
> http://www.astrosurf.com/lombry/
>
>
>
> "David Browne" <dddd@ddd> wrote in message
> news:20040519142134.286$fc@news.newsreader.com...
> > hi just got this ant,what is the best hight to mount this at,
> > there site says mount 8 feet, will it work better mounted 30 feet of
> ground
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> > Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004
> >
> >
> >
>
>

2420. Re: Antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 22:04:38 UTC
From: Just Another Opinion <JAO@somewhere.net>
Message-ID: <WRQqc.40715$Lm3.35152@lakeread04>
Source record: 94923

Read the manual -- it should specify this, my old tuner manual says:

"Always use the lowest possible value of inductance that will give a proper
match. Using higher inductance can result in wasted power inside the tuner,
and may cause damage."

Your tuning may vary -- let the reader beware

--
From one currently in the Cloaked Mode

Any clod can have the facts, but having opinions is an Art.
Charles McCabe (1856 -), San Francisco Chronicle

"Scott" <Skimpybag@hotmail.com> wrote in message
news:50bc4c9a.0405191338.1d920d23@posting.google.com...
> I have a "T" antenna tuner (two capacitors on each side of the roller
> coil). The coil goes to ground.
> Should I adjust for maximum inductance (farthest from ground) or
> minimum inductance (closest to ground) on the inductor? It tunes well
> on both ends of the coil.
> I don't want to pump it full of watts and see it smoke.
>
> Thanks in advance, Scott

2421. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 22:53:01 UTC
From: Thierry <"Answer direct via http">
Message-ID: <40abe54f$1@news.vo.lu>
Source record: 94924

"Just Another Opinion" <JAO@somewhere.net> wrote in message
news:hNQqc.40713$Lm3.7717@lakeread04...
> Au Contraire -- this is NOT a quarter wave vertical -- it is a half wave
end
> fed antenna and if you read the Cushcraft manual it explicitly states "The
> R7 should not be attached to a ground radial system". The feed point is a
> high impedance point and the black box matches the 50-Ohm coax to this
high
> impedance - thus no radials are required -- in fact adding radials will
> screw up the antenna.

I always used radials when using ANY vertical at ground level successfully,
whatever write manuals.
I laways use counterpoise when erected in heights, and in both cases,
results are there.

>
> As for height -- mine is 8 feet off the ground and works very well. A
friend
> had one up about 25 feet and we got very nearly the same reports in on the
> air checks. BUT -- there are a lot of variables in all this -- ground
> conductivity, obstructions, terrain, etc -- so mounting higher MAY give
> better results -- I know users who found this to be true at their
location.
>
> BUT if increasing height will help clear obstructions -- then by all means
> mount it up higher.
>
> The flexible rods at the bottom of the antenna are according to Cushcraft
> "Counterpoises" to isolate the antenna from ground. They are not long
enough
> to be resonant radials on any band.
>
> Before doing anything -- READ THE MANUAL!
> URL:
> http://www.cushcraft.com/support/pdf/r7.pdf
>
> Your results may vary -- let the reader beware.
> --
> From one currently in the Cloaked Mode
>
> Any clod can have the facts, but having opinions is an Art.
> Charles McCabe (1856 -), San Francisco Chronicle
>
>

>
>
>
>
> "Thierry" <Answer direct via http://www.astrosurf.com/lombry/post.htm>
wrote
> in message news:40abc41a$1@news.vo.lu...
> > Hi,
> >
> > I used one.
> > At ground level it needs many flexible radials burried into the ground
to
> > give good results.
> > Then I placed it on top of a small tower 10m high without its flexible
> > radials, the result is much better.
> > I remember than R1ANF was on 20m, I call him in SSB only a few seconds
> > using my TX barefoot, and I had my QSL !
> > This is not a proof that the R7 works well, but in all cases, there is
> > nothing to tell against it. This is probably one of the best vertical on
> the
> > place.
> > But try to place it in height, that will improve the radiation pattern.
> >
> > about radials : http://www.astrosurf.com/lombry/qsl-radials.htm
> >
> > 73
> > Thierry, ON4SKY
> > http://www.astrosurf.com/lombry/
> >
> >
> >
> > "David Browne" <dddd@ddd> wrote in message
> > news:20040519142134.286$fc@news.newsreader.com...
> > > hi just got this ant,what is the best hight to mount this at,
> > > there site says mount 8 feet, will it work better mounted 30 feet of
> > ground
> > > thanks dave browne
> > >
> > >
> > > ---
> > > Outgoing mail is certified Virus Free.
> > > Checked by AVG anti-virus system (http://www.grisoft.com).
> > > Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004
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>

2422. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 23:40:05 UTC
From: Just Another Opinion <JAO@somewhere.net>
Message-ID: <pfSqc.23$zE6.21@lakeread06>
Source record: 94925

Well Thierry your advice is good for a 1/4 wave vertical -- but not a half wave end vertical.

Lookup the theory and you will see why.

http://www.njqrp.org/n2cxantennas/halfer/

--
From one currently in the Cloaked Mode

"Thierry" <Answer direct via http://www.astrosurf.com/lombry/post.htm> wrote in message news:40abe54f$1@news.vo.lu...
>
> "Just Another Opinion" <JAO@somewhere.net> wrote in message
> news:hNQqc.40713$Lm3.7717@lakeread04...
> > Au Contraire -- this is NOT a quarter wave vertical -- it is a half wave
> end
> > fed antenna and if you read the Cushcraft manual it explicitly states
"The
> > R7 should not be attached to a ground radial system". The feed point is
a
> > high impedance point and the black box matches the 50-Ohm coax to this
> high
> > impedance - thus no radials are required -- in fact adding radials will
> > screw up the antenna.
>
> I always used radials when using ANY vertical at ground level
successfully,
> whatever write manuals.
> I laways use counterpoise when erected in heights, and in both cases,
> results are there.
>
> >
> > As for height -- mine is 8 feet off the ground and works very well. A
> friend
> > had one up about 25 feet and we got very nearly the same reports in on
the
> > air checks. BUT -- there are a lot of variables in all this -- ground
> > conductivity, obstructions, terrain, etc -- so mounting higher MAY give
> > better results -- I know users who found this to be true at their
> location.
> >
> > BUT if increasing height will help clear obstructions -- then by all
means
> > mount it up higher.

> >
> > The flexible rods at the bottom of the antenna are according to
Cushcraft
> > "Counterpoises" to isolate the antenna from ground. They are not long
> enough
> > to be resonant radials on any band.
> >
> > Before doing anything -- READ THE MANUAL!
> > URL:
> > http://www.cushcraft.com/support/pdf/r7.pdf
> >
> > Your results may vary -- let the reader beware.
> > --
> > From one currently in the Cloaked Mode
> >
> > Any clod can have the facts, but having opinions is an Art.
> > Charles McCabe (1856 -), San Francisco Chronicle
> >
> >
> >
> >
> >
> >
> > "Thierry" <Answer direct via http://www.astrosurf.com/lombry/post.htm>
> wrote
> > in message news:40abc41a$1@news.vo.lu...
> > > Hi,
> > >
> > > I used one.
> > > At ground level it needs many flexible radials burried into the ground
> to
> > > give good results.
> > > Then I placed it on top of a small tower 10m high without its flexible
> > > radials, the result is much better.
> > > I remember than R1ANF was on 20m, I call him in SSB only a few
seconds
> > > using my TX barefoot, and I had my QSL !
> > > This is not a proof that the R7 works well, but in all cases, there is
> > > nothing to tell against it. This is probably one of the best vertical
on
> > the
> > > place.
> > > But try to place it in height, that will improve the radiation
pattern.
> > >
> > > about radials : http://www.astrosurf.com/lombry/qsl-radials.htm
> > >
> > > 73
> > > Thierry, ON4SKY
> > > http://www.astrosurf.com/lombry/

> > >
> > >
> > >
> > > "David Browne" <dddd@ddd> wrote in message
> > > news:20040519142134.286$fc@news.newsreader.com...
> > > > hi just got this ant,what is the best hight to mount this at,
> > > > there site says mount 8 feet, will it work better mounted 30 feet of
> > > ground
> > > > thanks dave browne
> > > >
> > > >
> > > > ---
> > > > Outgoing mail is certified Virus Free.
> > > > Checked by AVG anti-virus system (http://www.grisoft.com).
> > > > Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004
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2423. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 23:53:06 UTC
From: Just Another Opinion <JAO@somewhere.net>
Message-ID: <CrSqc.29$zE6.18@lakeread06>
Source record: 94926

Well Thierry -- your advice is good for a 1/4 wave vertical -- but not a
half
wave end-fed vertical.

Look at the theory and you will see why.

http://www.njqrp.org/n2cxantennas/halfer/

--
From one currently in the Cloaked Mode

> "Thierry" <Answer direct via http://www.astrosurf.com/lombry/post.htm>
wrote
> in message news:40abe54f$1@news.vo.lu...
> >
> > "Just Another Opinion" <JAO@somewhere.net> wrote in message
> > news:hNQqc.40713$Lm3.7717@lakeread04...
> > > Au Contraire -- this is NOT a quarter wave vertical -- it is a half
wave
> > end
> > > fed antenna and if you read the Cushcraft manual it explicitly states
> "The
> > > R7 should not be attached to a ground radial system". The feed point
is
> a
> > > high impedance point and the black box matches the 50-Ohm coax to this
> > high
> > > impedance - thus no radials are required -- in fact adding radials
will
> > > screw up the antenna.
> >
> > I always used radials when using ANY vertical at ground level
> successfully,
> > whatever write manuals.
> > I laways use counterpoise when erected in heights, and in both cases,
> > results are there.
> >
> > >
> > > As for height -- mine is 8 feet off the ground and works very well. A
> > friend
> > > had one up about 25 feet and we got very nearly the same reports in on
> the
> > > air checks. BUT -- there are a lot of variables in all this -- ground
> > > conductivity, obstructions, terrain, etc -- so mounting higher MAY
give

> > > better results -- I know users who found this to be true at their
> > location.
> > >
> > > BUT if increasing height will help clear obstructions -- then by all
> means
> > > mount it up higher.
> > >
> > > The flexible rods at the bottom of the antenna are according to
> Cushcraft
> > > "Counterpoises" to isolate the antenna from ground. They are not long
> > enough
> > > to be resonant radials on any band.
> > >
> > > Before doing anything -- READ THE MANUAL!
> > > URL:
> > > http://www.cushcraft.com/support/pdf/r7.pdf
> > >
> > > Your results may vary -- let the reader beware.
> > > --
> > > From one currently in the Cloaked Mode
> > >
> > > Any clod can have the facts, but having opinions is an Art.
> > > Charles McCabe (1856 -), San Francisco Chronicle
> > >
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> > >
> > > "Thierry" <Answer direct via http://www.astrosurf.com/lombry/post.htm>
> > wrote
> > > in message news:40abc41a$1@news.vo.lu...
> > > > Hi,
> > > >
> > > > I used one.
> > > > At ground level it needs many flexible radials burried into the
ground
> > to
> > > > give good results.
> > > > Then I placed it on top of a small tower 10m high without its
flexible
> > > > radials, the result is much better.
> > > > I remember than R1ANF was on 20m, I call him in SSB only a few
> seconds
> > > > using my TX barefoot, and I had my QSL !
> > > > This is not a proof that the R7 works well, but in all cases, there
is
> > > > nothing to tell against it. This is probably one of the best
vertical
> on

> > > the
> > > > place.
> > > > But try to place it in height, that will improve the radiation
> pattern.
> > > >
> > > > about radials : http://www.astrosurf.com/lombry/qsl-radials.htm
> > > >
> > > > 73
> > > > Thierry, ON4SKY
> > > > http://www.astrosurf.com/lombry/
> > > >
> > > >
> > > >
> > > > "David Browne" <dddd@ddd> wrote in message
> > > > news:20040519142134.286$fc@news.newsreader.com...
> > > > > hi just got this ant,what is the best hight to mount this at,
> > > > > there site says mount 8 feet, will it work better mounted 30 feet
of
> > > > ground
> > > > > thanks dave browne
> > > > >
> > > > >
> > > > > ---
> > > > > Outgoing mail is certified Virus Free.
> > > > > Checked by AVG anti-virus system (http://www.grisoft.com).
> > > > > Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004
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>

2424. Tri-Ex HS471 instructions?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-19 23:54:51 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <10ansubirredr7f@corp.supernews.com>
Source record: 94935
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna

Does anyone have the instructions or manual for the Tri-Ex HS471 avaiable?
I'd like to get a copy if possible. *Many thanks*!

Jim Horn, WB9SYN/6

2425. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 00:17:41 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <FOSqc.15$_8z1.7@news01.bloor.is.net.cable.rogers.com>
Source record: 94927

Hi Dave, here is my 2 cents worth on the R-7. Purchased it second hand last summer, had to fix it due to high SWR on all band except 10 meters. After checking out antenna did find that the 12 meter trap was the problem, and after fixing it , well it was time to mount it. The installation here is 12 feet about ground , mounted on the baby barn, nice and easy to work on it from the roof of baby barn. Also did put 3 guy wires just under the 10 meter trap. Antenna is performing a lot better than expected on dx and is holding its own on 40 meters local and roughly 600 miles during the day, of course all depends on probagation also. But i am extremly satisfied with the antenna so far, and with guys on it, well, dont have to worry much about it during strong winds, as they do have a tendancy to bend a bit. It is also in close proximities to trees and stuff, but does not seem to bother the antenna pattern at all and swr is what the book says.
this is my 2 cents worth.
thanks for reading.
de Jean-Guy/ve9buf

"David Browne" <dddd@ddd> a crit dans le message de
news:20040519142134.286$fc@news.newsreader.com...
> hi just got this ant,what is the best hight to mount this at,
> there site says mount 8 feet, will it work better mounted 30 feet of
ground
> thanks dave browne
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004
>
>
>

2426. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 01:39:01 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <lr2oa05r4ravmo8g9qvn7or056r9seaohv@4ax.com>
Source record: 94928

On Wed, 19 May 2004 19:19:21 +0100, "David Browne" <dddd@ddd> wrote:

>hi just got this ant,what is the best hight to mount this at,
>there site says mount 8 feet, will it work better mounted 30 feet of ground
>thanks dave browne

Don't know the "best" height, but usta live next door to a guy with an
R7, and he mounted it at about 30 feet. It performed fine, as far as
he was concerned. Main downside to the antenna is a fairly narrow
tuning range on 40 meters.

Bob
k5qwg

>
>
>---
>Outgoing mail is certified Virus Free.
>Checked by AVG anti-virus system (http://www.grisoft.com).
>Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004
>
>

2427. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 01:54:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qe3oa0d50ge47dl225o64p6p80fhesqte5@4ax.com>
Source record: 94929

On Wed, 19 May 2004 16:40:05 -0700, "Just Another Opinion"
<JAO@somewhere.net> wrote:

>Well Thierry your advice is good for a 1/4 wave vertical -- but not a half
>wave end vertical.

There is absolutely nothing wrong with Thierry's advise. As the
subject of radials/counterpoise/ground is often either over engineered
or under engineered (often to no apparent difference to the distant
contact). It may complicate the tune, but it may also bring reward.

>Lookup the theory and you will see why.
>
>http://www.njqrp.org/n2cxantennas/halfer/

Hi OM,

If someone wants to invest in the treatment that Thierry suggests,
there is no down-side - this "theory" notwithstanding (which, by the
way makes no effort to prohibit it, to its credit). Multiple radials
also serve to decouple the feed line which then provides a more robust
reference against which the antenna operates.

73's
Richard Clark, KB7QHC

2428. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 03:01:14 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <382dnUrbCI3mgjHdRVn-hQ@comcast.com>
Source record: 94930

No, he just claimed he did.
"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
> Gore didn't invent the Internet, >

2429. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 03:35:03 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405191935.32503a86@posting.google.com>
Source record: 94931

Bob Miller <bxmillerNoSpam@texas.net> wrote in message
news:<skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com>...
> On Tue, 18 May 2004 22:49:48 -0400, Mike Coslo <mcoslo@adelphia.net>
> wrote:
>
> >Allan Butler wrote:
> >
> >> F8BOE wrote:
> >>
> >>
> >>>No, I've got the best miracle antenna... And it needs no tuner on the
> >>>frequency it is set!
> >>>
> >>>I invented the dummy load too!
> >>
> >>
> >> Oh come on!
> >>
> >> Everyone knows that Al Gore invented the dummy load right before he invented
> >> the Internet! ;-)
> >
> >
> >References pleeze re: inventing the internet?
> >
> > - Mike KB3EIA -
>
> Gore didn't invent the Internet, but as a congressman, he did pass
> bills that provided large amounts of federal funding for the
> communications system that later came to be called the Internet. We
> might not have an "Internet" without Gore.

Uhh . . the Internet has been around since the 1960s . . ARPANET?

> bob
> k5qwg

w3rv

2430. Re: Great Dangling Dipoles!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 03:38:33 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405191938.5390a88@posting.google.com>
Source record: 94932

Mike Coslo <mjc5@psu.edu> wrote in message news:<40AA5AFB.4050301@psu.edu>...
> I have a dipole hung from trees in my yard. I am going to lengthen my
> dipole by hanging more wire off the end. Will I be better off to run the
> wires to other trees, kind of creating a Z shape, or a C shape, or is it
> just as well to allow the ends to dangle?

ALWAYS add wire to the highest point on the antenna.

> - Mike KB3EIA -

2431. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 04:19:22 UTC
From: pw342@hotmail.com
Message-ID: <5f7b361.0405192019.2706b8d5@posting.google.com>
Source record: 94933

Also remember that a terminated rhombic has 50% loss, about the same as the B&W.
Pat W0OPW

2432. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 05:32:49 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8hfu1$92q$1@hercules.btinternet.com>
Source record: 94934

> Also remember that a terminated rhombic has 50% loss, about the same as
the B&W.

==========

A terminated rhombic does NOT have a loss in the forward direction.
Radiation in the forward direction remains the same as when unterminated.

When terminated it is radiation in the UNWANTED reverse direction which is
absorbed by the termination and suppressed.

Reg, G4FGQ

2433. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 05:46:06 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86zn833b35.fsf@duchess.twilley.org>
Source record: 94936

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "N2EY" == N2EY <N2EY@aol.com> writes:

N2EY> Jack Twilley <jmt+usenet@twilley.org> wrote in message
N2EY> news:<86zn8769jc.fsf@duchess.twilley.org>...
>> Out of curiosity, what other antenna provides a better
>> cost-benefit ratio while maintaining the same constraints with
>> respect to power, size, and construction?
>>
N2EY> A well made G5RV, for one. A well-made W3DZZ trap dipole, for
N2EY> another. W5DXP's "linear tuner" dipole, for a third. Or the
N2EY> classic dipole-with-openline-and-a-real-balanced-tuner for a
N2EY> fourth. All are much more efficient than a T2FD of the same
N2EY> size.

The only one of those I haven't seen is the "linear tuner" dipole.

N2EY> The B&W/T2FD is discussed in detail on W4RNL's excellent site
N2EY> (which see). In short, its efficiency is quite low on the lower
N2EY> bands and gets to be almost as good as a halfwave dipole on the
N2EY> upper bands. Their one and only advantage is low SWR over the
N2EY> frequency range.

I've looked, but the T2FD that's discussed isn't the one I'd be
buying, and I'm not sure if that matters.

N2EY> 73 de Jim, N2EY

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFArEYkGPFSfAB/ezgRApFQAKDmCr5rfAAedd+vbyQ/dYZb+r3azgCg/2oD
xgXsm3pVOa95PdaCzXYj6Fo=
=wiLd
-----END PGP SIGNATURE-----
```

2434. how good or bad are van gorden ant

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 06:29:58 UTC
From: wildboy74@webtv.net
Message-ID: <10445-40AC5066-39@storefull-3275.bay.webtv.net>
Source record: 94937

has any body use van gorden antennas

2435. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 09:02:23 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405200102.e1f5e8f@posting.google.com>
Source record: 94938

Claude Frantz <r31dmaeu@unibw-muenchen.de> wrote in message
news:<40aaf161$1@news.unibw-muenchen.de>...
> Many thanks for all the responses.
>
> I remember that in the experiment I have mentioned, the coupling to the
> tree was via an toroidal coil which was mounted around the tree, the
> tree beeing in the axis.
>
> Sure, a tree cannot be a good antenna. Any "real" antenna will probably
> always be better. But often the question is: no antenna at all or
> anything which does not seem to be an antenna. Perhaps a tree can be
> such a thing. Further, in portable operation, it is not always easy to
> install a "real" antenna.
>
> Claude

I've seen advertising in QRT for the latest new miracle sticks:

SAPSUCKER 2000Tï¿½.

and the mighty:

BARKBURNER 9000TRX-DXï¿½

Note that the ground qualities will enhance automatically by using
such an treetenna. That is because most all dogs will stop and urinate
against the base of said device. Add a few beer drinking buddies to
the party, and you will be a dx chipper in no time. Squirrels can add
nests, which will act as additional top loading.
Beware of tree beetles, infections, etc.. After a while the treetenna
could become a:
STUMPSTICK
Gasp!
These have been proven to be inferior radiators due to the *stumphole
effect* to the rf as it encounters the many rings in the tree stump.
These proceed to turn the rf round and round ,like flushing a toilet,
and ploink, you blow the finals in your rig, due to a massive
wormwood pulse that flows back along your feeder to the rig and your
operating position. Usually a desk or table made of wood, which
further increases the potential of damage to the station.

MK

2436. Re: Horz Loop vs Half Square

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 11:59:27 UTC
From: Joe <joe@nospam.com>
Message-ID: <40AC9D9E.F0FF2F1F@nospam.com>
Source record: 94939

hi scott

http://www.cebik.com

I like the half squares and the Moxon too !

73 joe

Scott wrote:

> I am looking to put up either a 75 meter Horizontal loop fed with 450 ohm
> ladder line or a 40 meter Half Square. I would only be able to get either
> antenna up less than 40 feet. I have had the loop up in the past and it was
> a great preformer even at low heights.
>
> Looking for antenna that would allow me to work into Europe as well as
> better signal to West Coast.
>
> Would appreciate your thoughts and any websites that you know of that detail
> out a Half Square.
>
> Thanks,
> Scott
> http://www.kq8rp.com

2437. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 12:59:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40acac84$1_2@corp.newsgroups.com>
Source record: 94940

Brian Kelly wrote:
> Uhh . . the Internet has been around since the 1960s . . ARPANET?

World Wide Web?

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2438. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 13:03:38 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40acad77$1_2@corp.newsgroups.com>
Source record: 94941

PatW wrote:
> Also remember that a terminated rhombic has 50% loss, about the same as the B&W.

But, unlike the B&W, that loss is in only one direction
which turns the rhombic into an effective directional beam.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2439. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 13:08:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40acae81$1_2@corp.newsgroups.com>
Source record: 94942

Jack Twilley wrote:
> The only one of those I haven't seen is the "linear tuner" dipole.

It's described at: http://www.qsl.net/w5dxp/notuner.htm

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2440. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 13:10:59 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <EfWdnT5Gi778MzHdRVn-sw@comcast.com>
Source record: 94943

"PatW" <pw342@hotmail.com> wrote in message
news:5f7b361.0405192019.2706b8d5@posting.google.com...
> Also remember that a terminated rhombic has 50% loss, about the same as
the B&W.
> Pat W0OPW

If GAIN - LOSS > 0 you still come out ahead.

Tam/WB2TT

2441. Re: Horz Loop vs Half Square

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 13:20:44 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40acb17a_2@corp.newsgroups.com>
Source record: 94944

Joe wrote:
> I like the half squares and the Moxon too !
>
> Scott wrote:
>>Looking for antenna that would allow me to work into Europe as well as
>>better signal to West Coast.

Just remember that a half-square is a bi-directional antenna
and would need to be rotated to cover both the West Coast
and Europe with its highest gain. If you aimed the half-square
toward Europe, the other major lobe would be aimed at Southern
Mexico. If you aimed it toward Los Angeles, the other major lobe
would be aimed at West Africa.
--
73, Cecil http://www.qsl.net/w5dxp

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2442. Re: 10.512 MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 14:19:38 UTC
From: larryj@teleport.com
Message-ID: <311bbdf8.0405200619.5bf73f75@posting.google.com>
Source record: 94980
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,alt.radio.uk,rec.radio.amateur.antenna,rec.radio.scanner,uk.radio.amateur

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:<c8g2hl$m2s$1@newshost.mot.com>...
> Sounds like music tuned upside down. Has anyone tried listening on LSB and
> tuning 3 kc higher?...whatzat," 10.515?
>
> --
> Steve N, K,9;d, c. i My email has no u's.
>
> "lethal" <sa.ukspamtrap@virgin.net> wrote in message
> news:hQmqc.132$gB5.91@newsfe3-win.server.ntli.net...
> > forget my last posting....
> >
> > this is the link. http://dspace.dial.pipex.com/brogers/page6.html
> >
> > follow this and listen to the sound clip
> >
> > --
> >
> >
> >
> **********
> **********
> > i want to die peacefully in my sleep , same as my grandad - not like his
> passengers,all screaming and shouting
> >
> **********
> **********
> > "Duncan Munro" <postmaster@duncanamps.com> wrote in message
> news:1w0lbz96e8g7d.1t5m3oc1p9dxh.dlg@40tude.net...
> > > I've had an email from the OM tonight, "Have a listen on 10.512 MHz
> (USB).
> > > What do you make of it?"
> > >
> > > It sounds like 'nightmare music' from a low budget film - does anyone
> know
> > > what on earth it is?
> > >
> > > --
> > > Duncan Munro M0KGK
> > > http://amateur.duncanamps.com/
> > > BOF #023 FISTS #10815
> >
> >

I dialed up 10.512 MHz a couple of nights ago. I began to belive that this posting was someone's idea of a joke, as all I heard was some Spanish-speaking stations talking back and forth,like many of them do on what they think are "private and unused by anyone else frequencies". The next day, I heard the "music" - it wasn't too strong here in the Pacific NW about 5:00 PM PDST Local time, and weaker yet at 11:00 PM. I couldn't hear it at all early this morning (6:00 AM).

Very interesting!

LJ

2443. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 15:14:18 UTC
From: Just Another Opinion <JAO@somewhere.net>
Message-ID: <eX3rc.811$zE6.12@lakeread06>
Source record: 94945

Richard, Thierry and the original poster I repeat:

The R7 is NOT a quarter wave vertical -- it is a half wave end
fed antenna.

A quarter wave radiator needs a ground plane or radials to work against for
sure -- but Cushcraft sez a half wave antenna doesn't need radials as it is
like a horizontal dipole turned vertical and end fed (high impedance) rather
than center fed.

I suggest you read and study the following:

The Cushcraft manual it explicitly states "The
R7 should not be attached to a ground radial system".
URL: http://www.cushcraft.com/support/pdf/r7.pdf

Do you know what is in the black box matching unit ?? If not see URL:
http://www.iol.ie/~bravo/r7_vertical.htm

A local Ham added radials -- couldn't tune the antenna -- so he added a
tuner. When he ran a kilowatt into this mishmash -- the black box blew up.
So he repaired it as in URL:
http://www.iol.ie/~bravo/r7_vertical.htm

He no longer has the added radials and tuner and runs a KW all the time with
no ill effects -- let the experimenter beware.

I know this is a controversial subject -- rehashed many times here, mostly
because folks treat the R7 like a quarter wave vertical -- which it isn't
and the R7 has that complex matching black box design which I wouldn't mess
with by adding radials. Unless I had the proper test equipment and expertise
to determine what effect added radials have on the impedances and matching.
Cushcraft undoubtedly did this.

More at URL:
http://lists.contesting.com/archives/html/Towertalk/2003-08/msg00059.html

AND http://dayton.akorn.net/pipermail/towertalk/2001-March/037180.html

Regarding decoupling the feed line -- Cushcraft recommends an RF choke 8
inches in diameter and ten turns on the coax.

Me -- I trusted Cushcraft and followed their instructions. Been working
great for 6 years now.
I won't run out the brag tape on countries worked with it -- means nothing.
--
From one currently in the Cloaked Mode

Any clod can have the facts, but having opinions is an Art.
Charles McCabe (1856 -), San Francisco Chronicle

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:qe3oa0d50ge47dl225o64p6p80fhesqte5@4ax.com...
> On Wed, 19 May 2004 16:40:05 -0700, "Just Another Opinion"
> <JAO@somewhere.net> wrote:
>
> >Well Thierry your advice is good for a 1/4 wave vertical -- but not a
half
> >wave end vertical.
>
> There is absolutely nothing wrong with Thierry's advise. As the
> subject of radials/counterpoise/ground is often either over engineered
> or under engineered (often to no apparent difference to the distant
> contact). It may complicate the tune, but it may also bring reward.
>
> >Lookup the theory and you will see why.
> >
> >http://www.njqrp.org/n2cxantennas/halfer/
>
> Hi OM,
>
> If someone wants to invest in the treatment that Thierry suggests,
> there is no down-side - this "theory" notwithstanding (which, by the
> way makes no effort to prohibit it, to its credit). Multiple radials
> also serve to decouple the feed line which then provides a more robust
> reference against which the antenna operates.
>
> 73's
> Richard Clark, KB7QHC

2444. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 15:27:43 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10apjjinqgpng93@corp.supernews.com>
Source record: 94946

With a typical ground plane antenna, the feedline can radiate
significantly, distorting the pattern. This effect could easily be
different for the different antennas. Modeling indicates that two baluns
are often needed to suppress the current on the outside of the feedline.
A model which includes the feedline might give some insights as to why
the antennas behave so differently.

Roy Lewallen, W7EL

Mark Keith wrote:

> Dan Richardson <<ChangeThisToCallSign>@mendolink.com> wrote in message
news:<3asha0hjfb2llh87hjagra0h4fr3pg0t2o@4ax.com>...
>
>>On Mon, 17 May 2004 10:42:49 -0500, richardharrison@webtv.net (Richard
>>Harrison) wrote:
>>[snip]
>>
>>>Power varies as the square of the voltage. One can see the difference in
>>>the field strength is hardly worth the effort for an amateur to try to
>>>increase the length of his antenna. It`s about a 3 dB gain from 1/4-wave
>>>to 5/8 wave.
>>
>>[snip]
>>
>>The 3 dB gain figure is valid when mounted on theoretical perfect
>>ground. For a ground-plane elevated above real ground you'll find the
>>gain to be rarely greater than 1 dB.
>
>
>
> Dunno. My real world tests don't quite agree. In using 30 mile ground
> wave tests across town, I tested 1/4 GP's, 1/2 waves including
> decoupling sections, and a 5/8 GP with 3/4 wave radials. All at 36 ft.
> The 5/8 ate the 1/4 GP for lunch. Probably 2 plus S units better than
> the 1/4 GP. The 5/8 beat the 1/2 wave by 1.5 S units. And this was
> tested and repeated over a period of months. Never varied. Ground wave
> testing is quite stable, and accurate for those low angles involved.
> Much more accurate than trying to compare using constantly varying
> skywaves. In real world gains, thats more than 1 db. 5/8 antennas are
> weird animals. On 2m, they suck. On HF, they can do fairly well, cuz
> the angles involved are not as critical. I used a 5/8 GP on 17m for
> 2-3 years. "also at 36 ft at the base".
> It mangled every other antenna I had on that band. On 10m, the 5/8
> beat any other length radiator quite handily. Again, on the critical

> 2m band, peeeyooooo.....they stink. BTW, on skywave, using a quick A/B
> test, all preferred the 5/8, over the other antennas. So it wasn't a
> low angle ground wave fluke. MK

2445. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 15:40:47 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10apkc3dccgfs0b@corp.supernews.com>
Source record: 94947

People like to simplify things, to make them easier to understand. They read that radials are important, but don't understand why, and apply that "sound bite" to all vertical antennas. (Or even to all antennas.) This sort of binary thinking -- or rather, non-thinking, is commonly applied to politics and a vast number of other fields besides antenna theory.

When you put power into an antenna, a current flows out of one conductor of the feedline to supply that power. An equal and opposite current flows into the other conductor. In the case of a grounded vertical, this means that whatever current flows into the base of the antenna also flows through the ground -- where the feedline shield is connected. Due to the resistance of the ground, this results in I^2 * R power loss. If the antenna's radiation resistance is comparable to or lower than the ground resistance, the fraction of applied power that's lost is significant, so it's common to lower the ground resistance by using radials. Radials become increasingly important as the vertical gets shorter, because a short vertical has a lower radiation resistance. However, the feedpoint radiation resistance of a half wave vertical is very high -- typically higher than the ground resistance. For a given power input, a relatively small current flows into the base of the antenna, so very little current flows in the ground. Consequently, the ground loss is low, and there's no need to decrease its resistance with radials.

Roy Lewallen, W7EL

larry d clark wrote:

> in a never ending quest to acquire antenna knowledge
> i've been doing some reading of a paper back book
> by a well know antenna guru who's now a sk.
> he claims that if a vertical antenna is fed at it's base
> with a parallel resonant l/c circuit and tapped on the
> inductor to to get an appropriate swr match, it's
> rf ground can be no more than a 3'x3' screen combined
> with a rod in the ground.
>
> in my mind, this seems to be something for nothing. if true
> why do i read about the importance of having a number
> of radials?
>
> questions, comments, pronouncements from the gurus on high
> most welcome. brickbats & complaints, etc 2>&1 /dev/null
>

> larry
> kd5foy
>
>

2446. Autotuner and dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 15:41:21 UTC
From: nightowls627@cs.com
Message-ID: <74f89aaf.0405200741.7b262601@posting.google.com>
Source record: 94948

I recently acquired an ldg lz 100 and hooked it up as soon as I got it. The dipole I have now will tune with a manual tuner to below 1.5:1 on 40m-10m. The autotuner won't tune to below 1.5:1 in any band. Am I doing something wrong or did I just not get a decent tuner. I oftentimes won't even get an SWR green light to show it has tuned and when I do, the SWR is high. Should I put a balun on or what? The dipole is 66 feet long in my attic... but as I stated, it tunes awesome with the manual tuner. If you want to email me, please email to ki4bbl@arrl.net The email here is incorrect.

2447. Re: Great Dangling Dipoles!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 16:07:35 UTC
From: jder8745@aol.com
Message-ID: <20040520120735.07889.00000935@mb-m04.aol.com>
Source record: 94949

I don't know about "just as well", but I hv done this when space was precious
and achieved a good match to a 50-Ohm t.l.

Jack

2448. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 16:13:38 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0405200813.394a97b1@posting.google.com>
Source record: 94950

Jack Twilley <jmt+usenet@twilley.org> wrote in message
news:<86zn833b35.fsf@duchess.twilley.org>...
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> >>>>> "N2EY" == N2EY <N2EY@aol.com> writes:
>
> N2EY> Jack Twilley <jmt+usenet@twilley.org> wrote in message
> N2EY> news:<86zn8769jc.fsf@duchess.twilley.org>...
> >> Out of curiosity, what other antenna provides a better
> >> cost-benefit ratio while maintaining the same constraints with
> >> respect to power, size, and construction?
> >>
> N2EY> A well made G5RV, for one. A well-made W3DZZ trap dipole, for
> N2EY> another. W5DXP's "linear tuner" dipole, for a third. Or the
> N2EY> classic dipole-with-openline-and-a-real-balanced-tuner for a
> N2EY> fourth. All are much more efficient than a T2FD of the same
> N2EY> size.
>
> The only one of those I haven't seen is the "linear tuner" dipole.

http://www.qsl.net/w5dxp/notuner.htm
>
> N2EY> The B&W/T2FD is discussed in detail on W4RNL's excellent site
> N2EY> (which see). In short, its efficiency is quite low on the lower
> N2EY> bands and gets to be almost as good as a halfwave dipole on the
> N2EY> upper bands. Their one and only advantage is low SWR over the
> N2EY> frequency range.
>
> I've looked, but the T2FD that's discussed isn't the one I'd be
> buying, and I'm not sure if that matters.

Which one would you be buying and how is it different? Most of the
data in the W4RNL site is for a 90' T2FD. When you look at the gain
curves, remember that they're in dBi. A simple halfwave dipole has
about 2.2 dBi gain.

The T2FD isn't a new invention - it was in QST about 1948 as a
receiving antenna, and that wasn't the first article on it by any
means. Government/military folks wanted a receiving antenna that was
essentially omnidirectional and would give a decent match to balanced
line over the HF frequency range - possibly feeding several receivers
via an active receive coupler. Low efficiency below 8 or 10 MHz was no
big deal because the receivers had lots of gain, and atmospheric noise
dominates in that part of the spectrum even with a poor antenna.

Transmitting is another issue.

If you want to spend the money for a T2FD, enjoy. But in the same space (T2FDs are not small!) and for the same or less money you could have a much more efficient transmitting antenna.

73 de Jim, N2EY

2449. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 16:29:12 UTC
From: Just Another Opinion <JAO@somewhere.net>
Message-ID: <t15rc.83372$Fl5.13125@okepread04>
Source record: 94951

Richard, Thierry and the original poster

I also suggest you read the post by Roy Lewallen, W7EL titled
Re: Voltage fed vertical question

--
From one currently in the Cloaked Mode

2450. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 16:29:51 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <325rc.28855$gr.2648980@attbi_s52>
Source record: 94952

When you put power into an antenna, a current flows out of one conductor
> of the feedline to supply that power. An equal and opposite current
> flows into the other conductor. In the case of a grounded vertical, this
> means that whatever current flows into the base of the antenna also
> flows through the ground -- where the feedline shield is connected. Due
> to the resistance of the ground, this results in I^2 * R power loss. If
> the antenna's radiation resistance is comparable to or lower than the
> ground resistance, the fraction of applied power that's lost is
> significant, so it's common to lower the ground resistance by using
> radials. Radials become increasingly important as the vertical gets
> shorter, because a short vertical has a lower radiation resistance.
> However, the feedpoint radiation resistance of a half wave vertical is
> very high -- typically higher than the ground resistance. For a given
> power input, a relatively small current flows into the base of the
> antenna, so very little current flows in the ground. Consequently, the
> ground loss is low, and there's no need to decrease its resistance with
> radials.
>
> Roy Lewallen, W7EL

Roy, I've always maintained that when I don't know that the ground resistance is zero, I want as little current flowing in it as possible. My inverted "L" is a voltage fed half wave on 160 meters, about 70 feet up and 170 feet out courtesy of a couple of strategically placed Oaks . I have measured that feed impedance as being in excess of 2600 ohms and feed it with a remotely tuned "L" network. I used it for several years just fed against 60 feet of 6 inch well casing, and then, bowing to conventional wisdom as advertised on 1850 KHz, added an elevated counterpoise beneath the whole thing. (About 12 feet in the air) I didn't notice any change in signal reports, but that impedance sure changed a lot. Did I change something besides the ground resistance?

Regards

W4ZCB

2451. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 16:48:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gskpa0dcovtjus4mf3jh0im0eo039g93km@4ax.com>
Source record: 94953

On Thu, 20 May 2004 08:14:18 -0700, "Just Another Opinion"
<JAO@somewhere.net> wrote:

>Richard, Thierry and the original poster I repeat:

Repetition is both tedious and changes nothing.

>The R7 is NOT a quarter wave vertical -- it is a half wave end
>fed antenna.

Mantras soothe the soul certainly.

>A quarter wave radiator needs a ground plane or radials to work against for
>sure -- but Cushcraft sez a half wave antenna doesn't need radials as it is
>like a horizontal dipole turned vertical and end fed (high impedance) rather
>than center fed.

Not needing and prohibiting are not the same thing.

> I suggest you read and study the following:
>
>The Cushcraft manual it explicitly states "The
>R7 should not be attached to a ground radial system".
>URL: http://www.cushcraft.com/support/pdf/r7.pdf

Yeah, and page one:
"System Grounding"

One radial good.
More radial bad.
Yeah, sure.

In fact a word search against the quote above returns 0 hits. So much
for explicit statements and what "should" be read. I note the links
below have the same breathless nature, which is to say a lot of air.

>Do you know what is in the black box matching unit ??

Yes I do.

> If not see URL:
>http://www.iol.ie/~bravo/r7_vertical.htm

Another "should" be read? I think not. It's been posted here many
times over the years and doesn't even broach the topic (the word
"radial" appears nowhere).

>A local Ham added radials -- couldn't tune the antenna -- so he added a
>tuner. When he ran a kilowatt into this mishmash -- the black box blew up.

>So he repaired it as in URL:
>http://www.iol.ie/~bravo/r7_vertical.htm

And this proves what (besides a penchant for repetition)? Another anonymous lid? Thanks, but no thanks, we have our quota here; too often appearing in the guise of learned lecturer complete with Cliff notes. This doubly quoted link does not describe the event you allude to, and in fact offers trap construction is more problematic than the invention of radials-as-evil.

>He no longer has the added radials and tuner and runs a KW all the time with
>no ill effects -- let the experimenter beware.

Yeah, now there's a line - no experimentation in Amateur radio. We have enough Credit Card operators.

>I know this is a controversial subject -- rehashed many times here

Ah, the voice of experience. I've been here 10 years and haven't seen this soap opera yet.

> mostly because folks treat the R7 like a quarter wave vertical -- which it isn't

Repetition again, quite boring now.

>and the R7 has that complex matching black box design which I wouldn't mess
>with by adding radials. Unless I had the proper test equipment and expertise
>to determine what effect added radials have on the impedances and matching.
>Cushcraft undoubtedly did this.
>
>More at URL:
>http://lists.contesting.com/archives/html/Towertalk/2003-08/msg00059.html

"There is no grounded part in an R7 type antenna"

Which, of course, negates page one of the quoted manual above....

>AND http://dayton.akorn.net/pipermail/towertalk/2001-March/037180.html

"The R7, like others in the R3-R8 series from
Cushcraft, use some number of 39" 'radials'...
They are not radials"

Quality stuff there.

Again, nothing here evidences the "should" of the "should" be read. The two quotes above offer repetition and no actual technical discussion. But then, this group is the place for that, and rightly so in the face of such tepid offerings.

You should vet your offerings before submitting them as evidence.

>Regarding decoupling the feed line -- Cushcraft recommends an RF choke 8
>inches in diameter and ten turns on the coax.

Excellent advice for the 1960s. However, in the 21st century most correspondents here would appreciate how mediocre-to-poor that would be with a conventional choke looking into a half wave load.

You seem to be at odds with experimentation with this last piece of advice. The link to the match box above suggests a far different means of choking. As this choking method does not appear in the Cushcraft liturgy, are we to assume the antenna will burst into demonic flames if this un-ordained device is used?

>Me -- I trusted Cushcraft and followed their instructions. Been working
>great for 6 years now.
>I won't run out the brag tape on countries worked with it -- means nothing.

That has been demonstratively true here for years.

Now, demonstrate the difficulties that will be imposed (if one follows Thierry's advice) by constructing a model readable by EZNEC that may be offered here for peer review. Testimonials do not pass as evidence in this forum as so many of them for the eh/cfa/fractal clog the system currently.

73's
Richard Clark, KB7QHC

2452. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 17:15:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4dppa0tcg3mppjn45um0892eth4t1m5t8d@4ax.com>
Source record: 94954

On Thu, 20 May 2004 09:30:07 -0700, Dan Richardson
<<ChangeThisToCallSign>@mendolink.com> wrote:

>Modeling I found that comparing a full-bore ground system (120
>half-wavelength radials) to a single eight-foot ground rod (average
>ground) the difference reported was about 1 dB.
>
Hi Danny,

I made the same comparison at 40M. The difference between 120
(quarterwave) radials and 1 amounts to 0.1dB Clip that one down by a
tenth and the difference climbs to an astronomical 0.3dB.

73's
Richard Clark, KB7QHC

2453. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 17:29:41 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40ACEB05.1E085B5B@uci.edu>
Source record: 94955

Richard Clark wrote:
>
> On Thu, 20 May 2004 08:14:18 -0700, "Just Another Opinion"
> <JAO@somewhere.net> wrote:
>
> >Richard, Thierry and the original poster I repeat:
>
> Repetition is both tedious and changes nothing.
>
> >The R7 is NOT a quarter wave vertical -- it is a half wave end
> >fed antenna.
>
> Mantras soothe the soul certainly.
>
> >A quarter wave radiator needs a ground plane or radials to work against for
> >sure -- but Cushcraft sez a half wave antenna doesn't need radials as it is
> >like a horizontal dipole turned vertical and end fed (high impedance) rather
> >than center fed.
>
> Not needing and prohibiting are not the same thing.
>
> > I suggest you read and study the following:
> >
> >The Cushcraft manual it explicitly states "The
> >R7 should not be attached to a ground radial system".
> >URL: http://www.cushcraft.com/support/pdf/r7.pdf
>
> Yeah, and page one:
> "System Grounding"
>
> One radial good.
> More radial bad.
> Yeah, sure.
>
> In fact a word search against the quote above returns 0 hits. So much
> for explicit statements and what "should" be read. I note the links
> below have the same breathless nature, which is to say a lot of air.
>
> >Do you know what is in the black box matching unit ??
>
> Yes I do.
>
> > If not see URL:
> >http://www.iol.ie/~bravo/r7_vertical.htm

>
> Another "should" be read? I think not. It's been posted here many
> times over the years and doesn't even broach the topic (the word
> "radial" appears nowhere).
>
> >A local Ham added radials -- couldn't tune the antenna -- so he added a
> >tuner. When he ran a kilowatt into this mishmash -- the black box blew up.
> >So he repaired it as in URL:
> >http://www.iol.ie/~bravo/r7_vertical.htm
>
> And this proves what (besides a penchant for repetition)? Another
> anonymous lid? Thanks, but no thanks, we have our quota here; too
> often appearing in the guise of learned lecturer complete with Cliff
> notes. This doubly quoted link does not describe the event you allude
> to, and in fact offers trap construction is more problematic than the
> invention of radials-as-evil.
>
> >He no longer has the added radials and tuner and runs a KW all the time with
> >no ill effects -- let the experimenter beware.
>
> Yeah, now there's a line - no experimentation in Amateur radio. We
> have enough Credit Card operators.
>
> >I know this is a controversial subject -- rehashed many times here
>
> Ah, the voice of experience. I've been here 10 years and haven't seen
> this soap opera yet.
>
> > mostly because folks treat the R7 like a quarter wave vertical -- which it isn't
>
> Repetition again, quite boring now.
>
> >and the R7 has that complex matching black box design which I wouldn't mess
> >with by adding radials. Unless I had the proper test equipment and expertise
> >to determine what effect added radials have on the impedances and matching.
> >Cushcraft undoubtedly did this.
> >
> >More at URL:
> >http://lists.contesting.com/archives/html/Towertalk/2003-08/msg00059.html
>
> "There is no grounded part in an R7 type antenna"
>
> Which, of course, negates page one of the quoted manual above....
>
> >AND http://dayton.akorn.net/pipermail/towertalk/2001-March/037180.html
>
> "The R7, like others in the R3-R8 series from
> Cushcraft, use some number of 39" 'radials'...
> They are not radials"
>

> Quality stuff there.
>
> Again, nothing here evidences the "should" of the "should" be read.
> The two quotes above offer repetition and no actual technical
> discussion. But then, this group is the place for that, and rightly
> so in the face of such tepid offerings.
>
> You should vet your offerings before submitting them as evidence.
>
> >Regarding decoupling the feed line -- Cushcraft recommends an RF choke 8
> >inches in diameter and ten turns on the coax.
>
> Excellent advice for the 1960s. However, in the 21st century most
> correspondents here would appreciate how mediocre-to-poor that would
> be with a conventional choke looking into a half wave load.
>
> You seem to be at odds with experimentation with this last piece of
> advice. The link to the match box above suggests a far different
> means of choking. As this choking method does not appear in the
> Cushcraft liturgy, are we to assume the antenna will burst into
> demonic flames if this un-ordained device is used?
>
> >Me -- I trusted Cushcraft and followed their instructions. Been working
> >great for 6 years now.
> >I won't run out the brag tape on countries worked with it -- means nothing.
>
> That has been demonstratively true here for years.
>
> Now, demonstrate the difficulties that will be imposed (if one follows
> Thierry's advice) by constructing a model readable by EZNEC that may
> be offered here for peer review. Testimonials do not pass as evidence
> in this forum as so many of them for the eh/cfa/fractal clog the
> system currently.
>
> 73's
> Richard Clark, KB7QHC

Did you get up on the wrong side of the bed this morning or something,
Richard?

73, jk

2454. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 17:44:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jfrpa0l0iu2ncs082u32lhuf42t1e3f2cp@4ax.com>
Source record: 94956

On Thu, 20 May 2004 10:29:41 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>Did you get up on the wrong side of the bed this morning or something,
>Richard?

Hi Jim,

Believe in three impossible things before breakfast.

73's
Richard Clark, KB7QHC

2455. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 20:00:11 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405201200.59193167@posting.google.com>
Source record: 94957

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40acac84$1_2@corp.newsgroups.com>...
> Brian Kelly wrote:
> > Uhh . . the Internet has been around since the 1960s . . ARPANET?
>
> World Wide Web?

Nah. E-mail, Telnet, etc. Unless you consider the Web simply a GUI for
the FTP sites of the days of yore . .

2456. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 20:53:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10aq6lg5uqk9d91@corp.supernews.com>
Source record: 94958

In the inverted L or any antenna with a horizontal wire, there's coupling between the wire and ground. The field from the horizontal wire induces current in the ground under it. If the wire is low, the loss produced by this current can be substantial. By putting an elevated wire under the horizontal wire, you've changed this coupling to the ground, plus you've introduced a new conductor into the antenna. Mutual coupling between this conductor and the other wires will change the impedance.

Modeling will give a lot of insight into what all is going on.

Roy Lewallen, W7EL

Harold E. Johnson wrote:
>
> Roy, I've always maintained that when I don't know that the ground
> resistance is zero, I want as little current flowing in it as possible. My
> inverted "L" is a voltage fed half wave on 160 meters, about 70 feet up and
> 170 feet out courtesy of a couple of strategically placed Oaks . I have
> measured that feed impedance as being in excess of 2600 ohms and feed it
> with a remotely tuned "L" network. I used it for several years just fed
> against 60 feet of 6 inch well casing, and then, bowing to conventional
> wisdom as advertised on 1850 KHz, added an elevated counterpoise beneath the
> whole thing. (About 12 feet in the air) I didn't notice any change in signal
> reports, but that impedance sure changed a lot. Did I change something
> besides the ground resistance?
>
> Regards
>
> W4ZCB
>
>

2457. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 21:15:33 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8j75lqjg1@sparta.btinternet.com>
Source record: 94959

A single ground rod, unless in sea water, has a resistance to mother earth between 50 and 200 ohms. Let's take it to be 100 ohms.

Efficiency of a 1/4-wave vertical, feedpoint resistance = 37 ohms, is 27 percent.

Efficiency of a 5/8-wave vertical, feedpoint resistance = 50 ohms, is 33 percent.

Efficiency of a 1/2-wave vertical, feedpoint resistance = 2500 ohms, is 96 percent.

The difference in radiation pattern in a typical back yard, in the vertical plane, is neither here nor there.

The 1/2-wave antenna also needs the most simple L and C matching network.

But I'd never recommend a ground rod anyway. Not worth the time, trouble and expense unless extremely short of real estate at ground level.

Roy, the problem of choice lies in over-complication by too 'clever', 'knowledgeable' old-wives and gurus rather than under-complication.

Reg, G4FGQ

2458. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 21:20:53 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Vi9rc.41$Ly.55769@attbi_s51>
Source record: 94960

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:10aq6lg5uqk9d91@corp.supernews.com...
> In the inverted L or any antenna with a horizontal wire, there's
> coupling between the wire and ground. The field from the horizontal wire
> induces current in the ground under it. If the wire is low, the loss
> produced by this current can be substantial. By putting an elevated wire
> under the horizontal wire, you've changed this coupling to the ground,
> plus you've introduced a new conductor into the antenna. Mutual coupling
> between this conductor and the other wires will change the impedance.
>
> Modeling will give a lot of insight into what all is going on.
>
> Roy Lewallen, W7EL

Thanks, don't know why I hadn't considered "the rest of the half wave". Not many options other than what I have up, so will pass on the modeling. It's REALLY a very decent performer on 160, 80 and 40, and unobtrusive in the summer.

W4ZCB

2459. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 21:46:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hm9qa0lh9q4kk5qav4kldov5egrgpcchtt@4ax.com>
Source record: 94961

On 20 May 2004 13:00:11 -0700, kelly@dvol.com (Brian Kelly) wrote:

>Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40acac84$1_2@corp.newsgroups.com>...
>> Brian Kelly wrote:
>> > Uhh . . the Internet has been around since the 1960s . . ARPANET?
>>
>> World Wide Web?
>
>Nah. E-mail, Telnet, etc. Unless you consider the Web simply a GUI for
>the FTP sites of the days of yore . .
Or Archie, Veronica, and gophering...

2460. WTB Telrex

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 22:01:28 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <YU9rc.30080$gr.3037600@attbi_s52>
Source record: 94962

NEED an old Telrex rotator. with or without control box.

W4ZCB

2461. Re: 10.512 MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 23:24:44 UTC
From: Les &/or Claire <les.clairefrontallobes@virgin.net>
Message-ID: <2h4t1kF9dvpjU1@uni-berlin.de>
Source record: 94981
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,alt.radio.uk,rec.radio.amateur.antenna,rec.radio.scanner,uk.radio.amateur

LJ wrote:
>
> I dialed up 10.512 MHz a couple of nights ago. I began to belive that
> this posting was someone's idea of a joke, as all I heard was some
> Spanish-speaking stations talking back and forth,like many of them do
> on what they think are "private and unused by anyone else
> frequencies". The next day, I heard the "music" - it wasn't too strong
> here in the Pacific NW about 5:00 PM PDST Local time, and weaker yet
> at 11:00 PM. I couldn't hear it at all early this morning (6:00 AM).
>
> Very interesting!
>
> LJ

Yes, a very strange signal indeed. The odd thing is that on both sides
of the atlantic people thought of aliens first. if I was a film sound man it
would be "alien contact sound No.1"

Les

--
http://www.stuffmongers.com

"Homo sapiens, the first truly free species, is about to decommission
natural selection, the force that made us.... Soon we must look deep
within ourselves and decide what we wish to become." Edward O. Wilson
Consilience, The Unity of Knowledge

Remove frontal lobes to reply from a NG

2462. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-20 23:31:45 UTC
From: jgboyles@aol.com
Message-ID: <20040520193145.18679.00001085@mb-m26.aol.com>
Source record: 94963

>Try this: a 16 Ohm resistor in series with each side of the dipole, and a
>100 Ohm resistor across the feedpoint. Unless I messed up, this will give
>you SWR =< 2:1 for all conditions including shorted, and absent dipoles.

Thanks Tam, This is exactly what I was looking for. A dummy load is 0% efficient. A B&W dipole is less than 20% on 80m and 160m. It costs a lot of money. There are less expensive ways to achieve 20% efficiency on 160m and 80m. 0% does not radiate (dummy load), a good bad antenna in my opinion is one that radiates, but not too much. And it can't cost too much.
73 Gary N4AST

2463. Remote antenna switching

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 00:12:30 UTC
From: J M Noeding <la8ak@online.no>
Message-ID: <j0iqa0lv7728mv046mv59fvo088123iulk@4ax.com>
Source record: 95017

Rrad about a complex remote control unit using VLSI circuits and made
some considerations.
Using a 9V transformer it is possible to switch relays to 4 positions
using the following signals on the antenna cable - with RF chokes and
suitable capacitors to pass the RF, and two dpdt relays at remote end:
1) no voltages
2)+12V with a diode in series with the switch and transformer
3) -12V with another diode in series with switch and transformer
4) 9VAC to activate both relays simultaneosly

very simple, but no VLSI - if that was the point, and no intruder
transmitter on 433.92MHz for the remote control if it was another
point, sorry - I am perhaps to old for those modern type of remote
control......

73
Jan-Martin
LA8AK

2464. Re: Really Inefficient Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 00:38:29 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8jj24$gp9$1@hercules.btinternet.com>
Source record: 94964

> Try this: a 16 Ohm resistor in series with each side of the dipole, and a
> 100 Ohm resistor across the feedpoint. Unless I messed up, this will give
> you SWR =< 2:1 for all conditions including shorted, and absent dipoles.
> Tam/WB2TT
>
========================

There's no need to mess about with the antenna. Just connect a crude
attenuator at the transmitter end of the transmission line. This much
reduces the cost of the antenna. It's then just a length of wire.

2465. Re: Autotuner and dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 01:47:00 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <n76dnQDYIu8JwjDdRVn-hA@adelphia.com>
Source record: 94965

Greg wrote:
> I recently acquired an ldg lz 100 and hooked it up as soon as I got
> it. The dipole I have now will tune with a manual tuner to below
> 1.5:1 on 40m-10m. The autotuner won't tune to below 1.5:1 in any
> band. Am I doing something wrong or did I just not get a decent
> tuner. I oftentimes won't even get an SWR green light to show it has
> tuned and when I do, the SWR is high. Should I put a balun on or
> what? The dipole is 66 feet long in my attic... but as I stated, it
> tunes awesome with the manual tuner. If you want to email me, please
> email to ki4bbl@arrl.net The email here is incorrect.

You should be able to tune the antenna on 40 meters, as it is resonant around 7.1 mHz to start with. 20 meters - maybe. 15 meters should tune okay.

Your manual tuner tunes okay because it will tune a much higher range of mismatches, assuming it is a "T" type tuner.

The autotuner I have seen that has the widest range for tuning mismatches is of all things, an MFJ.

This doesn't mean your tuner is bad, From what I have seen of the LDG's - they are nice well constructed units. I'd keep it and modify the antenna.

- Mike KB3EIA -

2466. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 02:23:57 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405201823.87c1e0c@posting.google.com>
Source record: 94966

Richard Clark <kb7qhc@comcast.net> wrote in message
news:<hm9qa0lh9q4kk5qav4kldov5egrgpcchtt@4ax.com>...
> On 20 May 2004 13:00:11 -0700, kelly@dvol.com (Brian Kelly) wrote:
>
> >Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40acac84$1_2@corp.newsgroups.com>...
> >> Brian Kelly wrote:
> >> > Uhh . . the Internet has been around since the 1960s . . ARPANET?
> >>
> >> World Wide Web?
> >
> >Nah. E-mail, Telnet, etc. Unless you consider the Web simply a GUI for
> >the FTP sites of the days of yore . .
> Or Archie, Veronica, and gophering...

You understand . . .

2467. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 02:48:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9oqqa0tflnamkoo94du9ne979hp6ebhmgk@4ax.com>
Source record: 94967

On 20 May 2004 19:23:57 -0700, kelly@dvol.com (Brian Kelly) wrote:

>Richard Clark <kb7qhc@comcast.net> wrote in message
news:<hm9qa0lh9q4kk5qav4kldov5egrgpcchtt@4ax.com>...
>> On 20 May 2004 13:00:11 -0700, kelly@dvol.com (Brian Kelly) wrote:
>>
>> >Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40acac84$1_2@corp.newsgroups.com>...
>> >> Brian Kelly wrote:
>> >> > Uhh . . the Internet has been around since the 1960s . . ARPANET?
>> >>
>> >> World Wide Web?
>> >
>> >Nah. E-mail, Telnet, etc. Unless you consider the Web simply a GUI for
>> >the FTP sites of the days of yore . .
>> Or Archie, Veronica, and gophering...
>
>You understand . . .

That, and a generation of congress (including Gore) who voted in such
a way that we now have a vast pool of untapped bandwidth ... 1 mile
from any consumer's house. They encouraged phase one of a
multi-tiered distribution system that is now in the weeds.

The dot.com explosion invested 10s of billions of bucks in fiber
installation promising video on demand and the next generation of web
connectivity.

The current administration (sic) and their FCC has dropped the ball
and mandated that each market area needs to hammer out their own
connection franchise contracts. 100000 opto-balkan states with the
same scale of efficiency. Need anyone wonder why the utilities make
money moving network data over power lines? This is third world
economics.

73's
Richard Clark, KB7QHC

2468. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 02:49:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10aqrhrmt2nic31@corp.supernews.com>
Source record: 94968

Be careful about making generalizations about this. The position of the peak current depends on frequency and the ground characteristics. I believe it's also a function of the height of the vertical. In some cases there's no real peak at all, but an exponential-looking decay of current from the base of the vertical outward. This, incidentally, was experimentally measured and documented by Brown, Lewis, and Epstein in 1937.

Roy Lewallen, W7EL

Dan Richardson < wrote:
>
> Maybe the difference is the length of the radials. I used ï¿½-wavelength
> radials as the peak ground current is at 0.35-wavelength from the base
> of the monopole - ï¿½-wavelength radials would be too short to reach
> that area.
>
> Danny
>

2469. Tuner modules

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 03:07:16 UTC
From: Jerry <joxendi@bellsouth.net>
Message-ID: <wlerc.13861$3W1.2939@bignews6.bellsouth.net>
Source record: 94969

I know there is a fellow on the 'net that makes tuner modules for IC706's.
Does he have them for Kenwoods
(TS-50), too. If so, I need his website address.

73

Jerry

2470. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 03:22:33 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <496dncwOztFl6DDd4p2dnA@adelphia.com>
Source record: 94970

CW wrote:

> No, he just claimed he did.

Citation please!

> "Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
> news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
>
>>Gore didn't invent the Internet, >
>
>
>

2471. Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 04:48:58 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <APudnb7MgIWDFzDdRVn-uw@comcast.com>
Source record: 94971

What sort of antenna offers narrow beamwidth, combined with smooth
sidelobes?
I'm not too concerned with F/B ratio, or the magnitude of the sidelobes,
(smaller is better obviously) but I'm more concerned that they not be a mess
of deep spiky notches.

This is a somewhat special application above the 440 band, but I could scale
a 440/900/1296 design appropriately. Gain, per se, isn't really an issue,
and negative gain may in fact be acceptable.

--
A: Because it messes up the order in which people normally read text.
Q: Why is top-posting such a bad thing?
A: Top-posting.
Q: What is the most annoying thing on usenet?

2472. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 05:03:23 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <w4grc.48130$pJ1.11668@lakeread02>
Source record: 94972

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:9oqqa0tflnamkoo94du9ne979hp6ebhmgk@4ax.com...
> On 20 May 2004 19:23:57 -0700, kelly@dvol.com (Brian Kelly) wrote:
>
> >Richard Clark <kb7qhc@comcast.net> wrote in message
news:<hm9qa0lh9q4kk5qav4kldov5egrgpcchtt@4ax.com>...
> >> On 20 May 2004 13:00:11 -0700, kelly@dvol.com (Brian Kelly) wrote:
> >>
> >> >Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40acac84$1_2@corp.newsgroups.com>...
> >> >> Brian Kelly wrote:
> >> >> > Uhh . . the Internet has been around since the 1960s . . ARPANET?
> >> >>
> >> >> World Wide Web?
> >> >
> >> >Nah. E-mail, Telnet, etc. Unless you consider the Web simply a GUI for
> >> >the FTP sites of the days of yore . .
> >> Or Archie, Veronica, and gophering...
> >
> >You understand . . .
>
> The dot.com explosion invested 10s of billions of bucks in fiber
> installation promising video on demand and the next generation of web
> connectivity.

Richard,

But they promised things that no one needed or wanted! They promised connectivity almost as ridicuous as AT&T promises in the early 70's - like the video phone, which made about as much sense as computers in the shower. It never went anywhere and to this day, even when it is free via the internet, it has no market. Satellite radio in cars, while it sounds like a good idea, struggles financially after third and fourth generation bankruptcies of the successors. No one wants to pay for it, and they have to give it away in new cars. There's a new "Palm Pilot" born every day. The next big false start I'm watching closely is "software radios". DOD is being sold a big bill of goods on these, and FCC is sitting on their hands unsure if it will revolutionize, or destroy the bandwidth. I'm a big defender of property and intellectual rights, and despise frivlous lawsuits, but I hope Motorola is held accountable for the miserable product they sold NYC public safety agencies. They aren't just short a few hundred towers there, they have a product as miserable as Nextel digital - it drops off at almost any corner with no fail-soft analog reliability.

73
Jack Painter
Virginia Beach Va

2473. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 05:19:09 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <g44ra09mctvg42vnqtf574qrbbmcgg9eu3@4ax.com>
Source record: 94973

On Fri, 21 May 2004 01:03:23 -0400, "Jack Painter" <223bthp@cox.net>
wrote:
>But they promised things that no one needed or wanted!

The administration (sic) makes sure we won't need or want it - not at
the cost it will take if we did. It's like "saving" Medicare where
you walk the last mile to the hospital.

73's
Richard Clark, KB7QHC

2474. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 05:41:28 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <pvKdndgZx6sVCzDd4p2dnA@comcast.com>
Source record: 94974

A few years ago someone made a bet with me that Gore did not take credit for the internet. I sent him a video clip of the interview where he did, in fact, make that claim. I no longer have the clip and can not find it on the web though it is, no doubt, archived somewhere. A transcript is still available. The man still owes me $50.00 on that bet.
http://www.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/transcript.gore/

"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:496dncwOztFl6DDd4p2dnA@adelphia.com...
> CW wrote:
>
> > No, he just claimed he did.
>
> Citation please!
>
> > "Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
> > news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
> >
> >>Gore didn't invent the Internet, >
> >
> >
> >
>

2475. Re: voltage fed vertical question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 09:36:12 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8kiic$ro9$1@sparta.btinternet.com>
Source record: 94975

> In ether case adding that much wire (15,840 feet) for so little gain
> sure doesn't seem worthwhile.
>
> 73
> Danny, K6MHE
>
========================

Danny, I quite agree.

The current-carrying cross-sectional area of the Earth is enormous at distances from the antenna base of 1/4-wavelength and greater. Regardless even of very poor soil resistivity, loss in the soil is sensibly zero.

Furthermore, propagation velocity in the soil is MUCH less than the free space velocity and I am of the opinion that computer models give a very distorted picture of what actually happens.

At distances of the order of 1/8 free-space wavelength practically all of the current flows in the soil. Shallow-buried radials might just as well not be there. The copper is better used to increase the number of short radials.

But an increase in the number of short radials is a waste of copper anyway when the number of radials is already very large.

What B,L&E were doing with 120 radials at MF in 1937 is hardly relevant. I understand they forgot to determine ground conductivity - an indication they didn't fully appreciate what they were about. As they were the first in the field to make such measurements this omission is understandable. But at HF, soil characteristics are considerably different - factors which computer model users do not feed into their models.

Computerised antenna model users are inclined to suffer from delusions of accuracy - drowning, unaware, in a sea of uncertainties.

But there's no real harm done! ;o)

Reg.

2476. Re: 5/8 wave ground plane

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 10:19:55 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405210219.20a73af0@posting.google.com>
Source record: 94976

Roy Lewallen <w7el@eznec.com> wrote in message
news:<10apjjinqgpng93@corp.supernews.com>...
> With a typical ground plane antenna, the feedline can radiate
> significantly, distorting the pattern. This effect could easily be
> different for the different antennas. Modeling indicates that two baluns
> are often needed to suppress the current on the outside of the feedline.
> A model which includes the feedline might give some insights as to why
> the antennas behave so differently.
>
> Roy Lewallen, W7EL

It's quite possible. The 1/2 was the only one I actually added a
decoupling section to. It was a 1/4 wave length of coax below the
feed, and a grounded set of 1/4 wave radials at the base of that
section. About the same scheme as cushcraft uses on their ringo ranger
2 verticals. It did improve the antenna. I never added extra
decoupling to the 1/4 or 5/8 antennas. But I did try both 1/4 and 3/4
wave radials on the 5/8 antenna. Ended up prefering the 3/4
radials..The 1/2 wave was a very good antenna, but in my case, not
once did it ever beat the 5/8. Actually, thinking about it, and even
included many CB antenna setups going back years and years, I've never
seen a 5/8 GP that didn't handily beat a 1/4 GP by 2 S units to a
local ground wave station. Even using the 1/4 wave radials, which I'm
not crazy about for a 5/8 antenna. These were all using various
length feedlines I'm sure. MK

2477. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 10:33:30 UTC
From: fractenna@aol.com
Message-ID: <20040521063330.25458.00001789@mb-m29.aol.com>
Source record: 94977

>What sort of antenna offers narrow beamwidth, combined with smooth
>sidelobes?

I don't know what you mean by 'smooth sidelobes'.

Sidelobes are artifacts of truncation and/or lack of continuity, in the spatial frequency spectrum of the aperture.

There are lots of ways, in hardware, to mitigate sidelobes. In an array this is done, conventionally, by amplitude weighting of elements. There are non-conventional ways of course, that are beyond the scope of this NG.

As elelemnts, there are moderate gain dipoles that have no sidelobes. A conventional solution, for example, is a Landstorfer element, which is a curved wire antenna that looks like a Gaussian in outline.

Perhaps a bit more specificity would help.

73,
Chip N1IR

2478. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 12:14:36 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <bgsra05tjs6r4jleleu7q10nt7ijdncd1n@4ax.com>
Source record: 94978

On Thu, 20 May 2004 22:41:28 -0700, "CW" <clinton.magers@comcast.net>
wrote:

>A few years ago someone made a bet with me that Gore did not take credit for
>the internet. I sent him a video clip of the interview where he did, in
>fact, make that claim. I no longer have the clip and can not find it on the
>web though it is, no doubt, archived somewhere. A transcript is still
>available. The man still owes me $50.00 on that bet.

He said something to the effect that he was a creator or father -- of
the internet -- he never used the word "invent." That was an invention
of reporter(s).

Bob
k5qwg

>http://www.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/transcript.gore/
>
>"Mike Coslo" <mcoslo@adelphia.net> wrote in message
>news:496dncwOztFl6DDd4p2dnA@adelphia.com...
>> CW wrote:
>>
>> > No, he just claimed he did.
>>
>> Citation please!
>>
>> > "Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
>> > news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
>> >
>> >>Gore didn't invent the Internet, >
>> >
>> >
>> >
>>
>

2479. Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 12:54:23 UTC
From: rhymer <ron@roncrowley.dot.com>
Message-ID: <qlura01s0pv1vervdje196julir6fllfmt@4ax.com>
Source record: 94979

What is the best way to use one feed line for more than one dipole?
Or, is it better to use a coax switch in the shack?

Thanks, Ron

2480. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 13:21:44 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <Innrc.49771$pJ1.14852@lakeread02>
Source record: 94984

"rhymer" <ron@roncrowley.dot.com> wrote
> What is the best way to use one feed line for more than one dipole?
> Or, is it better to use a coax switch in the shack?

Ron, your subject line "Two dipoles on one coax" implies the typical antenna selector switch that leaves no question (of course you can do that). But the message body asks about one feedline for more than one dipole as opposed to the antenna selector. The two choices are so unequal that a comparison is not possible.

Someone may explain here that they have connected more than one antenna with a single feedline, but it flies in the face of proper operating procedure. Most operators however do use antenna selector switches to provide more than one antenna choice to a given receiver or transmitter. The individual antennas always have their own individual feedline in those cases.

Best regards,

Jack Painter
Virginia Beach

2481. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 13:55:03 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <efKdnTKQpJqGljPdRVn-vw@comcast.com>
Source record: 94985

> I don't know what you mean by 'smooth sidelobes'.

I would rather have a higher sidelobe amplitude, if I can also not have deep notches in it, than lower sidelobes with deep notches, unless of course the sidelobes can be made to be insignificant.
And at this point, I'm not sure how low they would have to be, to be insignificant.

A small dish is possible, but given the wavelength, "small" is not really all that small.
I don't get a choice on wavelength.
In order of importance, tight beamwidth, low sidelobes, "smooth" sidelobes, and gain.

> Sidelobes are artifacts of truncation and/or lack of continuity, in the spatial
> frequency spectrum of the aperture.
>
> There are lots of ways, in hardware, to mitigate sidelobes. In an array this is
> done, conventionally, by amplitude weighting of elements. There are
> non-conventional ways of course, that are beyond the scope of this NG.
>
> As elelemnts, there are moderate gain dipoles that have no sidelobes. A
> conventional solution, for example, is a Landstorfer element, which is a curved
> wire antenna that looks like a Gaussian in outline.
>
> Perhaps a bit more specificity would help.

It probably would, but I'm just at the back of napkin stage on this project.
I won't know what I need really, till I do some testing.

2482. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 14:22:20 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <18idnQSLVaQKjTPdRVn-tw@comcast.com>
Source record: 94986

"rhymer" <ron@roncrowley.dot.com> wrote in message
news:qlura01s0pv1vervdje196julir6fllfmt@4ax.com...
> What is the best way to use one feed line for more than one dipole?
> Or, is it better to use a coax switch in the shack?
>
> Thanks, Ron

Ron,

Connecting two *dipoles* to the same feedline works just fine. Just tie them directly to the same balun. There will be two kinds of interaction: first, the two are electrically in parallel, and second, the wires themselves could have mutual coupling. The first seems to not really be a problem, and the second is minimized if there is separation between the two dipoles. For best results, put them at right angles to each other; if that is not possible, have at least 15 - 30 degrees separation, either vertical or horizontal. For instance, you could have a dipole supported at the ends, with an inverted V hanging below it.

The most interesting case is for antennas at 75 and 80 meters. You get <2:1 SWR from 3.5 to 4 MHz in a virtually non directional antenna (if the two dipoles are at 90 degrees).

I presently have a 40 m inverted V hanging below an 17 m dipole. (The trees are too close to do it the other way). The 40 meter is also out of plane to miss the trees. Works great.

Since you have to trim the lengths slightly (lowest frequency first), it is simplest to run EZNEC or some other simulation first.

Tam/WB2TT

2483. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 14:25:10 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <2e-dnSiM_OjcjDPdRVn-uw@comcast.com>
Source record: 94987

"Dave VanHorn" <dvanhorn@cedar.net> wrote in message
news:APudnb7MgIWDFzDdRVn-uw@comcast.com...
>
>
> What sort of antenna offers narrow beamwidth, combined with smooth
> sidelobes?
> I'm not too concerned with F/B ratio, or the magnitude of the sidelobes,
> (smaller is better obviously) but I'm more concerned that they not be a
mess
> of deep spiky notches.
>
> This is a somewhat special application above the 440 band, but I could
scale
> a 440/900/1296 design appropriately. Gain, per se, isn't really an issue,
> and negative gain may in fact be acceptable.
>
> --
> A: Because it messes up the order in which people normally read text.
> Q: Why is top-posting such a bad thing?
> A: Top-posting.
> Q: What is the most annoying thing on usenet?
Because I don't want to read the same damn message 26 times.

2484. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 14:36:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40ae1318$1_3@127.0.0.1>
Source record: 94988

Dave VanHorn wrote:
> What sort of antenna offers narrow beamwidth, combined with smooth
> sidelobes?
> I'm not too concerned with F/B ratio, or the magnitude of the sidelobes,
> (smaller is better obviously) but I'm more concerned that they not be a mess
> of deep spiky notches.

An Extended Double Zepp has a relatively narrow beamwidth
(~35 deg) and four side lobes about -13 dB down. I vaguely
remember a magazine article that told how to virtually
eliminate the EDZ side lobes.
--
73, Cecil http://www.qsl.net/w5dxp

2485. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 14:44:13 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40ae14e7$1_3@127.0.0.1>
Source record: 94989

Jack Painter wrote:
> Someone may explain here that they have connected more than one antenna with
> a single feedline, but it flies in the face of proper operating procedure.

Except, of course, for paralleled dipoles where only one of
them is resonant (low feedpoint impedance) on any one frequency.
Perhaps that is what he is talking about.
--
73, Cecil http://www.qsl.net/w5dxp

2486. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 15:27:12 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <bISdnc1sV8FNgjPdRVn-ug@comcast.com>
Source record: 94990

Did you read my post? I am well aware exactly what he said. Apparently, you are not.

"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message > He said something to the effect that he was a creator or father -- of
> the internet -- he never used the word "invent." That was an invention
> of reporter(s).
>

2487. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 15:53:23 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40AE25F3.2A5AA222@cwis.net>
Source record: 94991

Ron,
It's mainly a matter of convenience, or maybe you only
have enough feed line for one feed line.
Depending on 'how' you use the connected-together antennas,
only for use on the intended bands they are cut for, or as
multiband antennas, it might be simpler to use seperate feed
lines for each.
As for the 'best' way of connecting two or more antennas
for use on a single feed line, attach them to whatever you're
using for a center insulator, the second antenna just like the
first one. There are a number of 'mechanical' ways of doing
that and the 'best' is which ever is easiest for you (or how
ever you know how to do it). As you'd expect, the connections
should be strong enough, light weight enough, and sort of
'pretty' enough to satisfy the antenna's requirements and any
'significant other' that's around (wife, neighbors, landlord,
etc.).
Using seperate feed lines and an antenna switch makes the
process of tuning the antennas a bit 'easier', probably won't
take as long. Which ~may~ be the only difference depending on
how/where you erect the antennas.
Of course, using antennas that are high, widely seperated,
and
fed seperately is always nice! If you have the room, the
required
feed lines, a switch, the time to do it, and so on (I wish!)...
'Doc

2488. Re: Autotuner and dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 15:57:38 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40AE26F2.B5E0ABFC@cwis.net>
Source record: 94992

Greg,
Most 'auto-tuners' have limited tuning 'range' when
compared to 'manual' tuners, that's because of expense,
size limitations, and so on. Since I know nothing about
your 'LDG' tuner, that's what I'd have to guess is happening.
Doesn't mean that there's necessarily anything wrong with
it, just that it can't 'do' what you're asking of it...
'Doc

2489. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 16:26:24 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <27bsa0pp1nk4qecutjcb37aa269p6luk2p@4ax.com>
Source record: 94993

On Fri, 21 May 2004 10:25:10 -0400, "Tam/WB2TT"
<t-tammaru@c0mca$t.net> wrote:
>> Q: Why is top-posting such a bad thing?
...
>Because I don't want to read the same damn message 26 times.
>
Hi Tam,

You prove to be an example of your own grief. The poorest response
style is the one that does not edit the point responded to.

73's
Richard Clark, KB7QHC

2490. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 17:02:45 UTC
From: rsjones@hotmail.com
Message-ID: <791f676d.0405210902.649ca1ae@posting.google.com>
Source record: 94994

Richard Clark <kb7qhc@comcast.net> wrote in message
news:<gskpa0dcovtjus4mf3jh0im0eo039g93km@4ax.com>...
> On Thu, 20 May 2004 08:14:18 -0700, "Just Another Opinion"
> <JAO@somewhere.net> wrote:
>
> >Richard, Thierry and the original poster I repeat:
>
> Repetition is both tedious and changes nothing.
>
> >The R7 is NOT a quarter wave vertical -- it is a half wave end
> >fed antenna.
>
> Mantras soothe the soul certainly.
>
> >A quarter wave radiator needs a ground plane or radials to work against for
> >sure -- but Cushcraft sez a half wave antenna doesn't need radials as it is
> >like a horizontal dipole turned vertical and end fed (high impedance) rather
> >than center fed.
>
> Not needing and prohibiting are not the same thing.
>
> > I suggest you read and study the following:
> >
> >The Cushcraft manual it explicitly states "The
> >R7 should not be attached to a ground radial system".
> >URL: http://www.cushcraft.com/support/pdf/r7.pdf
>
> Yeah, and page one:
> "System Grounding"
>
> One radial good.
> More radial bad.
> Yeah, sure.
>
> In fact a word search against the quote above returns 0 hits. So much
> for explicit statements and what "should" be read. I note the links
> below have the same breathless nature, which is to say a lot of air.
>

Richard,

I don't know the answer to the main issue of this thread. I just
don't know enough about antennas to speak as an expert. However, as a
point of fact, the R7 manual does state on page 1 under the section
titled "Location":

'Although the R7 will operate in almost any location, it will perform best if it is mounted vertically and located in the clear away from surrounding objects such as buildings, trees, powerlines, towers, guy wires, antennas and metallic objects. The R7 should not be attached to a ground radial system. Failure to heed these points will possibly degrade performance, detune the antenna and increase VSWR".

When I clicked on the above link, a PDF file was opened. It appears that the manual was scanned and stored in PDF. In this case, no text search would be successful.

FWIW, when I added radials to my R7 I was unable to tune it properly on all the bands. Once the radials were removed I was able to tune it up without problems.

Thanks,

Rick, K6RJ

2491. What is a compass antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 17:04:54 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0405210904.141ff3f1@posting.google.com>
Source record: 94995

Haven't been able to find anything on the web about it... I imagine
it's related to pinpointing the direction of a transmitted signal?

Thanks in advance!
Dave

2492. What is a compass antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 17:05:40 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0405210905.619052b1@posting.google.com>
Source record: 94996

Haven't been able to find anything on the web about it... I imagine
it's related to pinpointing the direction of a transmitted signal?

Thanks in advance!
Dave

2493. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 18:05:36 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <r4hsa092lsn3h69u8e9e1p4c26b56rp3mj@4ax.com>
Source record: 94997

On Fri, 21 May 2004 08:27:12 -0700, "CW" <clinton.magers@comcast.net>
wrote:

>Did you read my post? I am well aware exactly what he said.

I'm aware of what he said, and it was the truth.

Yes, I saw your post.

Bob
k5qwg

> Apparently, you
>are not.
>
>"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message > He said something
>to the effect that he was a creator or father -- of
>> the internet -- he never used the word "invent." That was an invention
>> of reporter(s).
>>
>

2494. Re: Trees as antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 18:43:06 UTC
From: Helmut Wabnig <president@blackhouse.com>
Message-ID: <m4jsa09j014k0nhrc9uq6gq683cvkfv1c7@4ax.com>
Source record: 94998

On Tue, 18 May 2004 10:26:59 +0200, Claude Frantz
<r31dmaeu@unibw-muenchen.de> wrote:

>Some years ago experiments have be done using trees as antennas. Where
>can I find references about ? Do fellows here known about the results ?
>
>Claude
enter "tree antenna" into GOOGLE GROUPS, 17 000 hits,
needs some additional filtering , but here we go!

I used them trees, while I was a boy, to listen to medium wave radio
stations with my diode detector, a 60 mm nail, a hammer, some wire,
worked great, nail them in about 3 meters height.

S9 + 20 dB, for sure :-)

w.

2495. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 18:44:08 UTC
From: Helmut Wabnig <president@blackhouse.com>
Message-ID: <4fjsa0d8e8bt3fqksdc37fke3glojk9a0o@4ax.com>
Source record: 94999

On Tue, 18 May 2004 20:17:10 +0200, "F8BOE" <f8boe-8@bluemail.ch>
wrote:

>No, I've got the best miracle antenna... And it needs no tuner on the
>frequency it is set!
>
>I invented the dummy load too!
>

Yes, but you missed the Fractal Dummy Load.

w.

2496. Re: Bi-Quad "Bowtie" antenna construction?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 18:48:11 UTC
From: dplatt@radagast.org
Message-ID: <10asjnb3mgfkn41@corp.supernews.com>
Source record: 94904
Cross-posted to: sci.electronics.design,alt.engineering.electrical,rec.radio.amateur.antenna

>Is it considered bad design to support the bi-quad element on some kind of
>stand-offs in 4 locations (2 per quad) between the element and the reflector?
>Like nylon, possibly using a dab of epoxy to hold them in place?

In principle this ought to be OK. The presence of the standoff will
have some effect on the antenna's electrical behavior (increased
capacitance between element and the reflector) but I suspect that this
would probably be negligible in most cases. Depending on the
frequency in question, you might want to select a standoff material
which is known not to absorb RF at those frequencies. If you're
really feeling energetic, don't use nylon and epoxy - fabricate
standoffs out of Teflon, with a hole-and-slit arrangement to admit and
hold the antenna element, and a tapped hole in the base to allow it to
be secured to the reflector plate with a nonmetallic screw.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2497. RE: Tree Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 19:14:12 UTC
From: fractenna@aol.com
Message-ID: <20040521151412.17730.00001853@mb-m16.aol.com>
Source record: 95000

This URL (below) pretty much duplicates my results from almost a decade ago, as printed in the 73 article in April 96. I assume KF4BWG read the article.I regret that I cannot assist in reprints BTW.

The (tree) phenomenon--I find it interesting and amusing; I do not find it important. Finding what constitutes frequency invariance in Maxwell's Equations is important, if you want a calibration.

Go have fun with the tree stuff. That's what its good for--and that's about it.

URL:
www.qsl.net/kf4bwg/ant.html

73,
Chip N1IR

2498. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 19:25:46 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <bPudnSLkKrkEyjPdRVn-hg@comcast.com>
Source record: 95001

> You prove to be an example of your own grief. The poorest response
> style is the one that does not edit the point responded to.

I am fairly mystefied as well.. Maybe he got a ton of copies somehow, but there was only one on my server, and I only sent one.

Oh well.

2499. G5RV or 135 foot doublet or Carolina Windom?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 19:41:53 UTC
From: Jim Leder <k8cxm@fuse.net>
Message-ID: <3Ysrc.39$ax2.9@fe37.usenetserver.com>
Source record: 95002

This topic has been kicked around so much, I feel like it fits into the upcoming spring/summer TV reruns. I currently have a G5RV in an inverted Vee configuration, with the apex at about 35 feet. It works OK on 75/80, pretty well on 40, OK on 20 and OK on 17. It is a miserable failure everywhere else. I'm limited in space and height, but after surveying my trees and lot, I could put up a 135 foot center fed doublet with the apex at about 40 feet and the ends sloping down to about 15 feet (another inverted Vee, best I can do with my trees). I would feed it with 450 ohm ladder line to the shack, mate it with a 4:1 current balun and then connect with a short piece of coax to my TS450's ATU. Seems like it should work, but I guess I need to ask some questions:
1) My G5RV is old, and has been patched. I expect it to not survive another winter or the vinyl eating squirrels. Does the doublet offer me any improvements? The ladder line would be away from the hungry rodents, free swinging and not near their trees.
2) Or, should I just rebuild the G5RV and scrape the doublet idea?
3) Is the 4:1 balun a good idea? Seems the only good way to be able to use the Kenwood's ATU. The G5RV and Kenwood work well together on all bands, even though it doesn't radiate out of my backyard on some of them.
4) Should I be concerned with RF in the shack with the doublet scenario?
5) Is there a better doublet length than 135 feet? That seems to be the most common length I see.
6) My intention is to replace the RV with something better, that offers improved performance on 75/80,40,30,20 and 17. Is it LIKELY this setup will work, or am I too optimistic? I have an Alpha Delta DXEE which would be moved to where the G5RV is now, offering me 20,15 and 10 (it's bad on 40).
7) I've spent a bit of time looking over my situation, and this is maybe the best wire antenna installation I can come up with. I've also considered making my own 'Carolina Windom', but from what I've read it doesn't offer me much improvement. Does it? Might the 'Carolina Windom' approach be a better idea?

My goal is to keep the replacement costs below $35, which I know I can do with the doublet or the homebrew 'Carolina Windom'. I'm in no hurry, got all summer to do this and I am retired. I just want to do what will give me the best results. I'm looking for opinions, suggestions and practical experience with using one of these doublet/balun antennas or 'Carolina Windoms' and the kind of ATU found in most modern transceivers. I don't want the hassle or expense of an external antenna tuner.

Thanks...and 73's from Cicada humming SW Ohio

--

****
Jim & Pat Leder
http://home.fuse.net/k8cxm
****

2500. EN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 19:46:22 UTC
From: Richard <translations@qdnet.pl>
Message-ID: <c8lmvo$7ut$1@nemesis.news.tpi.pl>
Source record: 95003

What do people think about EH aerials? Opinions are certainly divided here in Poland.

My biggest concern is that it is very hard to get any real construction details of these aerials, which kind of leads me to beleive tha tthey are basicially a big coil and not much else whihc would radiate in any shpae or form.

Would be delighted to hear others opinions, expereriences.

Richard
SO5GB, Warsaw, PL

2501. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 20:02:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <b3lsa0pjb9cu258ngjfjar2rtp6psg7sd5@4ax.com>
Source record: 95004

On 21 May 2004 10:02:45 -0700, rsjones@hotmail.com (Rick, K6RJ) wrote:

>I don't know the answer to the main issue of this thread. I just
>don't know enough about antennas to speak as an expert. However, as a
>point of fact, the R7 manual does state on page 1 under the section
>titled "Location":

Hi Rick,

Thank you for the follow-up. You are correct, and yes the pdf is a
poor, unsearchable copy as evidenced by your observations offered.

As far as this thread goes, I've seen testimony that it works/doesn't
work with radials - both ways. Such is the value of testimonials
where you can find any answer to suit any occasion.

I've seen testimonial "proof" that an eh works better than a standard
quarterwave, wherein the data clearly proved it didn't. The
testimonials dismissed the data (their own) as irrelevant.
Testimonial is fine and is occasionally called for. Testimonial as
proof is worthless.

I've offered data to this point of a "prohibition" on using radials.
The difference between 120 quarterwave or halfwave radials compared to
one short "counterpoise" barely tipped the meter at 1dB on the
performance side of the ledger. As for matching, I averred that
tuning may be impacted (I cannot imagine how it could be otherwise).
THAT is within the provence of Amateur radio service as a minimum
technical skill. THIS is a technical forum where design and data is
offered for examination. The remaining correspondence is confined to
the slow lane or the shoulder when a rhetorical axle is broken.

Frankly, this "prohibition" of no radials is more a design mandate,
not a papal bull. The site offered where we can find the actual
components of the "black box" displayed and laid out schematic style
offers an equal opportunity to redesign to allow radials. This
apparently is not within the skill-set of many, or arguably even
desired; however, it is not impossible (nor particularly difficult).

To this last point. I would offer that most of the interesting
correspondence (that isn't simply entertainment quality) is composed
of rather academic interests. Some of it is impractical in the
extreme and as absurd as fractals. More of it barely offers a
difference that would twitch an S Meter, or a Power meter. This does
not mean it lacks merit in its discussion because, let's face it, a
forum is built and survives on the vigor of debate. Clearly no one is
going to (legitimately) re-invent the dipole, so topics become rather

obtuse.

73's
Richard Clark, KB7QHC

2502. Re: EN antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 20:27:14 UTC
From: John Passaneau <jxp16@psu.edu>
Message-ID: <c8lon4$r9k$1@f04n12.cac.psu.edu>
Source record: 95005

"Richard" <translations@qdnet.pl> wrote in message
news:c8lmvo$7ut$1@nemesis.news.tpi.pl...
> What do people think about EH aerials? Opinions are certainly divided here
> in Poland.
>
> My biggest concern is that it is very hard to get any real construction
> details of these aerials, which kind of leads me to beleive tha tthey are
> basicially a big coil and not much else whihc would radiate in any shpae
or
> form.
>
> Would be delighted to hear others opinions, expereriences.
>
> Richard
> SO5GB, Warsaw, PL
>
>
The general feeling here is that they are not what their advertised to be.
In fact most real tests show that most of the radiation from one is from the
feedline, not the antenna. Bottom line is they don't work and a light bulb
on the end of the coax would work better.

--
John Passaneau W3JXP
State College Pa
jxp16@psu.edu
This mail is a natural product. The slight variations in spelling and
grammar enhance its individual character and beauty and in no way are to
be considered flaws or defects.

2503. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 20:52:25 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <ef6dnZZCs4qU8TPdRVn-jg@comcast.com>
Source record: 95006

Apparently, Gore was correct that democrats will believe anything.

"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:r4hsa092lsn3h69u8e9e1p4c26b56rp3mj@4ax.com...
> On Fri, 21 May 2004 08:27:12 -0700, "CW" <clinton.magers@comcast.net>
> wrote:
>
> >Did you read my post? I am well aware exactly what he said.
>
> I'm aware of what he said, and it was the truth.
>
> Yes, I saw your post.
>
> Bob
> k5qwg
>
> > Apparently, you
> >are not.
> >
> >"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message > He said
something
> >to the effect that he was a creator or father -- of
> >> the internet -- he never used the word "invent." That was an invention
> >> of reporter(s).
> >>
> >
>

2504. Re: Autotuner and dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 21:11:11 UTC
From: nightowls627@aol.comnojunk
Message-ID: <20040521171111.27526.00001892@mb-m11.aol.com>
Source record: 95007

Thks for replies. I am going to keep it. I think it will come in handy for FD when I run a random wire up a tree. I will certainly look into some of the specs for this tuner and adjust the antenna accordingly. Shows my ignorance that you can just throw up an antenna and tune it with an autotuner. Thanks again. Always a big help!!

73
Greg
ki4bbl@arrl.net

2505. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 21:29:59 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <sxurc.49849$pJ1.22083@lakeread02>
Source record: 95008

"Cecil Moore" <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
news:40ae14e7$1_3@127.0.0.1...
> Jack Painter wrote:
> > Someone may explain here that they have connected more than one antenna
with
> > a single feedline, but it flies in the face of proper operating
procedure.
>
> Except, of course, for paralleled dipoles where only one of
> them is resonant (low feedpoint impedance) on any one frequency.
> Perhaps that is what he is talking about.

Thanks Cecil. I meant to say "normal" operating procedure. I knew you guys
had examples of why you would do otherwise, LOL.

Best,

Jack Painter
Virginia Beach, Va

2506. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 21:59:42 UTC
From: jgboyles@aol.com
Message-ID: <20040521175942.10421.00001796@mb-m02.aol.com>
Source record: 95009

>An Extended Double Zepp has a relatively narrow beamwidth
>(~35 deg) and four side lobes about -13 dB down. I vaguely
>remember a magazine article that told how to virtually
>eliminate the EDZ side lobes.

It was in the vol. 4 Compendium, and it is also in my latest ARRL antenna book. The technique involves placing about 2500 ohms capacitive reactance on each leg of EDZ at a strategic location. You can reduce the side lobes, and provide a better match to 50 ohm coax.
I have been playing around with a 3 element 2 meter EDZ beam that is currently 17 dbi gain @ 3 deg. elevation with 12 dbi F/B. I used side lobe reduction on all 3 elements. Be interesting to see if the actual antenna matches the model.
73 Gary N4AST

2507. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 22:22:43 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <PrCdnRYTR6ayHDPd4p2dnA@comcast.com>
Source record: 95010

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:27bsa0pp1nk4qecutjcb37aa269p6luk2p@4ax.com...
> On Fri, 21 May 2004 10:25:10 -0400, "Tam/WB2TT"
> <t-tammaru@c0mca$t.net> wrote:
> >> Q: Why is top-posting such a bad thing?
> ...
> >Because I don't want to read the same damn message 26 times.
> >
> Hi Tam,
>
> You prove to be an example of your own grief. The poorest response
> style is the one that does not edit the point responded to.

Precisely, I think you got the point.

Tam
>
> 73's
> Richard Clark, KB7QHC

2508. Re: Q: DC motor for MFJ-1786.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 23:19:31 UTC
From: kashe@sonic.net
Message-ID: <ij3ta011n76tqdi3jh69vkfoeoopnun787@4ax.com>
Source record: 95011

On Wed, 19 May 2004 13:57:07 +0200, "Vandmand"
<vandmand@loveletters.dk> wrote:

>Hi
>I have to replace the DC motor in my MFJ-1786 Magnetic Loop antenna. Does
>anyone have information about spare part number, a replacement motor and
>where to by?
>73 de OZ1JZV John
>

How about:

By E-Mail:
Website Questions: website@mfjenterprises.com
Manual Requests:
Current Products are free, Discontinued Products are a $5 charge,
MFJ-1270C is $10 + S&H, MFJ-1278B is $16.95 + S&H
manuals@mfjenterprises.com
Catalog Requests: Click here for the catalog request form.
Customer Service: mfjcustserv@mfjenterprises.com
Technical Support: techinfo@mfjenterprises.com
NOTE: There is a two to four week response time for all technical
support emails. If this is not fast enough for you, please call us on
our technical support lines listed above.

2509. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 23:44:46 UTC
From: rhymer <ron@roncrowley.dot.com>
Message-ID: <oj4ta0lkds34n927hbso7cssosgg7r0okd@4ax.com>
Source record: 95012

On Fri, 21 May 2004 09:21:44 -0400, "Jack Painter" <223bthp@cox.net>
wrote:

>"rhymer" <ron@roncrowley.dot.com> wrote
>> What is the best way to use one feed line for more than one dipole?
>> Or, is it better to use a coax switch in the shack?
>
>Ron, your subject line "Two dipoles on one coax" implies the typical antenna
>selector switch that leaves no question (of course you can do that). But the
>message body asks about one feedline for more than one dipole as opposed to
>the antenna selector. The two choices are so unequal that a comparison is
>not possible.

I have no idea what you mean by "typical antenna selector switch".

>Someone may explain here that they have connected more than one antenna with
>a single feedline, but it flies in the face of proper operating procedure.
>Most operators however do use antenna selector switches to provide more than
>one antenna choice to a given receiver or transmitter. The individual
>antennas always have their own individual feedline in those cases.

Yes, I was referring to more than one dipole on a single feed line (in
my case two dipoles 40 and 15).

Thanks, Ron

>Best regards,
>
>Jack Painter
>Virginia Beach
>

2510. Re: Autotuner and dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 23:45:12 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <INSdneRW4v8eCTPdRVn-jw@comcast.com>
Source record: 95013

Gregg,

Measure the SWR without a tuner on the various bands. you should be able to
tell whether the autotuner will tune that.

Tam/WB2TT
"Greg" <nightowls627@cs.com> wrote in message
news:74f89aaf.0405200741.7b262601@posting.google.com...
> I recently acquired an ldg lz 100 and hooked it up as soon as I got
> it. The dipole I have now will tune with a manual tuner to below
> 1.5:1 on 40m-10m. The autotuner won't tune to below 1.5:1 in any
> band. Am I doing something wrong or did I just not get a decent
> tuner. I oftentimes won't even get an SWR green light to show it has
> tuned and when I do, the SWR is high. Should I put a balun on or
> what? The dipole is 66 feet long in my attic... but as I stated, it
> tunes awesome with the manual tuner. If you want to email me, please
> email to ki4bbl@arrl.net The email here is incorrect.

2511. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 23:45:36 UTC
From: jder8745@aol.com
Message-ID: <20040521194536.13455.00000851@mb-m06.aol.com>
Source record: 95014

What u r describing is a "multi dipole".

I have used combo 75 and 160 fed with same RG58 and had no problems.

73 de Jack, K9CUN

2512. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-21 23:58:18 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40ae9730$0$435$5cbedd26@news.real-time.com>
Source record: 95015

You have too much time on

Tam/WB2TT wrote:

> "Dave VanHorn" <dvanhorn@cedar.net> wrote in message
> news:APudnb7MgIWDFzDdRVn-uw@comcast.com...
>
>>
>>What sort of antenna offers narrow beamwidth, combined with smooth
>>sidelobes?
>>I'm not too concerned with F/B ratio, or the magnitude of the sidelobes,
>>(smaller is better obviously) but I'm more concerned that they not be a
>
> mess
>
>>of deep spiky notches.
>>
>>This is a somewhat special application above the 440 band, but I could
>
> scale
>
>>a 440/900/1296 design appropriately. Gain, per se, isn't really an issue,
>>and negative gain may in fact be acceptable.
>>
>>--
>>A: Because it messes up the order in which people normally read text.
>>Q: Why is top-posting such a bad thing?
>>A: Top-posting.
>>Q: What is the most annoying thing on usenet?
>
> Because I don't want to read the same damn message 26 times.
>
>

your hands.

;)

tom
K0TAR

2513. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 00:03:02 UTC
From: rhymer <ron@roncrowley.dot.com>
Message-ID: <s65ta05irq1hi2ugmgm0dffh0nh1kaismr@4ax.com>
Source record: 95016

On Fri, 21 May 2004 10:22:20 -0400, "Tam/WB2TT"
<t-tammaru@c0mca$t.net> wrote:

>
>"rhymer" <ron@roncrowley.dot.com> wrote in message
>news:qlura01s0pv1vervdje196julir6fllfmt@4ax.com...
>> What is the best way to use one feed line for more than one dipole?
>> Or, is it better to use a coax switch in the shack?
>>
>> Thanks, Ron
>
>Ron,
>
>Connecting two *dipoles* to the same feedline works just fine. Just tie them
>directly to the same balun. There will be two kinds of interaction: first,
>the two are electrically in parallel, and second, the wires themselves could
>have mutual coupling. The first seems to not really be a problem, and the
>second is minimized if there is separation between the two dipoles. For best
>results, put them at right angles to each other; if that is not possible,
>have at least 15 - 30 degrees separation, either vertical or horizontal. For
>instance, you could have a dipole supported at the ends, with an inverted V
>hanging below it.

That's what I wanted to hear, that it can be done without using
anything special. It sure would beat switching them at the xmitter. I
have always used separate feed lines and recently I read where someone
had 4 dipoles on the same feed line.

>
>The most interesting case is for antennas at 75 and 80 meters. You get <2:1
>SWR from 3.5 to 4 MHz in a virtually non directional antenna (if the two
>dipoles are at 90 degrees).

That sounds really cool.

>I presently have a 40 m inverted V hanging below an 17 m dipole. (The trees
>are too close to do it the other way). The 40 meter is also out of plane to
>miss the trees. Works great.

Is the 40m at a right angle to the 17m, or is the V separation
adequate?

>Since you have to trim the lengths slightly (lowest frequency first), it is
>simplest to run EZNEC or some other simulation first.
>
>Tam/WB2TT

Thanks muchly for that,

Ron, W1WBV

2514. Wizard Radio in Seven Corners, VA, to receive WHFS in Annapolis

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 00:30:48 UTC
From: dgoncz@aol.com.bat.exe
Message-ID: <20040521203048.07231.00001969@mb-m02.aol.com>
Source record: 95018

Dear Amateurs,

What might I do to improve reception of WHFS using my Wizard Radio ISA card?

I am troubled by mono reception due to insufficient signal strength, movement and position of people in the room, and interference pickup.

If I could just get some shielded twinax... I need less than 20 feet:

Because the antenna, Radio Shack's best passive antenna, is hung from the center of the 15 by 15 foot living room, and is connected by a hook directly above the computer with 300 ohm line. But it isn't an ordinary line.

I figured the end of the 300 ohm line needed to be just like the end of the dipole that came with the Wizard, so I cut down the center for about a foot, shaved off the center and spaced the two lines gradually with dental floss to make an "adapter", ending with them close enough together to be soldered to the tabs on the 1/8 inch three conductor phone plug that goes into the Wizard.

What I want to try now is get some 72 or 78 ohm twinax, use the braid gounded to the barrel of the plug to prevent interference, and terminate the braid at the tip of the antenna with an insulated mount made from Lexan with a square hole fitting the end plug, and a hole to pass the two inner wires. From there, I'll run the inner wires, braid free, to posts extending the existing antenna terminals so that they run in a plane parallel to the main beam.

Is there a spacing pattern I can use for this 28 inch run? Or should I tension the wires to make a linear spacing pattern from the posts, which are 1 7/8 inches apart, to their entry into the braid at the end of the antenna?

I have already tried a balun but have not tried a 300 to 75 ohm balun at the antenna, shielded line to the computer, another 75 to 300 ohm balun there, a length of 300 ohm line, and a cut down the middle of the 300 ohm line to space the wires closer and closer together until the entry point. Seem like too many losses.

Thus the twinax and posts. It has the correct impedance at the entry to the Wizard, maintains it, shielded, to the antenna, and then the shield terminates and the wires form an air space line adapting to the antenna's presented terminals. Presumably two air spaced lines there would have 300 ohm impedance.

The antenna has a smaller front passive element, a second passive element at 23 1/2 inches along the beam from the first element, an active element 3 1/4 inches from that, crossed lines to another active element 1 foot from the first, another pair of crossed lines to an active element at 13 inches, and a passive element at 16 inches from the last active element.

The lengths are passive, shorted, 49 inches, another just like it, active, open, 43 inches, and then 56 inches, then 58 inches, then the final passive, shorted element 66 inches. The shorted elements are shorted together and to the beam. All elements fold with care, but I broke one passive element latch figuring that out. You have to pull the latch to fold the element. They're all nearly parallel. They can all be refolded and redeployed with care. I intend to keep this antenna for a long time. I just love my WHFS.

This is a distance of about 55 miles over roads.

The antenna is rated to 110 miles.

The Wizard obviously has a weak input section, but it has tuning in 0.05 MHz steps.

I can receive WHFS on 99.1 MHz, and on 99.05 and 99.15, but at 99.0 there's another station from 98.7, and at 99.2 there's a station from 99.5.

[98.70] [99.00](99.05)(99.10)(99.15)[99.20] [99.50] tuned
[98.70] [98.70](99.10)(99.10)(99.10)[99.50] [99.50] received

like that, see. During the day. At night it's worse.

Yours,

Doug Goncz (ftp://users.aol.com/DGoncz/)

Read about my physics project at NVCC:
http://groups.google.com/groups?q=dgoncz&scoring=d plus
"bicycle", "fluorescent", "inverter", "flywheel", "ultracapacitor", etc.
in the search box

2515. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 00:33:44 UTC
From: rhymer <ron@roncrowley.dot.com>
Message-ID: <686ta0t1go1ki7an5h7b5d19e45kg50g76@4ax.com>
Source record: 95019

On Fri, 21 May 2004 10:53:23 -0500, 'Doc <w5lz@cwis.net> wrote:

>Ron,
> It's mainly a matter of convenience, or maybe you only
>have enough feed line for one feed line.
> Depending on 'how' you use the connected-together antennas,
>only for use on the intended bands they are cut for, or as
>multiband antennas, it might be simpler to use seperate feed
>lines for each.
> As for the 'best' way of connecting two or more antennas
>for use on a single feed line, attach them to whatever you're
>using for a center insulator, the second antenna just like the
>first one. There are a number of 'mechanical' ways of doing
>that and the 'best' is which ever is easiest for you (or how
>ever you know how to do it). As you'd expect, the connections
>should be strong enough, light weight enough, and sort of
>'pretty' enough to satisfy the antenna's requirements and any
>'significant other' that's around (wife, neighbors, landlord,
>etc.).

I own the house, we have a 2 acre minimum and my XYL is a ham . . .
KB1FZM :-)

> Using seperate feed lines and an antenna switch makes the
>process of tuning the antennas a bit 'easier', probably won't
>take as long. Which ~may~ be the only difference depending on
>how/where you erect the antennas.
> Of course, using antennas that are high, widely seperated,
>and
>fed seperately is always nice! If you have the room, the
>required
>feed lines, a switch, the time to do it, and so on (I wish!)...
> 'Doc

I have the space but my lot is heavily treed. That is the way we like
it, so I would rather not cut any trees. The antennas will cross each
other, so it will benefit me if I can tie them together at the center.
My 40 m antenna didn't survive the winter.

Thank, Ron W1WBV

2516. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 00:41:48 UTC
From: rhymer <ron@roncrowley.dot.com>
Message-ID: <168ta0hbh65e5rmulnttttl7403jsbnbjja@4ax.com>
Source record: 95020

On 21 May 2004 23:45:36 GMT, jder8745@aol.com (JDer8745) wrote:

>What u r describing is a "multi dipole".
>
>I have used combo 75 and 160 fed with same RG58 and had no problems.
>
>73 de Jack, K9CUN

Yeah, I suppose that would be the same as a multi-band dipole. I guess
I just assumed there would be an impedance mismatch if I did that.

73's

Ron, W1WBV

2517. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 00:41:53 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40AEA1D1.A502EF09@uci.edu>
Source record: 94871

rhymer wrote:
>
> On Fri, 21 May 2004 09:21:44 -0400, "Jack Painter" <223bthp@cox.net>
> wrote:
>
> >"rhymer" <ron@roncrowley.dot.com> wrote
> >> What is the best way to use one feed line for more than one dipole?
> >> Or, is it better to use a coax switch in the shack?
> >>
> >Ron, your subject line "Two dipoles on one coax" implies the typical antenna
> >selector switch that leaves no question (of course you can do that). But the
> >message body asks about one feedline for more than one dipole as opposed to
> >the antenna selector. The two choices are so unequal that a comparison is
> >not possible.
>
> I have no idea what you mean by "typical antenna selector switch".
>
> >Someone may explain here that they have connected more than one antenna with
> >a single feedline, but it flies in the face of proper operating procedure.
> >Most operators however do use antenna selector switches to provide more than
> >one antenna choice to a given receiver or transmitter. The individual
> >antennas always have their own individual feedline in those cases.
>
> Yes, I was referring to more than one dipole on a single feed line (in
> my case two dipoles 40 and 15).
>
> Thanks, Ron

You might try something like this:

http://www.hamuniverse.com/multidipole.html

73, AC6XG

2518. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 00:59:56 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40aea5ac$0$431$5cbedd26@news.real-time.com>
Source record: 94872

David Browne wrote:

> hi just got this ant,what is the best hight to mount this at,
> there site says mount 8 feet, will it work better mounted 30 feet of ground
> thanks dave browne
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004
>
>
>

Ok, I spoke to the designer this evening, and I'll pass on what I learned. He was speaking fast, as he normally does, so I'm sure I missed a lot. Roy can confirm that, and Roy can confirm that he handed over another copy of his software to him just last week.

Per the designer

The R7 was built because he needed a multiband antenna in the fall of 90. The R5 was used as the base idea for the design. He worked on it over late fall and winter 90/91. The antenna project was up and down 2 to 3 times a day at times.

The owner of Cushcraft heard of the backyard project in spring 1991, and "asked" that it be brought to work. Tomorrow at the latest.

The antenna is not a half wave antenna, it is about a 3/8 wave antenna. The impedance is approximately 250 ohms, and a roughly 4.5 to 1 transform is done. There is a series cap of 41 pF for 40m.

There are 7 radials of 49 inches, because Cushcraft had tons of 49 inch 5/8 whips for 2m. The R5 had 4, this needed more.

There is a false resonance on 75m or 80m, and if you put power into it at that freq, you will burn up the matching system.

And, to end this argument, do not ever add radials to the system, and do not remove any of the ones it comes with. It's a touchy match.

tom
K0TAR

2519. Re: G5RV or 135 foot doublet or Carolina Windom?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 01:11:05 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <C7idnSNGl9g0NTPd4p2dnA@adelphia.com>
Source record: 94873

Jim Leder wrote:
> This topic has been kicked around so much, I feel like it fits into the
> upcoming spring/summer TV reruns. I currently have a G5RV in an inverted Vee
> configuration, with the apex at about 35 feet. It works OK on 75/80, pretty
> well on 40, OK on 20 and OK on 17. It is a miserable failure everywhere
> else. I'm limited in space and height, but after surveying my trees and lot,
> I could put up a 135 foot center fed doublet with the apex at about 40 feet
> and the ends sloping down to about 15 feet (another inverted Vee, best I can
> do with my trees). I would feed it with 450 ohm ladder line to the shack,
> mate it with a 4:1 current balun and then connect with a short piece of coax
> to my TS450's ATU. Seems like it should work, but I guess I need to ask some
> questions:
> 1) My G5RV is old, and has been patched. I expect it to not survive another
> winter or the vinyl eating squirrels. Does the doublet offer me any
> improvements? The ladder line would be away from the hungry rodents, free
> swinging and not near their trees.
> 2) Or, should I just rebuild the G5RV and scrape the doublet idea?
> 3) Is the 4:1 balun a good idea? Seems the only good way to be able to use
> the Kenwood's ATU. The G5RV and Kenwood work well together on all bands,
> even though it doesn't radiate out of my backyard on some of them.
> 4) Should I be concerned with RF in the shack with the doublet scenario?
> 5) Is there a better doublet length than 135 feet? That seems to be the most
> common length I see.
> 6) My intention is to replace the RV with something better, that offers
> improved performance on 75/80,40,30,20 and 17. Is it LIKELY this setup will
> work, or am I too optimistic? I have an Alpha Delta DXEE which would be
> moved to where the G5RV is now, offering me 20,15 and 10 (it's bad on 40).
> 7) I've spent a bit of time looking over my situation, and this is maybe the
> best wire antenna installation I can come up with. I've also considered
> making my own 'Carolina Windom', but from what I've read it doesn't offer me
> much improvement. Does it? Might the 'Carolina Windom' approach be a better
> idea?
>
> My goal is to keep the replacement costs below $35, which I know I can do
> with the doublet or the homebrew 'Carolina Windom'. I'm in no hurry, got all
> summer to do this and I am retired. I just want to do what will give me the
> best results. I'm looking for opinions, suggestions and practical experience
> with using one of these doublet/balun antennas or 'Carolina Windoms' and the
> kind of ATU found in most modern transceivers. I don't want the hassle or
> expense of an external antenna tuner.

If you want to run coax, how about a fan dipole? That seems to me to be
the best of all worlds. Youjust have to spend some (more) time trimming
since the wires interact with each other.

- Mike KB3EIA -

2520. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 01:16:10 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <v4adnSaXruQqNDPdRVn-gw@comcast.com>
Source record: 94874

"Tom Ring" <tarnews@taring.org> wrote in message
news:40ae9730$0$435$5cbedd26@news.real-time.com...
> You have too much time on

Random text generator?

2521. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 01:16:26 UTC
From: William Warren <william_warren_nonoise@comcast.net>
Message-ID: <KRxrc.92983$iF6.8142481@attbi_s02>
Source record: 94875

"rhymer" <ron@roncrowley.dot.com> wrote in message
news:oj4ta0lkds34n927hbso7cssosgg7r0okd@4ax.com...
> Yes, I was referring to more than one dipole on a single feed line (in
> my case two dipoles 40 and 15).

OM,

Since a dipole will also work on the third harmonic of its design frequency, it's very common to use a 40 M dipole on 15. You usually don't need a second dipole to work 15 if you already have one for 40.

As other have pointed out, however, it's perfectly fine to put dipoles for other bands on the same feedline: 20, 17, or whatever. The antenna that's not in resonance presents a high impedance to the feedline, and the resonant dipole takes the power.

HTH.

73, Bill

2522. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 01:17:43 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <HaOdnVja0ZOJNzPdRVn-uw@comcast.com>
Source record: 94876

> I'd suggest one or two antennas, a dipole with a plane reflector or a
> corner reflector. Both offer excellent bandwidth, good beamwidth,
> clean pattern and usually arount 10DbI gain. Go to www.cebic.com
> for details (and polar plots!).

Just not my day today.. This is an internet security company?

2523. Re: Tree Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 01:28:29 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <yOKdnXhWMIwgMTPdRVn-hw@adelphia.com>
Source record: 94878

Fractenna wrote:

> This URL (below) pretty much duplicates my results from almost a decade ago, as
> printed in the 73 article in April 96. I assume KF4BWG read the article.I
> regret that I cannot assist in reprints BTW.
>
> The (tree) phenomenon--I find it interesting and amusing; I do not find it
> important. Finding what constitutes frequency invariance in Maxwell's
> Equations is important, if you want a calibration.
>
> Go have fun with the tree stuff. That's what its good for--and that's about it.
>
> URL:
> www.qsl.net/kf4bwg/ant.html

Talk about an amusing page! Thanks for a few laughs, Chip.

I wonder what this sort of thing does to a healthy tree?

- Mike KB3EIA -

2524. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 01:30:09 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40aeacb7$0$439$5cbedd26@news.real-time.com>
Source record: 94877

Dave VanHorn wrote:

> "Tom Ring" <tarnews@taring.org> wrote in message
> news:40ae9730$0$435$5cbedd26@news.real-time.com...
>
>>You have too much time on
>
>
> Random text generator?
>
>

You needed to read the whole post. It was a joke about the joke that is
the thread.

tom
K0TAR

2525. Re: Remote antenna switching

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 01:34:23 UTC
From: Rick Karlquist N6RK <richard@karlquist.removethis.com>
Message-ID: <z6yrc.6300$JC5.641454@attbi_s54>
Source record: 94879

I have a Heathkit antenna switch that works like you
describe.

Rick N6RK

"J M Noeding" <la8ak@online.no> wrote in message
news:j0iqa0lv7728mv046mv59fvo088123iulk@4ax.com...
> Rrad about a complex remote control unit using VLSI circuits and made
> some considerations.
> Using a 9V transformer it is possible to switch relays to 4 positions
> using the following signals on the antenna cable - with RF chokes and
> suitable capacitors to pass the RF, and two dpdt relays at remote end:
> 1) no voltages
> 2)+12V with a diode in series with the switch and transformer
> 3) -12V with another diode in series with switch and transformer
> 4) 9VAC to activate both relays simultaneosly
>
> very simple, but no VLSI - if that was the point, and no intruder
> transmitter on 433.92MHz for the remote control if it was another
> point, sorry - I am perhaps to old for those modern type of remote
> control......
>
> 73
> Jan-Martin
> LA8AK

2526. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 01:35:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8ebta0t4qk5v53rqi8obm8fc6cj8r7gu4f@4ax.com>
Source record: 94880

On Fri, 21 May 2004 21:20:34 -0400, william ewald
<wewald@bellsouth.net> wrote:

>
>>He said something to the effect that he was a creator or father -- of
>>the internet -- he never used the word "invent." That was an invention
>>of reporter(s).
>>
>>Bob
>>k5qwg
>>
>>
>>>>http://www.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/transcript.gore/
>
>"During my service in the United States Congress, I took the
>initiative in creating the Internet. I took the initiative in moving
>forward a whole range of initiatives that have proven to be important
>to our country's economic growth and environmental protection,
>improvements in our educational system. "
>
>Close enough.
>

Him and 535 other starry eyed visionaries - sheesh checkout the
perspective.

Look at what they are doing today by sitting on their hands.

2527. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 01:46:01 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40aeb06e$0$437$5cbedd26@news.real-time.com>
Source record: 94881

A random point here for my comment.

What does any of this have to do with antennas?

tom
K0TAR

Richard Clark wrote:

> On Fri, 21 May 2004 21:20:34 -0400, william ewald
> <wewald@bellsouth.net> wrote:
>
>
>>>He said something to the effect that he was a creator or father -- of
>>>the internet -- he never used the word "invent." That was an invention
>>>of reporter(s).
>>>
>>>Bob
>>>k5qwg
>>>
>>>
>>>
>>>>http://www.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/transcript.gore/
>>
>>"During my service in the United States Congress, I took the
>>initiative in creating the Internet. I took the initiative in moving
>>forward a whole range of initiatives that have proven to be important
>>to our country's economic growth and environmental protection,
>>improvements in our educational system. "
>>
>>Close enough.
>>
>
>
> Him and 535 other starry eyed visionaries - sheesh checkout the
> perspective.
>
> Look at what they are doing today by sitting on their hands.

2528. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 02:11:01 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <S-6dnR43XoQoKzPdRVn-sA@adelphia.com>
Source record: 94882

Dave VanHorn wrote:
>>I'd suggest one or two antennas, a dipole with a plane reflector or a
>>corner reflector. Both offer excellent bandwidth, good beamwidth,
>>clean pattern and usually arount 10DbI gain. Go to www.cebic.com
>>for details (and polar plots!).
>
>
> Just not my day today.. This is an internet security company?

http:www.cebik.com should get you to the right place, Dave.

- Mike KB3EIA -

2529. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 02:16:36 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <S4-dnZX8TPiZJTPd4p2dnA@adelphia.com>
Source record: 94883

william ewald wrote:

>>He said something to the effect that he was a creator or father -- of
>>the internet -- he never used the word "invent." That was an invention
>>of reporter(s).
>>
>>Bob
>>k5qwg
>>
>>
>>
>>>>http://www.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/transcript.gore/
>
>
> "During my service in the United States Congress, I took the
> initiative in creating the Internet. I took the initiative in moving
> forward a whole range of initiatives that have proven to be important
> to our country's economic growth and environmental protection,
> improvements in our educational system. "
>
> Close enough.
>

He and a number of other elected representatives worked to grease the
skids for the internet. He did indeed take the initiative.

I think its called "strategery".... ;^)

- Mike KB3EIA -

2530. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 02:17:07 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <S4-dnZT8TPi_JTPd4p2dnA@adelphia.com>
Source record: 94884

5

Tom Ring wrote:

> A random point here for my comment.
>
> What does any of this have to do with antennas?
>
> tom
> K0TAR
>
> Richard Clark wrote:
>
>> On Fri, 21 May 2004 21:20:34 -0400, william ewald
>> <wewald@bellsouth.net> wrote:
>>
>>
>>>> He said something to the effect that he was a creator or father -- of
>>>> the internet -- he never used the word "invent." That was an invention
>>>> of reporter(s).
>>>>
>>>> Bob
>>>> k5qwg
>>>>
>>>>
>>>>
>>>>> http://www.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/transcript.gore/
>>>>>
>>>
>>>
>>> "During my service in the United States Congress, I took the
>>> initiative in creating the Internet. I took the initiative in moving
>>> forward a whole range of initiatives that have proven to be important
>>> to our country's economic growth and environmental protection,
>>> improvements in our educational system. "
>>>
>>> Close enough.
>>>
>>
>>
>> Him and 535 other starry eyed visionaries - sheesh checkout the
>> perspective.
>>
>> Look at what they are doing today by sitting on their hands.
>

>

2531. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 02:46:37 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <P6KdnYcJq-6aIjPd4p2dnA@comcast.com>
Source record: 94885

"rhymer" <ron@roncrowley.dot.com> wrote in message
news:s65ta05irq1hi2ugmgm0dffh0nh1kaismr@4ax.com...
> On Fri, 21 May 2004 10:22:20 -0400, "Tam/WB2TT"
> <t-tammaru@c0mca$t.net> wrote:
> ....
> Is the 40m at a right angle to the 17m, or is the V separation
> adequate?
>
The 40 is not at right angles. Only shifted horizontally enough to clear the
tree trunks and find suitable anchors for the ends. Vertically, there might
be 30 degrees separation, since the ends of the 17 go up, and the ends of
the 40 come down

> >Since you have to trim the lengths slightly (lowest frequency first), it
is

That is because the 40 has more effect on the 17 than the 17 does on the 40.
I am using a 1:1 balun. Not sure if that affects anything or not.

> >simplest to run EZNEC or some other simulation first.
> >
> >Tam/WB2TT
>
> Thanks muchly for that,
>
> Ron, W1WBV
>
>

2532. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 02:49:27 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <jlfta019poape31bp57c1o8iipngl8vs14@4ax.com>
Source record: 94886

On Fri, 21 May 2004 13:52:25 -0700, "CW" <clinton.magers@comcast.net>
wrote:

>Apparently, Gore was correct that democrats will believe anything.

See "Al Gore & the Creation of the Internet" at

http://www.firstmonday.dk/issues/issue5_10/wiggins/

I'm not so sure you won that $50 bet :-(

Bob
k5qwg

2533. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 04:55:01 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <uJWdnXSicpedQDPd4p2dnA@comcast.com>
Source record: 94887

"Tom Ring" <tarnews@taring.org> wrote in message
news:40aeacb7$0$439$5cbedd26@news.real-time.com...
> Dave VanHorn wrote:
>
> > "Tom Ring" <tarnews@taring.org> wrote in message
> > news:40ae9730$0$435$5cbedd26@news.real-time.com...
> >
> >>You have too much time on
> >
> >
> > Random text generator?
> >
> You needed to read the whole post. It was a joke about the joke that is
> the thread.

The thread isn't a joke.
It's a serious question.

2534. Re: Directivity, with smooth sidelobes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 05:13:47 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <PeudnSh0je37fDPdRVn_iw@comcast.com>
Source record: 94888

> >Just not my day today.. This is an internet security company?
> >
>
> Rah futz, lizdexia kicked in... it's www.cebik.com
>
> Do check out the commentary on plane and corner reflectors.

I see Much better. I need to read and understand.
From what I see at the moment, the corner reflector gives me the smooth and minimal sidelobes I wanted, but not as much directivity as I'd like.
Still, it's a start.

2535. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 06:04:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p4qta0t7b08p68j75i6vio6o0f0gm2244d@4ax.com>
Source record: 94889

On Fri, 21 May 2004 20:46:01 -0500, Tom Ring <tarnews@taring.org>
wrote:

>What does any of this have to do with antennas?

Hi Tom,

If you find off-topic correspondence offensive, your contribution is
then amusingly ironic with us watching you hoisting your own petard.

It's one of those Catch-22 situations, n'est pas?

73's
Richard Clark, KB7QHC

2536. Re: Q: DC motor for MFJ-1786.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 06:21:31 UTC
From: John Pedersen <vandmand@loveletters.dk>
Message-ID: <40aef1be$0$152$edfadb0f@dread11.news.tele.dk>
Source record: 94890

Hi
Thanks for your reply.
To get an answer i tried to search in several ways. :-)
My antenna dealer will replaced the motor free of charge.
73
<kashe@sonic.net> skrev i en meddelelse
news:ij3ta011n76tqdi3jh69vkfoeoopnun787@4ax.com...
> On Wed, 19 May 2004 13:57:07 +0200, "Vandmand"
> <vandmand@loveletters.dk> wrote:
>
> >Hi
> >I have to replace the DC motor in my MFJ-1786 Magnetic Loop antenna. Does
> >anyone have information about spare part number, a replacement motor and
> >where to by?
> >73 de OZ1JZV John
> >
>
> How about:
>
> By E-Mail:
> Website Questions: website@mfjenterprises.com
> Manual Requests:
> Current Products are free, Discontinued Products are a $5 charge,
> MFJ-1270C is $10 + S&H, MFJ-1278B is $16.95 + S&H
> manuals@mfjenterprises.com
> Catalog Requests: Click here for the catalog request form.
> Customer Service: mfjcustserv@mfjenterprises.com
> Technical Support: techinfo@mfjenterprises.com
> NOTE: There is a two to four week response time for all technical
> support emails. If this is not fast enough for you, please call us on
> our technical support lines listed above.
>

2537. Re: G5RV or 135 foot doublet or Carolina Windom?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 06:46:19 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405212246.39c0ac74@posting.google.com>
Source record: 94891

Mike Coslo <mcoslo@adelphia.net> wrote in message
news:<C7idnSNGl9g0NTPd4p2dnA@adelphia.com>...
> Jim Leder wrote:
> > This topic has been kicked around so much, I feel like it fits into the
> > upcoming spring/summer TV reruns. I currently have a G5RV in an inverted Vee
> > configuration, with the apex at about 35 feet. It works OK on 75/80, pretty
> > well on 40, OK on 20 and OK on 17. It is a miserable failure everywhere
> > else. I'm limited in space and height, but after surveying my trees and lot,
> > I could put up a 135 foot center fed doublet with the apex at about 40 feet
> > and the ends sloping down to about 15 feet (another inverted Vee, best I can
> > do with my trees). I would feed it with 450 ohm ladder line to the shack,
> > mate it with a 4:1 current balun and then connect with a short piece of coax
> > to my TS450's ATU. Seems like it should work, but I guess I need to ask some
> > questions:

I don't really recommend that myself. It might work, actually, it
probably would work, but it's hard on that tuner which is not really
made for that type of job.
I would always use a heavier duty outboard tuner if I wanted to run
ladder line.
But thats just me...The tuner in that 450 if fried, costs some hefty
cash flow to fix. It's not made for the real wide impedance variations
you will see with the ladder line fed dipole. It's more of a line
flattener. IE: handy to let you work the whole 80m band, once you are
externally in the ballpark. A 3 or 5 to 1 mismatch is no problem. A 20
or 40 to 1 is gonna hurt it I bet. Will run hot. Might even refuse
some loads, tune, tune, tune, no go, and the tuner will shut off in
disgust. I've seen it happen...

> > 2) Or, should I just rebuild the G5RV and scrape the doublet idea?

Well, maybe not. But I'd find an outboard tuner for the doublet.

> > 3) Is the 4:1 balun a good idea?

Many recommend a 1:1, but the garden variety 4:1 in most tuners that
accept ladder line will work for most matches. I just use the 4:1 in
my tuner if I run ladder line. Not the greatest from a purist point of
view, but I'm not *that* picky....They seem to work for me most all
the time. I always use the min inductance tuning. Very important.

Seems the only good way to be able to use
> > the Kenwood's ATU. The G5RV and Kenwood work well together on all bands,
> > even though it doesn't radiate out of my backyard on some of them.

It's no secret I'm not a fan of G5RV's...:/

> > 4) Should I be concerned with RF in the shack with the doublet scenario?

Not really.

> > 5) Is there a better doublet length than 135 feet? That seems to be the most
> > common length I see.

The best is what fits your bands the best. The best way to find the
best compromises, are to model them. In general, I see the worst
problems on the highest bands, where the dipole is quite long. Using
130 ft 80 m dipoles with ladder line, I've had cases where 10m acted
like a cloud warmer. But the antenna was fairly low to the ground.
Naturally, a half size dipole is bad news also..Lots of tuner loss in
most cases...T net tuners hate half size dipoles...:(

> > 6) My intention is to replace the RV with something better, that offers
> > improved performance on 75/80,40,30,20 and 17. Is it LIKELY this setup will
> > work, or am I too optimistic?

naw. I think it would work pretty well for 80-17....Just get the best,
and biggest tuner you can afford if you do it. You will have lower
losses in general compared to some of the little tuners. IE: I'm using
a MFJ 989c..Not the best in the west, but quite usable for ladder
line, or coax...It has a roller coil, so the inductance setting is
exact. This reduces loss if you are careful tuning.

I have an Alpha Delta DXEE which would be
> > moved to where the G5RV is now, offering me 20,15 and 10 (it's bad on 40).
> > 7) I've spent a bit of time looking over my situation, and this is maybe the
> > best wire antenna installation I can come up with. I've also considered
> > making my own 'Carolina Windom', but from what I've read it doesn't offer me
> > much improvement. Does it? Might the 'Carolina Windom' approach be a better
> > idea?

It's no secret I not a fan of windoms or any OCF dipole either...:/
Those are prone to rf in the shack problems if you aren't careful.

> >
> > My goal is to keep the replacement costs below $35, which I know I can do
> > with the doublet or the homebrew 'Carolina Windom'. I'm in no hurry, got all
> > summer to do this and I am retired. I just want to do what will give me the
> > best results. I'm looking for opinions, suggestions and practical experience
> > with using one of these doublet/balun antennas or 'Carolina Windoms' and the
> > kind of ATU found in most modern transceivers. I don't want the hassle or
> > expense of an external antenna tuner.
>
> If you want to run coax, how about a fan dipole? That seems to me to be
> the best of all worlds. You just have to spend some (more) time trimming
> since the wires interact with each other.

For under $35, this is by far, the best choice I think. Heck, as far
as I'm concerned, it's the best choice at any price...I run parallel
dipoles on a single coax feed. Very efficient, and no ant band
changing required. Right now, I have 160, 80 and 40. Being I tend to

work less 160 in the summer, I usually convert the 160 dipole to 20m, by adding insulators at the 16 ft points...I have two other 160 antennas anyway...I use three of them in the winter...The parallel dipoles will outperform all the other choices on the bands it's resonant on. And you have a dipole pattern on all those bands. The only drawback is if you want all bands to 17m, you have to have about 4 dipoles. 80, 40, 20, 17. The 40 dipole will work 15 using the 450 tuner. You probably could work 10m, using that tuner with usable performance. I doubt the SWR would be over 5 to 1 with the mix of all the elements. In fact, I think my SWR is pretty low on 10m, even without a tuner. Same for 6m...Parallel dipoles are easiest to tune if you spread them apart quite a bit. Don't stack them on top of each other with spreaders, unless you want a real PIA to tune. Lots of coupling between the elements if you do that. I place them at right angles if possible, IE: 80/40 and then the other bands equally in between those. Always start with the lowest band first, then tune each higher band. If you have coupling problems it will show up on the higher band element that is being effected by a lower band element next to it. You will almost never have a problem on 80m. Only the higher bands. Sometimes just moving a wire a few feet, can drastically reduce some coupling you might see. MK

2538. Dipole/Balun? Commercially Produced Alternative?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 08:52:11 UTC
From: rseifertweb@earthlink.net
Message-ID: <75639161.0405220052.109c0336@posting.google.com>
Source record: 94892

Hello all. I'm thinking about a wire antenna ... even thinking about buying a pre-made 40-10m (short) antenna ... I have about 40' to play with on the 11th floor balcony facing due west (USAF member stationed in Ankara, Turkey). I also have a tuner that I've never used. I think I'm primarily interested in primarily 10, 20 and 40 ... and perhaps 12, 15, 17 and 30? I'd love to work Europe and possibly back to the states if possible (barefoot).

I happened across an ad for Van Gorden Engineering baluns & insulators, Hi-Q 1:1 or Hi-Q 4:1 Baluns. I have no clue as to how to choose one beyond knowing they connect coax to a dipole. Is coax length important?

Can anyone explain how I'd choose and install a balun given my desire? 1:1 or 4:1 impedance ratio?

Finally, can anyone suggest an off-the-shelf antenna based on their experiences with it?

Thanks!
Rich
(Please don't reply via e-mail ... deed address)

2539. Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 09:30:19 UTC
From: rseifertweb@earthlink.net
Message-ID: <75639161.0405220130.5486ee6c@posting.google.com>
Source record: 94893

Hi all. I'm sitting here trying to figure out how to get on the air!
I'm in a big apartment building ... I have these hot water pipes which
feed radiators on every floor ... I'm on the 11th floor.

I'm thinking that I can throw 100' wire out the window (to radiate)
and ground to the hot water pipes. Thoughts? Any risk of damage to
the heating system? I don't know how the water's heated...

Thanks,
Rich
(Please don't reply via e-mail ... dead address)

2540. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 12:04:15 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40af4152$0$435$5cbedd26@news.real-time.com>
Source record: 94894

Richard Clark wrote:

> Hi Tom,
>
> If you find off-topic correspondence offensive, your contribution is
> then amusingly ironic with us watching you hoisting your own petard.
>
> It's one of those Catch-22 situations, n'est pas?
>
> 73's
> Richard Clark, KB7QHC

I didn'y say I found it offensive. Amusing, actually. Just asking.

I always liked the petard reference.

tom
K0TAR

2541. Re: Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 12:21:22 UTC
From: Paul_Morphy <nopaul_morphy2@coolgoose.com>
Message-ID: <6BHrc.15206$fF3.381198@bgtnsc05-news.ops.worldnet.att.net>
Source record: 94895

"Rich" <rseifertweb@earthlink.net> wrote in message
news:75639161.0405220130.5486ee6c@posting.google.com...
> Hi all. I'm sitting here trying to figure out how to get on the air!
> I'm in a big apartment building ... I have these hot water pipes which
> feed radiators on every floor ... I'm on the 11th floor.
>
> I'm thinking that I can throw 100' wire out the window (to radiate)
> and ground to the hot water pipes. Thoughts? Any risk of damage to
> the heating system? I don't know how the water's heated...

How much power are you planning to run? You could make the radiators hot with rf, too. The cold-water pipes would be better, as they usually go directly into the ground, whereas the hot-water system goes into a boiler. There are a lot of joints in both between you and ground, so it may not matter much. The pipes won't be very close to true ground potential but may work as a counterpoise to your wire. Worth a try.

When I lived in Manhattan's East Village in the 1970s, I was on the third floor of a six-floor building with a fire escape. I scraped 80 years of paint and scale off the metal and put on a 'crocodile' clip when I wanted to get on the air. My counterpoise was a piece of insulated wire running along the baseboards. After working W1AW and mentioning the antenna (the QSL card came addressed to "Roasted Pigeons") I even got mentioned in the ARRL Antenna Book! Using about 200 W I was able to work ZL and VK on 40 CW, and I was surrounded by other buildings. so your wire is worth a try.

73,

"PM"

2542. Re: Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 12:47:53 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40AF4BF9.A9728626@cwis.net>
Source record: 94896

Rich,
Will the heating pipes work as a 'ground'? Sure, probably, but you might think about it for just a while. Since the heating system runs to all parts of the building, that means 'part' of your antenna system is running to all parts of the building too (all those electronic devices susceptible to RF interference, you know? Unhappy neighbors?). Any chance of having access to the roof? That would open up quite a number of possibly 'better' options.
And just because it's not a bad idea, have you, or can you find an amateur group in Ankara? I'm sure they could offer a lot of helpful advice, not just about antennas!
'Doc

2543. Re: Dipole/Balun? Commercially Produced Alternative?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 14:06:48 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <a0nua0lg9j5f58qnqghm5ossthckbmin4l@4ax.com>
Source record: 94897

On 22 May 2004 01:52:11 -0700, rseifertweb@earthlink.net (Rich) wrote:

>Hello all. I'm thinking about a wire antenna ... even thinking about
>buying a pre-made 40-10m (short) antenna ... I have about 40' to play
>with on the 11th floor balcony facing due west (USAF member stationed
>in Ankara, Turkey). I also have a tuner that I've never used. I
>think I'm primarily interested in primarily 10, 20 and 40 ... and
>perhaps 12, 15, 17 and 30? I'd love to work Europe and possibly back
>to the states if possible (barefoot).

I'm not sure 40' is long enough to get on 40 meters. I tried a 44'
dipole (3/8 wave on 40 meters), and it would only tune 30m through
10m. I extended it to 51', and now it tunes 40m, too. It's fed with
ladder line to an antenna tuner, an mfj unit.

You might just put up the longest dipole you can, 40' or so, feed it
with ladder line, and then tune it with the tuner you already have. If
it has balanced line connnections, you're all set. If not, a simple
coax choke will transition the balanced line to your tuner.

bob
k5qwg

>
>I happened across an ad for Van Gorden Engineering baluns &
>insulators, Hi-Q 1:1 or Hi-Q 4:1 Baluns. I have no clue as to how to
>choose one beyond knowing they connect coax to a dipole. Is coax
>length important?
>
>Can anyone explain how I'd choose and install a balun given my desire?
> 1:1 or 4:1 impedance ratio?
>
>Finally, can anyone suggest an off-the-shelf antenna based on their
>experiences with it?
>
>Thanks!
>Rich
>(Please don't reply via e-mail ... deed address)

2544. Re: Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 14:13:55 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <De6dnSgma7ai_TLdUSdV9g@ptd.net>
Source record: 94898

I believe that using hot water pipes as a "ground" would be a violation of
the National Electrical Code.

There have been many good articles/threads posted here - many with links to
websites on grounding.
Try googling on ham-radio and grounding ...

Carl - wk3c

"'Doc" <w5lz@cwis.net> wrote in message news:40AF4BF9.A9728626@cwis.net...
>
>
> Rich,
> Will the heating pipes work as a 'ground'? Sure, probably,
> but you might think about it for just a while. Since the
> heating system runs to all parts of the building, that means
> 'part' of your antenna system is running to all parts of the
> building too (all those electronic devices susceptible to RF
> interference, you know? Unhappy neighbors?). Any chance of
> having access to the roof? That would open up quite a number
> of possibly 'better' options.
> And just because it's not a bad idea, have you, or can you
> find an amateur group in Ankara? I'm sure they could offer a
> lot of helpful advice, not just about antennas!
> 'Doc

2545. Re: G5RV or 135 foot doublet or Carolina Windom?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 14:43:26 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40af67e3$1_6@corp.newsgroups.com>
Source record: 94899

Mark Keith wrote:

> Mike Coslo <mcoslo@adelphia.net> wrote in message
news:<C7idnSNGl9g0NTPd4p2dnA@adelphia.com>...
>
>>Jim Leder wrote:
>>>I could put up a 135 foot center fed doublet with the apex at about 40 feet
>>>and the ends sloping down to about 15 feet (another inverted Vee, best I can
>>>do with my trees). I would feed it with 450 ohm ladder line to the shack,
>>>mate it with a 4:1 current balun and then connect with a short piece of coax
>>>to my TS450's ATU. Seems like it should work, but I guess I need to ask some
>>>questions:
>
> I don't really recommend that myself. It might work, actually, it
> probably would work, but it's hard on that tuner which is not really
> made for that type of job.

If he's willing to use three different feedline lengths, it will work
like a charm and his ATU will be happy. A 130 ft. dipole is covered on
my web page. Driving the SWR lower than 3:1 by switching the length of
the feedline is a snap and then the ATU is happy, usually over the entire
band. For my 130 ft. dipole fed with "450" ohm ladder-line, a feedline of:

88 ft. works well with my IC-756PRO ATU on 40m, 15m, & 12m.
95 ft. works well with my IC-756PRO ATU on 30m, 17m, & 10m.
105 ft. works well with my IC-756PRO ATU on 20m & 12m.
(Note that the difference in 88 ft. and 105 ft. is 1/2 WL on 12m.)

So with an ATU, three lengths of ladder-line cover all the HF bands
for a 130 ft. dipole. Two 4PDT relays are all that are needed to
switch in three lengths of ladder-line. For 100 watts, two OMRON
LY4's work well.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2546. Re: Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 14:51:19 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40af69bc_6@corp.newsgroups.com>
Source record: 94900

Rich wrote:
> I'm thinking that I can throw 100' wire out the window (to radiate)
> and ground to the hot water pipes. Thoughts? Any risk of damage to
> the heating system? I don't know how the water's heated...

I tried that in a dorm at Texas A&M in the 50's. Every AM radio
and most every HI-FI in the dorm quit working when I keyed down.
--
http://www.qsl.net/w5dxp/notuner.htm

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2547. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 15:08:09 UTC
From: Curt <me@home.con>
Message-ID: <b2rua0d6oqm822j9kjrg38c7bofh1g2tcl@4ax.com>
Source record: 94901

On Sun, 16 May 2004 21:13:58 GMT, R. David Steele
<steele.david@verizon.net/OMEGA> wrote:

>http://www.bwantennas.com/
>
>The military is using these antennas because of ALE (automatic
>linking) and NVIS. I gather that while they are very broad
>banded, they have less the best gain?
>
>Any feed back?

I have used the BWD-90 for 2 months now, and love it.
I live on a city lot, and this antenna fits and performs better than
any other antenna I have tried. I've tried shortened 75m dipoles,
40 meter delta loops, and all kinds of slopers. all narrow banded and
loaded with city noise. The antenna has made the hobby fun for me
again. It is frequency agile, and has a great signal to noise ratio.
At 80 meters the antenna is only down 1 db from a standard dipole.
At 40 meters it even, there is 1db gain at 20 meters, and 3db at 10m.
(B & W,s numbers, not mine).
The botton line is if you live in the sticks with all kinds of space,
and no noise, you don't need a folded terminated dipole.
you can run wire to the cows come home,
but it's sure nice in the city.
Curt

2548. Re: Magical antennas (Was: Directivity, with smooth sidelobes)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 15:17:49 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <QqednW9N6dZo8zLdRVn-uA@comcast.com>
Source record: 94902

> From the site;not closely related to the thread, but to a common topic
> in this group:
>
> "Magical antennas.

I'm not looking for magic. I'm well aware of the total BS that's out there.

I have compromises I'm willing to make, and indeed it looks like a corner reflector will do what I want. Engineering is the art of compromise.

2549. Re: Remote antenna switching

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 16:17:42 UTC
From: J M Noeding <la8ak@online.no>
Message-ID: <i6vua0tasdpolohjcgs3qaqndqusov6onr@4ax.com>
Source record: 94903

Believe LA8XG described a similar unit some decades ago, would you pse
send me a schematic or advice what the model is?

73 jm
On Sat, 22 May 2004 01:34:23 GMT, "Rick Karlquist N6RK"
<richard@karlquist.removethis.com> wrote:

>I have a Heathkit antenna switch that works like you
>describe.
>
>Rick N6RK
>
>"J M Noeding" <la8ak@online.no> wrote in message
>news:j0iqa0lv7728mv046mv59fvo088123iulk@4ax.com...
>> Rrad about a complex remote control unit using VLSI circuits and made
>> some considerations.
>> Using a 9V transformer it is possible to switch relays to 4 positions
>> using the following signals on the antenna cable - with RF chokes and
>> suitable capacitors to pass the RF, and two dpdt relays at remote end:
>> 1) no voltages
>> 2)+12V with a diode in series with the switch and transformer
>> 3) -12V with another diode in series with switch and transformer
>> 4) 9VAC to activate both relays simultaneosly
>>
>> very simple, but no VLSI - if that was the point, and no intruder
>> transmitter on 433.92MHz for the remote control if it was another
>> point, sorry - I am perhaps to old for those modern type of remote
>> control......
>>
>> 73
>> Jan-Martin
>> LA8AK
>

2550. Re: Magical antennas (Was: Directivity, with smooth sidelobes)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 16:32:27 UTC
From: fractenna@aol.com
Message-ID: <20040522123227.26462.00002063@mb-m07.aol.com>
Source record: 94905

>I have compromises I'm willing to make, and indeed it looks like a corner
>reflector will do what I want. Engineering is the art of compromise.
>
>

Corner reflectors are good, but keep in mind that it will challenging to maintain similar SWR, not to mention gain, over the multiple bands of interest.

My standard question: what problem are you trying to solve? At this point it seems a bit open ended to help more specifically.

Unlike other fields of engineering, antennas are one of the few where expertise is acheived by doing, rather than a mere degree. For example, Dr. Cebik is a retired philosphy of aesthetics professor. Most of what I have seen from his antenna work is especially useful to amateurs, which is the audience target of this NG.

73,
Chip N1IR

2551. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 16:39:40 UTC
From: fractenna@aol.com
Message-ID: <20040522123940.26462.00002064@mb-m07.aol.com>
Source record: 94906

>>Any feed back?

If you desire a single antenna with excellent SWR match at many bands, then I am of the opinion that there is value here.

Even the most efficient horizontal dipole is almost useless for DX--the assumed need, not NVIS-- unless it is high up. This is because all low dipoles have low gain at low elevations: Their launch angle is quite high.

I would suspect that typical ohmic losses on the BW are 2-5 dB. The mismatch lsses are negligible.

Getting this well over a wave high at the lowest freq of operation will afford at least that, and probably more, in a gain differential at low angles, compared to an efficient, low dipole.

The point: a high BW antenna will work well. Any low dipole will work poorly. The in-between is a valid issue to ponder.

73,
Chip N1IR

2552. Re: Magical antennas (Was: Directivity, with smooth sidelobes)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 17:04:52 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <FMOdnQ7XALaWFTLdRVn-hQ@comcast.com>
Source record: 94907

"Fractenna" <fractenna@aol.com> wrote in message
news:20040522123227.26462.00002063@mb-m07.aol.com...
> >I have compromises I'm willing to make, and indeed it looks like a corner
> >reflector will do what I want. Engineering is the art of compromise.
> >
> >
>
> Corner reflectors are good, but keep in mind that it will challenging to
> maintain similar SWR, not to mention gain, over the multiple bands of
> interest.

I'm only interested in a small frequency range. I said that I could scale
designs on ham bands to what I want.

> My standard question: what problem are you trying to solve? At this point
it
> seems a bit open ended to help more specifically.

I want to minimize signals from off-axis, and then achieve minimum beamwidth
(maximum directivity).
Gain and bandwidth are compromise points.

2553. Re: Dipole/Balun? Commercially Produced Alternative?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 17:33:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <i63va052j2rksms0eotfm681eihfmctjsb@4ax.com>
Source record: 94908

On 22 May 2004 01:52:11 -0700, rseifertweb@earthlink.net (Rich) wrote:

> I have about 40' to play
>with on the 11th floor balcony facing due west (USAF member stationed
>in Ankara, Turkey). I also have a tuner that I've never used. I
>think I'm primarily interested in primarily 10, 20 and 40 ... and
>perhaps 12, 15, 17 and 30? I'd love to work Europe and possibly back
>to the states if possible (barefoot).

Hi Rich,

With your proximity to the Iraqi theater, I would suggest you check closely with Turkish laws, much less reciprocity to engage in RF communications. I cringe to think of the unforseen complications that may fall on your head. You might even check with your local command, being Turkey used to be (?) one of our "listening" stations.

As for the mechanics of an antenna, if 40' is all you have, you have more than some. In that sense, it is simpler and far more compelling if you gave it a try. No, it won't be a straight match and if it were, it would be very strange (with luck having nothing to do with it). As you have a tuner, enjoy it. The antenna won't be so far off to be a poor performer.

If local laws, the building admin, and some friendly neighbors allow, you might try a larger vertical dipole (I guess it all depends how many floors there are above you).

73's
Richard Clark, KB7QHC

2554. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 17:54:01 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <N7-dnS_BsuckDjLdRVn-gQ@adelphia.com>
Source record: 94909

Tom Ring wrote:
> Richard Clark wrote:
>
>
>> Hi Tom,
>>
>> If you find off-topic correspondence offensive, your contribution is
>> then amusingly ironic with us watching you hoisting your own petard.
>> It's one of those Catch-22 situations, n'est pas?
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
> I didn'y say I found it offensive. Amusing, actually. Just asking.

Oh.... Okay, Tom.

Since you were only asking, and didn't know, it doesn't have much to do
with antennas.

Hope this helps! 8^)

- Mike KB3EIA -

2555. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 18:31:03 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <H%Mrc.52233$pJ1.40406@lakeread02>
Source record: 94910

"Fractenna" <fractenna@aol.com> wrote in message
news:20040522123940.26462.00002064@mb-m07.aol.com...
> >>Any feed back?
>
> If you desire a single antenna with excellent SWR match at many bands,
then I
> am of the opinion that there is value here.
>
> Even the most efficient horizontal dipole is almost useless for DX--the
assumed
> need, not NVIS-- unless it is high up. This is because all low dipoles
have low
> gain at low elevations: Their launch angle is quite high.
>
> I would suspect that typical ohmic losses on the BW are 2-5 dB. The
mismatch
> lsses are negligible.
>
> Getting this well over a wave high at the lowest freq of operation will
afford
> at least that, and probably more, in a gain differential at low angles,
> compared to an efficient, low dipole.
>
> The point: a high BW antenna will work well. Any low dipole will work
poorly.
> The in-between is a valid issue to ponder.
>
> 73,
> Chip N1IR

Chip, how did we digress to comparing a "high B&W" to a "low dipole"? When the two are each at their optimal height (and why would we ever compare anything else..) then the dipole has it all over a B&W. I use my (amost 1/2 wave height) dipole only for DX, without a tuner on it's two resonant frequencies and with a tuner on two bands well above, with amazing results. 5, 8, 11 and 15 mhz to Alaska, Equador, Venezuela and Canadian Maritimes, if that qualifies as "DX".

73

Jack Painter
Virginia Beach, Va

2556. Re: Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 18:36:57 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8o6k9ti1@sparta.btinternet.com>
Source record: 94911

Assuming the hot and cold plumbing is mostly metal pipes.

If possible run more than one ground connecting wire in two or more different directions. Even long, bent wires are far better than none. If possible also include a wire to a cold water pipe. Run wires unobtrusively under carpets, etc. 18 gauge to 14 gauge, bare, enamelled or plastic insulated wires will do fine.

Don't forget all the mains wiring in the building (and equipment connected thereto) is also connected to your radio and form part of its ground system. Every bit of stray inductance and capacitance adds to its lectrical bulk.

Make as much use as possible of the large set of random, cross-connected, terminated radials in the building. In principle, you have at your disposal one of the best ground systems for miles around. Connect directly from the transmitter to it as often as you can.

High voltages between pipes and wiring and nearby equipment are very unlikely to exist because of the large electrical mass of the whole. And it is impossible to put one bare foot out of the window to reach the real ground while turning on the cold tap with your bare hand in the bathroom.

To be absolutely safe start with low power before attempting 100 watts. Don't exceed 100 watts. I say this simply because I've never used more than 100 watts myself when using the plumbing system as a ground. Never had any trouble with RF burns. Not even tingling. You and the transmitter are inside a sort of random Faraday cage.

If an occasonal interference to TV is a problem tackle it from the TV set end.

Problems, if any at all, get better the lower the frequency. There may be only one band affected. So avoid it. I've never heard of a problem on 160m. And problems do occasionally arise whatever the ground system when used with an end-fed wire. Or even with an HF rotateable beam fed over a balanced line.

With a high random 100 foot wire out of the window, plus a tuner, you will do very well. By extending the end downwards to make 140 or 150 feet you will do even better.

The only unavoidable problem lies in the locally-generated noise level at the lower frequencies.

Reg, G4FGQ

==========

"Rich" <rseifertweb@earthlink.net> wrote in message
news:75639161.0405220130.5486ee6c@posting.google.com...
> Hi all. I'm sitting here trying to figure out how to get on the air!
> I'm in a big apartment building ... I have these hot water pipes which
> feed radiators on every floor ... I'm on the 11th floor.
>
> I'm thinking that I can throw 100' wire out the window (to radiate)
> and ground to the hot water pipes. Thoughts? Any risk of damage to
> the heating system? I don't know how the water's heated...
>
> Thanks,
> Rich
> (Please don't reply via e-mail ... dead address)

2557. Re: Two dipoles on one coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 19:04:15 UTC
From: jder8745@aol.com
Message-ID: <20040522150415.17626.00000847@mb-m15.aol.com>
Source record: 94912

Yes I forgot to add that each antenna was 1/2 wave long.

Jack

2558. packet radio

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 19:40:50 UTC
From: al <r@ng.fr>
Message-ID: <40afacc2$0$11899$626a14ce@news.free.fr>
Source record: 94913

Hello
I'm french om and search for Isle of Jersey frequency for packet radio and ,
if possible, call of digipeaters.
73
F5RLM

--
" On ne voit bien qu'avec le coeur ; l'essentiel est invisible pour les yeux
".
(A. de Saint-Exup�ry : " Le petit prince ").

2559. G5RVh COAX feeder lengths dilemma ? Help please

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 20:24:52 UTC
From: Smog <james@burrill.co.uk>
Message-ID: <c8ocu3eap1@news8.svr.pol.co.uk>
Source record: 94915

Hi.

I am just in the throws of installing a half size G5RV in my back garden. I am going for the "top hat" arrangement (North / South) instead of the inverted V.

It says on the instructions with the kit that the best coaxial feeder length to stick to is either 45 feet or 90 feet. I have 77 feet of Belden coax and didn't really want to cut it ! How critical is the 45 feet coax length ? If I have to cut it I will but as said, didn't really want too :(. Could I just leave the 77 feet and neatly fix it around the edge of the garden, to use up the excess, and not suffer too much loss ??

Any help will be greatly received,

Thanks.

--

Jim Burrill (Smogthemog)
M1BMW
Kiteaholic

www.jbphonetech.info

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.688 / Virus Database: 449 - Release Date: 18/05/2004

2560. Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 20:24:57 UTC
From: blair thompson <blairt@abcomm.ca>
Message-ID: <19dva0handge2vae00bcrvg1n5m1dab5uc@4ax.com>
Source record: 94914

I'm certain this question must have been dealt with before,
but I recently acquired a Cushcraft R5 vertical which looks a bit
weather-beaten.

I was wondering whether, if I aerosol-sprayed the aluminum,
elements, with an appropriate color, it might impair the performance
of what is already a compromise antenna. I know radio waves don't care
about appearance, but I would like to "tart it up" a bit.

Thanks for any information.
73
Blair VE7HHH

2561. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 21:30:44 UTC
From: j999w@aol.com
Message-ID: <20040522173044.09152.00000784@mb-m17.aol.com>
Source record: 94916

Good question.

Personally, I'd rather buff it up with steel wool, a wire wheel, and scotchbright pads. Shouldn't take that long. YOu'd have to clean it up in order to paint it anyway.

Certainly, be careful in your choice of paint.

jw
K9RZZ

2562. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 21:36:23 UTC
From: kashe@sonic.net
Message-ID: <juhva0h6866144b0ig6h4qr6vevt6qhosv@4ax.com>
Source record: 94917

On Fri, 21 May 2004 21:20:34 -0400, william ewald
<wewald@bellsouth.net> wrote:

>
>>He said something to the effect that he was a creator or father -- of
>>the internet -- he never used the word "invent." That was an invention
>>of reporter(s).
>>
>>Bob
>>k5qwg
>>
>>
>>>>http://www.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/transcript.gore/
>
>"During my service in the United States Congress, I took the
>initiative in creating the Internet. I took the initiative in moving
>forward a whole range of initiatives that have proven to be important
>to our country's economic growth and environmental protection,
>improvements in our educational system. "
>
>Close enough.

Only if accuracy is considered disposable.

2563. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 22:07:15 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <naQrc.24177$zw.4857@attbi_s01>
Source record: 94918

"blair thompson" <blairt@abcomm.ca> wrote in message
news:19dva0handge2vae00bcrvg1n5m1dab5uc@4ax.com...
> I'm certain this question must have been dealt with before,
> but I recently acquired a Cushcraft R5 vertical which looks a bit
> weather-beaten.
>
> I was wondering whether, if I aerosol-sprayed the aluminum,
> elements, with an appropriate color, it might impair the performance
> of what is already a compromise antenna. I know radio waves don't care
> about appearance, but I would like to "tart it up" a bit.
>
> Thanks for any information.
> 73
> Blair VE7HHH

Blair,

John Tait, EI7BA has a good web page on the Cushcraft R5/R7 antenna
http://www.iol.ie/~bravo/r7_vertical.htm

My preference for aluminum is NOT to paint it. Shiny aluminum can not exist
long in an
oxygen environment without developing a dull gray patina (reaction of AL
with O2).
This patina is conductive.

I do not like to use steel wool (dissimilar metal abrasives) and any small
iron/steel particles
left on the antenna will rust (brown).

I usually use a scotchbrite-type pad ... a very mild lye (sodium hydroxide)
in a well ventilated area AND plenty of water.
http://www.ccohs.ca/oshanswers/chemicals/chem_profiles/sodium_hydroxide/basic_sod.html
CAS Registry Number for sodium hydroxide is 1310-73-2. This number is
assigned by the Chemical Abstracts Service (CAS) in the United States and is
used as a unique identifier number world-wide.

Once the aluminum is shiny, wash the aluminum well to remove remaining NaOH.

Dry and then apply a clear finish to preserve the shiny. The clear finish
can not be used electrical and RF conductivity is desired (inside
compression fittings of sections).

IF you desire to paint any fiberglass on the antenna, there are a number of
products for the auto and marine industry for

that application.

Greg, w9gb

2564. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 22:18:32 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <YkQrc.97486$iF6.8804007@attbi_s02>
Source record: 94919

"blair thompson" <blairt@abcomm.ca> wrote in message
news:19dva0handge2vae00bcrvg1n5m1dab5uc@4ax.com...
> I'm certain this question must have been dealt with before,
> but I recently acquired a Cushcraft R5 vertical which looks a bit
> weather-beaten.
>
> I was wondering whether, if I aerosol-sprayed the aluminum,
> elements, with an appropriate color, it might impair the performance
> of what is already a compromise antenna. I know radio waves don't care
> about appearance, but I would like to "tart it up" a bit.
>
> Thanks for any information.
> 73
> Blair VE7HHH

Blair,

Here is another R5/R7 "clean and repair" web site.
http://home.planet.nl/~fhvgeerligs/Ant/R5/onhr5eng.htm

IF you do use steel wool, use a good damp cloth to remove any steel slivers
that
you may get. A very fine emery paper (400 to 600 grit) may be a better
choice for
corrosion areas.

IF you are going to be near a salt-water environment a clear coat should be
used.

Greg
w9gb

2565. Re: Dipole/Balun? Commercially Produced Alternative?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 22:21:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40afd342$1_3@corp.newsgroups.com>
Source record: 94821

Rich wrote:
> Finally, can anyone suggest an off-the-shelf antenna based on their
> experiences with it?

Not off the shelf, but a 40 ft dipole will work well on 40m
if you can get the RF into the dipole. A quick session with
EZNEC says if you create a G5RV-like dipole, 40 ft. long, fed
with 20 ft. of 450 ohm ladder-line, and install a 1000 pf cap
at the ladder-line/coax junction, it will be close to 50 ohms
on 7.2 MHz. Of course, it will have to be "cut and tried".

Other lengths of ladder-line should allow it to work well on
the higher HF bands without a tuner.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2566. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-22 22:22:25 UTC
From: Keyboard In The Noise <KITN@cat.net>
Message-ID: <BoQrc.10443$wa.8960@fed1read07>
Source record: 94920

The Cushcraft manual addresses this --- at URL:
http://www.cushcraft.com/support/pdf/r5.pdf

Since it is in pdf I can't copy it so -- check there
--
Keyboard In The Noise

Opinions are the cheapest commodities in the world. Author unknown but
"right on"

"blair thompson" <blairt@abcomm.ca> wrote in message
news:19dva0handge2vae00bcrvg1n5m1dab5uc@4ax.com...
> I'm certain this question must have been dealt with before,
> but I recently acquired a Cushcraft R5 vertical which looks a bit
> weather-beaten.
>
> I was wondering whether, if I aerosol-sprayed the aluminum,
> elements, with an appropriate color, it might impair the performance
> of what is already a compromise antenna. I know radio waves don't care
> about appearance, but I would like to "tart it up" a bit.
>
> Thanks for any information.
> 73
> Blair VE7HHH

2567. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 00:25:34 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <04SdnXaYt6jjcjLd4p2dnA@comcast.com>
Source record: 94822

I don't recall anyone in this thread claiming that Gore had said that he invented the internet. Where did that come from?

<kashe@sonic.net> wrote in message news:juhva0h6866144b0ig6h4qr6vevt6qhosv@4ax.com...
> On Fri, 21 May 2004 21:20:34 -0400, william ewald
> <wewald@bellsouth.net> wrote:
>
> >
> >>He said something to the effect that he was a creator or father -- of
> >>the internet -- he never used the word "invent." That was an invention
> >>of reporter(s).
> >>
> >>Bob
> >>k5qwg
> >>
> >>
>
>>>http://www.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/transcript.gore/
> >
> >"During my service in the United States Congress, I took the
> >initiative in creating the Internet. I took the initiative in moving
> >forward a whole range of initiatives that have proven to be important
> >to our country's economic growth and environmental protection,
> >improvements in our educational system. "
> >
> >Close enough.
>
> Only if accuracy is considered disposable.
>

2568. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 00:32:10 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <7iSrc.10458$wa.1838@fed1read07>
Source record: 94823

"G.Beat" <now9spamgb@no.comcast.spam.net> wrote in message
news:naQrc.24177$zw.4857@attbi_s01...
> "blair thompson" <blairt@abcomm.ca> wrote in message
> news:19dva0handge2vae00bcrvg1n5m1dab5uc@4ax.com...
> > I'm certain this question must have been dealt with before,
> > but I recently acquired a Cushcraft R5 vertical which looks a bit
> > weather-beaten.
> >
> > I was wondering whether, if I aerosol-sprayed the aluminum,
> > elements, with an appropriate color, it might impair the performance
> > of what is already a compromise antenna. I know radio waves don't care
> > about appearance, but I would like to "tart it up" a bit.
> >
> > Thanks for any information.
> > 73
> > Blair VE7HHH
>
> Blair,
>
> John Tait, EI7BA has a good web page on the Cushcraft R5/R7 antenna
> http://www.iol.ie/~bravo/r7_vertical.htm
>
> My preference for aluminum is NOT to paint it. Shiny aluminum can not
exist
> long in an
> oxygen environment without developing a dull gray patina (reaction of AL
> with O2).
> This patina is conductive.

Aluminum oxide is conductive?!

Ed
WB6WSN

2569. Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 00:37:16 UTC
From: dada <sman1@stny.rr.com>
Message-ID: <40AFF4A8.61F46210@stny.rr.com>
Source record: 94824

Hi.
I have been thinking of making an antenna support (for center of dipole, support of Jpole, etc)

Was thinking of using 3 4x4 pressure treated lumber 12 foot lengths.

Put them in cement 4 inces aprt (cement will be approx 4x4x4 feet.
Put 3 vertical 4x4 into cement about 2 feet.
At top of 4x4, create a pivot point, and add 2 4x4s between the other 3.

Add another at the top between the two, overlapping the 3 and 2 and 2 and 1 4x4 by about 2 feet.
Using 12 foot 4x4 that would give me about 30 feet.
Will this work ? Would it stand without guying ?
I plan to make this a tilt over at the top of the lower 3 4x4s, maybe extending the
next tier of 2 4x4s with somthing on their bottoms to give more leverage for raising.

Am I nuts ? (well.... I already know the anser to that... but will this work ?

Thanks & 73
Jow, WB2JQT, Newark Valley, NY

2570. Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 02:07:13 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <IHTrc.1908$Da5.28@newssvr22.news.prodigy.com>
Source record: 94825

I know that any power not dissipated by an antenna is reflected back to the transmitter. Then the transmitter "reflects" this reflection back to antenna, ad nauseum until its all gone. I also know that a short or an open is required to reflect power and I'm searching for which it is, an open or a short. I'm inclined to think it's a virtual open but I'm at a loss to understand that and I wonder if someone has a good explanation or analogy and some math wouldn't hurt.
tnx
Hank WD5JFR

2571. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 02:45:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <li20b0d6o7dimggeq28dqohc09kvte09fp@4ax.com>
Source record: 94826

On Sun, 23 May 2004 02:07:13 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>I know that any power not dissipated by an antenna is reflected back to the
>transmitter. Then the transmitter "reflects" this reflection back to
>antenna, ad nauseum until its all gone. I also know that a short or an open
>is required to reflect power and I'm searching for which it is, an open or a
>short. I'm inclined to think it's a virtual open but I'm at a loss to
>understand that and I wonder if someone has a good explanation or analogy
>and some math wouldn't hurt.
>tnx
>Hank WD5JFR
>

Hi Hank,

What you describe as reflection and re-reflection occurs between the
mismatched antenna and the tuner that has been adjusted to minimize
power returned to the transmitter. The sole function of the tuner is
to keep this power from being dissipated by the transmitter (common
experience of arcing, denoting a voltage reflection, or thermal
runaway, denoting a current reflection). The "virtual" reflection
(offered by the tuner) is generally know as the complex conjugate of
the remote load, seen at the near end of the line through which it is
returning. This means that the line transforms the phase and
amplitude of the reflection, and the tuner's job is to invert that
relationship to counteract it, and return it to the antenna.

There are both wave descriptions of this process, and lumped circuit
equivalents. Both work, and both describe the same process from
different points of view. One does not negate the other's validity
(unless, of course, you attempt to mix the points of view and demand
consistency in terms - a frequent rhetorical trap here).

There will no doubt be a flurry of denials to this simple example with
contortions of logic to match. As for the math, you will find it by
the reams, once you've been overwhelmed with the arcana of hyperbolic
descriptions of a novel physics that have to proceed its proof.

Keep your eye on how your literal points in your question go abandoned
with these arcane theories.

73's
Richard Clark, KB7QHC

2572. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 02:54:01 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <dnUrc.96115$536.17229512@attbi_s03>
Source record: 94827

>>
>> Blair,
>>
>> John Tait, EI7BA has a good web page on the Cushcraft R5/R7 antenna
>> http://www.iol.ie/~bravo/r7_vertical.htm
>>
>> My preference for aluminum is NOT to paint it. Shiny aluminum can not
> exist
>> long in an
>> oxygen environment without developing a dull gray patina (reaction of AL
>> with O2).
>> This patina is conductive.
>
> Aluminum oxide is conductive?!
>
> Ed
> WB6WSN

Ed -

Good catch. Getting ahead of my fingers. To avoid seizing when assembling
the
telescoping elements of your Cushcraft antenna, you should coat the
inner element with PENTROX-A by Burndy. This can be found at any
electrical distributor.
Many Home Depot stores also carry the product.
It is conductive and will avoid seizing between these aluminum elements.

w9gb

2573. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 02:59:37 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <tsUrc.43914$gr.4379779@attbi_s52>
Source record: 94828

"dada" <sman1@stny.rr.com> wrote in message
news:40AFF4A8.61F46210@stny.rr.com...
>
> Hi.
> I have been thinking of making an antenna support (for center of dipole,
> support of Jpole, etc)
>
> Was thinking of using 3 4x4 pressure treated lumber 12 foot lengths.
>
> Put them in cement 4 inces aprt (cement will be approx 4x4x4 feet.
> Put 3 vertical 4x4 into cement about 2 feet.
> At top of 4x4, create a pivot point, and add 2 4x4s between the other 3.
>
> Add another at the top between the two, overlapping the 3 and 2 and 2
> and 1 4x4 by about 2 feet.
> Using 12 foot 4x4 that would give me about 30 feet.
> Will this work ? Would it stand without guying ?
> I plan to make this a tilt over at the top of the lower 3 4x4s, maybe
> extending the
> next tier of 2 4x4s with somthing on their bottoms to give more leverage
> for raising.
>
> Am I nuts ? (well.... I already know the anser to that... but will this
> work ?
>
> Thanks & 73
> Jow, WB2JQT, Newark Valley, NY
>

IF you find an older ARRL Antenna handbook, they routinely showed the
construction of a 30 to 40 foot center support
for an inverted "V" using 2x4 dimensional lumber, and base and guy wires.

w9gb

2574. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 04:41:24 UTC
From: j999w@aol.com
Message-ID: <20040523004124.17474.00001792@mb-m13.aol.com>
Source record: 94829

4x4's?

Man, if you guy that thing, you could probably put a tribander on it !

:^]

jw
K9RZZ

2575. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 05:57:28 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8peg8$5ft$1@titan.btinternet.com>
Source record: 94830

"Richard Clark" wrote:
> What you describe as reflection and re-reflection occurs between the
> mismatched antenna and the tuner that has been adjusted to minimize
> power returned to the transmitter. The sole function of the tuner is
> to keep this power from being dissipated by the transmitter (common
> experience of arcing, denoting a voltage reflection, or thermal
> runaway, denoting a current reflection). The "virtual" reflection
> (offered by the tuner) is generally know as the complex conjugate of
> the remote load, seen at the near end of the line through which it is
> returning. This means that the line transforms the phase and
> amplitude of the reflection, and the tuner's job is to invert that
> relationship to counteract it, and return it to the antenna.
>
> There are both wave descriptions of this process, and lumped circuit
> equivalents. Both work, and both describe the same process from
> different points of view. One does not negate the other's validity
> (unless, of course, you attempt to mix the points of view and demand
> consistency in terms - a frequent rhetorical trap here).
>
> There will no doubt be a flurry of denials to this simple example with
> contortions of logic to match. As for the math, you will find it by
> the reams, once you've been overwhelmed with the arcana of hyperbolic
> descriptions of a novel physics that have to proceed its proof.
>
> Keep your eye on how your literal points in your question go abandoned
> with these arcane theories.
>
> 73's
> Richard Clark, KB7QHC
==========

Dear Richard, you are confusing the matter even further, if that were possible.

The only saving grace about your tedius message is that you yourself eventually realise what a load of overcomplicated nonsense it is.

Reflected power is a mere fiction. Power which is not radiated from an antenna never actually arrives there. In fact it never leaves the transmitter.

All the power which leaves the transmiter is radiated except for that which is lost in the line. It has nowhere else to go!

But for the existence of so-called SWR meters, the words 'forward and reflected power' would never enter people's vocabularies. For the few who

become involved with such matters, the misleading fiction also appears in the language of mathematics.

Names have to be invented in order to discuss mathematical equations in plain English. But there's no reason why they should be propagated, just to confuse, into the real World.

The sole purpose of an SWR meter is to indicate whether or not the transmitter is loaded with 50 ohms.

Reg, G4FGQ

2576. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 06:51:25 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p0g0b0pfnt5cn70l2bv9v6nkfgrhqgcup6@4ax.com>
Source record: 94831

On Sun, 23 May 2004 05:57:28 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:
>Dear Richard, you are confusing the matter even further, if that were
>possible.

Old Son,

Have I stolen your thunder?

Like the pendulum with a dull and meagre swing, your predictable
observations on this subject return to an unremarkable SWR, a topic
never raised without the old wife discovering it under her bed....

Does the following strike a bell?
>A QUOTATION:
>
>"When you can measure what you are speaking about and express it in numbers
>you know something about it. But when you cannot measure it, when you cannot
>express it in numbers, your knowledge is of a meagre and unsatisfactory
>kind. It may be the beginning of knowledge but you have scarcely in your
>thoughts advanced to the state of science."

You have never offered a scintilla of quantized discussion to the
matter. If you can summon up a respectable treatise that would make
lord kelvinator proud, then maybe we would have something of actual
substance to discuss. We can start with any of a number of my own -
if, of course, you want to advance to the state of science. Forgive
this last bit of presumption if you are simply trolling again. That,
too, has its own entertainment merit and I am glad to correspond in
kind. :-)

73's
Richard Clark, KB7QHC

2577. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 08:31:10 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <f9zbSdFOFGsAFAr2@ifwtech.co.uk>
Source record: 94832

Richard Clark wrote:
>There are both wave descriptions of this process, and lumped circuit
>equivalents. Both work, and both describe the same process from
>different points of view. One does not negate the other's validity

I agree with that last statement - and we can take it a step further.

Each description can do things that the other one can't; no argument about that. But in cases where both descriptions should be valid, then they *must* agree.

This is a basic cross-check that should always be applied... but regrettably isn't.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

2578. Re: Dipole/Balun? Commercially Produced Alternative?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 08:48:45 UTC
From: rseifertweb@earthlink.net
Message-ID: <75639161.0405230048.531d34de@posting.google.com>
Source record: 94833

I should have been more precise in my estimating (I know ... doesn't make sense). I actually have 59' to play with. Dohhht!

Cecil, any chance you can take one more look-see for me with EZNEC? How well do you think it will radiate on all the bands?

Bob, you make a good observation regarding proximity to theater and Turkish reaction. When I arrived, I filed with the Turkish Telekomuncations Office (their version of the FCC) and got a Turkish Call sign, TA2ZAD. I figured it was appropriate whether I was going to go on the air or not, especially given that I brought a couple of radios into the country. ;-)

I have a separate post going regarding using my SGC-230 coupler ... I was thinking about loading up the hot water pipes as a counterpoise and dropping a 100' of wire out the window. I saw a few folks' replies so far ... and they got me thinking otherwise now.

Thanks!
Rich
(Please don't reply via e-mail ... dead address)

2579. Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 08:54:30 UTC
From: Lord Snooty <bonzo@dog.com>
Message-ID: <aFZrc.6955$be.4189@newsread2.news.pas.earthlink.net>
Source record: 94834

There has been some discussion in the past months about conjugate matching, VSWR, and power transfer from source to load.
I've come across a puzzle while noodling on this.
My main issue here is how the heck my VSWR meter is measuring the way it is.

My elementary hook-up is an RF power amp feeding directly into a VSWR meter, and from there into a load consisting of a carbon resistor and a variable capacitor rigged in series. The meter connects to the load via about a foot of 50 ohm coax. The frequency is between 1 and 10 MHz.
Model the source impedance as Zs = R + jX, and the load impedance as Zl = r + jx (or use phasors if you prefer :).
The following two statements are true:
1) The power dissipated in the load (r) is maximised when x = -X (so-called "conjugate matching"), whatever the value of (r).
2) The classical VSWR is minimised (zero "reflected power") when x = +X, whatever the value of (r).

However, my VSWR meter, whch is a conventional 2-diode bridge and short transmission line, indicates that minimum indicated VSWR corresponds to max power dissipated in (r).!! (i.e. at conjugate match, and NOT when reflected power is zero).

The equation normally used for VSWR is
VSWR = ABS((1 + |p|) / (1 - |p|))
where
p = (Zl - Zs) / (Zl + Zs)
and p is a measure of the amount of power reflected back to the source, called the "voltage reflection coefficient"

I plotted something I call "conjugate VSWR" or VSWR*. which is the same expression as above, but with p defined as
p = (Zl - Zs*) / (Zl + Zs)
where Zs* indicates the complex conjugate of Zs.
and the behaviour of this VSWR* thingie absolutely matches what I see on my meter. Aye, there's the rub.

Some points to note
a) Classical VSWR shows NO minimum for all r, when x has the opposite sign to X
b) VSWR* always has a minimum at the same r-value which causes maximum power to be dissipated in r, whatever the value of x.

Again, I flat don't understand how my VSWR meter can indicate VSWR* when I know it should indicate VSWR.

Here are a couple of links to flesh out the theory.

1. Wade through this at your peril - it's you lot fighting abou this issue and is VERY long
http://www.ibiblio.org/pub/academic/agriculture/agronomy/ham/ANTENNAS/20030831.ant

2. This is much more succint - cut to the chase on p47
http://my.ece.ucsb.edu/yorklab/Useful%20Stuff/Tutorials/RFPower_Meas%20AN64-1B.pdf

Best,
Andrew

2580. Re: Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 08:58:36 UTC
From: rseifertweb@earthlink.net
Message-ID: <75639161.0405230058.620f408a@posting.google.com>
Source record: 94835

Hi all. Thanks for your replies. To give you more info, I'm only capable of up to 100w. I'm thinking about adding a Bencher 1.8-30 MHz Bandpass Filter to my set-up to minimize TV interference (even if I use a dipole, ref. my other post, "Re: Dipole/Balun? Commercially Produced Alternative?" The pipes/radiators throughout the building would be the counterpoise to the hot-wire ... not at all intended as a ground. I'm poised to do this rather quickly, minus the bandpass filter, which I need to order from HRO or AES.

So maybe I will try this out... Any last words about safety? Not blowing up the furnace room and heating oil tank? ;-)

By the way, off topic, but can anyone please get me a good e-mail address for HRO? All the e-mail addresses on their web site are inoperable. Go figure. ;-)

Thanks!
Rich
(Please don't reply via e-mail ... dead address)

2581. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 09:21:58 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <n+9ly6J20GsAFAMy@ifwtech.co.uk>
Source record: 94836

Reg Edwards wrote:
>
>Reflected power is a mere fiction.

Fiction may not be the right word, but reflected power is certainly a *useless* thing to calculate.

>Power which is not radiated from an antenna never actually arrives
>there. In fact it never leaves the transmitter.
>
Agreed.

After the first microsecond the transmitter is operating into a steady-state load impedance. The only *useful* question then is: "Given that particular value of load impedance, how much power can my transmitter generate?" But that isn't an antenna/transmission-line problem at all - the answer lies in the transmitter, and *only* the transmitter.

As far as the transmitter is concerned, it doesn't matter how that particular value of load impedance was created. There are several ways to create a specified value of (R +/-jX), and whichever way it's done, the transmitter will deliver exactly the power.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

2582. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 11:03:29 UTC
From: Dave <noone@nowhere.com>
Message-ID: <-e-dnecv786bGC3dRVn-vA@crocker.com>
Source record: 94837

ok, bonzo, i'll bite on the troll bait. but only because its early in the morning and the normal endless discussion of this stuff hasn't taken over yet.

"Lord Snooty" <bonzo@dog.com> wrote in message news:aFZrc.6955$be.4189@newsread2.news.pas.earthlink.net...
> There has been some discussion in the past months about conjugate matching,
> VSWR, and power transfer from source to load.
> I've come across a puzzle while noodling on this.
> My main issue here is how the heck my VSWR meter is measuring the way it is.
>
> My elementary hook-up is an RF power amp feeding directly into a VSWR meter,
> and from there into a load consisting of a carbon resistor and a variable
> capacitor rigged in series. The meter connects to the load via about a foot of
> 50 ohm coax. The frequency is between 1 and 10 MHz.
> Model the source impedance as Zs = R + jX, and the load impedance as Zl = r +
> jx (or use phasors if you prefer :).
> The following two statements are true:
> 1) The power dissipated in the load (r) is maximised when x = -X (so-called
> "conjugate matching"), whatever the value of (r).

wrong. you must transform the R+jX along the transmission line to get back to the load seen by the source. you stipulate a low frequency and short line, so you are close anyway.

> 2) The classical VSWR is minimised (zero "reflected power") when x = +X,
> whatever the value of (r).

doubly wrong. vswr is on a cable and is independent of the source. it knows nothing of R+jX only the characteristic impedance of the cable. all following calculations are wrong for this reason alone.

>
> However, my VSWR meter, whch is a conventional 2-diode bridge and short
> transmission line, indicates that minimum indicated VSWR
> corresponds to max power dissipated in (r).!! (i.e. at conjugate match, and
> NOT when reflected power is zero).
>
> The equation normally used for VSWR is

> VSWR = ABS((1 + |p|) / (1 - |p|))
> where
> p = (Zl - Zs) / (Zl + Zs)

wrong again, the impedance used must be that of the cable not of the source.
its not worth commenting further until you understand this.

> and p is a measure of the amount of power reflected back to the source,
called
> the "voltage reflection coefficient"
>
> I plotted something I call "conjugate VSWR" or VSWR*. which is the same
> expression as above, but with p defined as
> p = (Zl - Zs*) / (Zl + Zs)
> where Zs* indicates the complex conjugate of Zs.
> and the behaviour of this VSWR* thingie absolutely matches what I see on
my
> meter. Aye, there's the rub.
>
> Some points to note
> a) Classical VSWR shows NO minimum for all r, when x has the opposite sign
to
> X
> b) VSWR* always has a minimum at the same r-value which causes maximum
power
> to be dissipated in r, whatever the value of x.
>
> Again, I flat don't understand how my VSWR meter can indicate VSWR* when I
> know it should indicate VSWR.
>
> Here are a couple of links to flesh out the theory.
>
> 1. Wade through this at your peril - it's you lot fighting abou this issue
and
> is VERY long
>
http://www.ibiblio.org/pub/academic/agriculture/agronomy/ham/ANTENNAS/20030831.ant
>
> 2. This is much more succint - cut to the chase on p47
>
http://my.ece.ucsb.edu/yorklab/Useful%20Stuff/Tutorials/RFPower_Meas%20AN64-1B.pdf
>
> Best,
> Andrew
>
>

2583. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 11:07:28 UTC
From: Dave <noone@nowhere.com>
Message-ID: <PMGdnbvsaYpoGC3d4p2dnA@crocker.com>
Source record: 94838

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c8peg8$5ft$1@titan.btinternet.com...

> Reflected power is a mere fiction. Power which is not radiated from an
> antenna never actually arrives there. In fact it never leaves the
> transmitter.

but, but, but, i can SEE reflected power! it shows on my TDR, i can see
ghosts in video from it, i can measure it, i can catch it in a circulator!
how can it be fiction?!?!?!

2584. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 11:49:24 UTC
From: fractenna@aol.com
Message-ID: <20040523074924.13355.00000986@mb-m06.aol.com>
Source record: 94839

>Chip, how did we digress to comparing a "high B&W" to a "low dipole"? When
>the two are each at their optimal height (and why would we ever compare
>anything else..) then the dipole has it all over a B&W. I use my (amost 1/2
>wave height) dipole only for DX, without a tuner on it's two resonant
>frequencies and with a tuner on two bands well above, with amazing results.
>5, 8, 11 and 15 mhz to Alaska, Equador, Venezuela and Canadian Maritimes, if
>that qualifies as "DX".
>
>73
>
>Jack Painter
>Virginia Beach, Va
>

Hi Jack,

It seems relevant to me in two big contexts: (1) why do some folks do well (relatively) with the BW antenna; (2) what does it replace?

My response clearly explains (1). In the case of (2), I can think of many circumstances where it is preferable to put one dipole (BW) up high than a slew of dipoles up high. If you have neighbors, you know what I mean:-)

Don't know what DX is to me anymore; I have DXCC #1 Honor Roll and haven't been active on the low bands in several years. To someone else, DX is what you haven't heard or worked yet:-) I say go for it.

Some folks don't live in a perfect world, Jack, and its good to know when a compromise is a true degradation.

A BW antenna, up high, is a good antenna for DX across many bands. It is hardly a dummy load.

Hope this helps on this question.

73,
Chip N1IR

2585. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 12:03:30 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <8l41b0lr5am3ppj0b24tf958vmgpmun35a@4ax.com>
Source record: 94840

On Sat, 22 May 2004 17:25:34 -0700, "CW" <clinton.magers@comcast.net>
wrote:

>I don't recall anyone in this thread claiming that Gore had said that he
>invented the internet. Where did that come from?

It came from you, sir:

No, he just claimed he did.
"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
> Gore didn't invent the Internet, >

Bob
k5qwg

2586. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 12:28:29 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hbjn4Fat6oaU1@uni-berlin.de>
Source record: 94841

Reg:

Consider a signal generator connected through a circulator to the input of a slotted line. The circulator provides a constant impedance to the signal generator no matter what impedance is connected to the output port of the circulator. Now, if your quote below is true, please explain the standing wave pattern measured via the slotted line probe whenever the slotted line itself is terminated in other than its characteristic impedance.

Also ponder this scenario. A transmitter is adjusted to deliver the maximum output power of which it is capable (limited by its power supply) into a 50 ohm transmission line several wavelengths long, terminated in a 50 ohm antenna. The transmission line is just barely rated to handle the power delivered by the transmitter under these conditions.

Now something fails within the antenna, and its input Z rises to 2000 ohms. If the transmitter has no protective circuits to shut it down, it will continue to generate power, and the transmission line will arc/burn. Of course, so might the tx output circuits, but let's say they are "very robust," and the tx continues to operate.

What is the source of the additional power causing the line failure? The tx already was delivering all the power it could before the failure, so it isn't coming from there.

RF

Visit http://rfry.org for FM broadcast RF system papers.

"Reg Edwards" wrote
> Reflected power is a mere fiction. Power which is not radiated
> from an antenna never actually arrives there. In fact it never
> leaves the transmitter.

2587. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 12:32:24 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <pXW2IMQYnJsAFAe8@ifwtech.co.uk>
Source record: 94842

Dave wrote:
>
>"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
>news:c8peg8$5ft$1@titan.btinternet.com...
>
>> Reflected power is a mere fiction. Power which is not radiated from an
>> antenna never actually arrives there. In fact it never leaves the
>> transmitter.
>
>but, but, but, i can SEE reflected power! it shows on my TDR, i can see
>ghosts in video from it, i can measure it, i can catch it in a circulator!
>how can it be fiction?!?!?!

You aren't being literal-minded enough. When you claim to "see" and
"measure" reflected power, you're applying theories that assume it
exists. You are not proving that it does exist.

What shows on your TDR, as ghosts on your TV, and also on a slotted
line, is the interaction between forward and reflected voltage waves.
Likewise a circulator (or a directional coupler) processes the voltage
and current waves. I've yet to see a fully detailed functional
explanation of any of those devices in terms of power waves alone.

That is because "forward and reflected power waves" is a derivative
concept. It depends on concepts of voltage and current waves for its
existence; but it doesn't add anything useful that we didn't already
know.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

2588. Re: G5RVh COAX feeder lengths dilemma ? Help please

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 12:56:56 UTC
From: pw342@hotmail.com
Message-ID: <5f7b361.0405230456.575d16fb@posting.google.com>
Source record: 94843

Modeling of the G5RV shows that the best length for the Coax section
is 0 feet!
The reason is that the coax section only creates loss, depending on
the SWR at the frequency of operation. Some frequencies have higher
SWR than others.

I provide a sample G%RV antenna file with Coax definition in the demo
version of Nec2go. It is very easy to Sweep the coax length and see
the losses.

Pat W.

2589. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 13:08:13 UTC
From: Dave <noone@nowhere.com>
Message-ID: <FMudnVxwnq_fPy3dRVn-ig@crocker.com>
Source record: 94844

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:pXW2IMQYnJsAFAe8@ifwtech.co.uk...
> Dave wrote:
> >
> >"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> >news:c8peg8$5ft$1@titan.btinternet.com...
> >
> >> Reflected power is a mere fiction. Power which is not radiated from an
> >> antenna never actually arrives there. In fact it never leaves the
> >> transmitter.
> >
> >but, but, but, i can SEE reflected power! it shows on my TDR, i can see
> >ghosts in video from it, i can measure it, i can catch it in a
circulator!
> >how can it be fiction?!?!?!
>
> You aren't being literal-minded enough. When you claim to "see" and
> "measure" reflected power, you're applying theories that assume it
> exists. You are not proving that it does exist.
>
> What shows on your TDR, as ghosts on your TV, and also on a slotted
> line, is the interaction between forward and reflected voltage waves.
> Likewise a circulator (or a directional coupler) processes the voltage
> and current waves. I've yet to see a fully detailed functional
> explanation of any of those devices in terms of power waves alone.
>
> That is because "forward and reflected power waves" is a derivative
> concept. It depends on concepts of voltage and current waves for its
> existence; but it doesn't add anything useful that we didn't already
> know.

i know that, i was just trying to get in all the bogus arguments before
anyone else did. 'power waves' are a concept invented to simplify some
concepts, but instead they just hide the important details. we have been
over and over that on here in the past and always end up in the same place,
i was just hoping to skip right to the end.

2590. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 13:10:42 UTC
From: Dave <noone@nowhere.com>
Message-ID: <rJCdnVsNevtKPy3d4p2dnA@crocker.com>
Source record: 94845

"Dave" <noone@nowhere.com> wrote in message
news:FMudnVxwnq_fPy3dRVn-ig@crocker.com...
>
> "Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
> news:pXW2IMQYnJsAFAe8@ifwtech.co.uk...
> > Dave wrote:
> > >
> > >"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> > >news:c8peg8$5ft$1@titan.btinternet.com...
> > >
> > >> Reflected power is a mere fiction. Power which is not radiated from
an
> > >> antenna never actually arrives there. In fact it never leaves the
> > >> transmitter.
> > >
> > >but, but, but, i can SEE reflected power! it shows on my TDR, i can
see
> > >ghosts in video from it, i can measure it, i can catch it in a
> circulator!
> > >how can it be fiction?!?!?!
> >
> > You aren't being literal-minded enough. When you claim to "see" and
> > "measure" reflected power, you're applying theories that assume it
> > exists. You are not proving that it does exist.
> >
> > What shows on your TDR, as ghosts on your TV, and also on a slotted
> > line, is the interaction between forward and reflected voltage waves.
> > Likewise a circulator (or a directional coupler) processes the voltage
> > and current waves. I've yet to see a fully detailed functional
> > explanation of any of those devices in terms of power waves alone.
> >
> > That is because "forward and reflected power waves" is a derivative
> > concept. It depends on concepts of voltage and current waves for its
> > existence; but it doesn't add anything useful that we didn't already
> > know.
>
> i know that, i was just trying to get in all the bogus arguments before
> anyone else did. 'power waves' are a concept invented to simplify some
> concepts, but instead they just hide the important details. we have been
> over and over that on here in the past and always end up in the same
place,
> i was just hoping to skip right to the end.
>
>

maybe if i had learned to use smileys it would have helped.... what is the sarcastic one?? something like ;-^ or something like that??

2591. Re: G5RVh COAX feeder lengths dilemma ? Help please

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 13:18:46 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B0A4B6.B54F8150@cwis.net>
Source record: 94846

Jim,
Sorry, but the length of the coax is important. You
have another option (per the instructions), add another
12 feet to the 77 feet you already have.
The length of coax is specified for a purpose, it makes
up part of a circuit which does impedance transformation, and
if you change the 'value' of a circuit's component, you
're-tune' the circuit. The length is fairly critical. Maybe
not to the 'milimeter' level of accuracy, but certainly to the
'foot' level...
'Doc

PS - Are you sure the instructions said 45 feet or 90 feet?

2592. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 13:21:21 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <lz1sc.2208$jq7.1749@newssvr22.news.prodigy.com>
Source record: 94847

If this old mind recalls correctly a TV station with an undesireable SWR
will not transmit a clear image to its viewers because the delayed
re-reflection arrives at the TV set later and casues a ghost or smear.
Could you please explain the "Reflected power is a mere fiction." and the
smear or ghost?

tnx
Hank WD5JFR
"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c8peg8$5ft$1@titan.btinternet.com...
>
> "Richard Clark" wrote:
> > What you describe as reflection and re-reflection occurs between the
> > mismatched antenna and the tuner that has been adjusted to minimize
> > power returned to the transmitter. The sole function of the tuner is
> > to keep this power from being dissipated by the transmitter (common
> > experience of arcing, denoting a voltage reflection, or thermal
> > runaway, denoting a current reflection). The "virtual" reflection
> > (offered by the tuner) is generally know as the complex conjugate of
> > the remote load, seen at the near end of the line through which it is
> > returning. This means that the line transforms the phase and
> > amplitude of the reflection, and the tuner's job is to invert that
> > relationship to counteract it, and return it to the antenna.
> >
> > There are both wave descriptions of this process, and lumped circuit
> > equivalents. Both work, and both describe the same process from
> > different points of view. One does not negate the other's validity
> > (unless, of course, you attempt to mix the points of view and demand
> > consistency in terms - a frequent rhetorical trap here).
> >
> > There will no doubt be a flurry of denials to this simple example with
> > contortions of logic to match. As for the math, you will find it by
> > the reams, once you've been overwhelmed with the arcana of hyperbolic
> > descriptions of a novel physics that have to proceed its proof.
> >
> > Keep your eye on how your literal points in your question go abandoned
> > with these arcane theories.
> >
> > 73's
> > Richard Clark, KB7QHC
> ==================================
>
> Dear Richard, you are confusing the matter even further, if that were
> possible.

>
> The only saving grace about your tedius message is that you yourself
> eventually realise what a load of overcomplicated nonsense it is.
>
> Reflected power is a mere fiction. Power which is not radiated from an
> antenna never actually arrives there. In fact it never leaves the
> transmitter.
>
> All the power which leaves the transmiter is radiated except for that
which
> is lost in the line. It has nowhere else to go!
>
> But for the existence of so-called SWR meters, the words 'forward and
> reflected power' would never enter people's vocabularies. For the few who
> become involved with such matters, the misleading fiction also appears in
> the language of mathematics.
>
> Names have to be invented in order to discuss mathematical equations in
> plain English. But there's no reason why they should be propagated, just
to
> confuse, into the real World.
>
> The sole purpose of an SWR meter is to indicate whether or not the
> transmitter is loaded with 50 ohms.
> ----
> Reg, G4FGQ
>
>

2593. Re: Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 13:34:01 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B0A849.BAF5CCC0@cwis.net>
Source record: 94848

Rich,
How ever you think of it, the 'steam' pipes are
going to be part of your antenna 'system', they
will have RF on them. Filters may 'help', but they
won't remove the RF from the pipes, and the possibility
for RFI is still going tobe there.
Especially at 100 watts, I seriously doubt if you
have to worry about 'blowing up' the boiler room. I
would be more worried about irrate neighbors...
'Doc

PS - Give it a try. If there are complaints, stop!

2594. Re: G5RVh COAX feeder lengths dilemma ? Help please

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 13:44:06 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <rKGdnXUKDKnBNi3dRVn-uw@ctc.net>
Source record: 94849

"PatW" <pw342@hotmail.com> wrote in message
news:5f7b361.0405230456.575d16fb@posting.google.com...
> Modeling of the G5RV shows that the best length for the Coax section
> is 0 feet!
> The reason is that the coax section only creates loss, depending on
> the SWR at the frequency of operation. Some frequencies have higher
> SWR than others.

That is probably the case in all antennas. Just one slight problem. HOw does the average ham set up a station for the low bands without any feedline ? With some of the remote heads like the Icom 706 I guess that you could mount the rig at the feed point and remote it. Still not too practical for most .

The G5RV was designed to allow a reasonable match on some bnads if fed with a specific ammount of feedline. YOu pick up losses but the SWR will be low into a 50 ohm system. Did you modle the impedance of the G5RV without any feedline ?

2595. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 13:59:36 UTC
From: dada <sman1@stny.rr.com>
Message-ID: <40B0B0B8.78C28AA8@stny.rr.com>
Source record: 94850

J999w wrote:

> 4x4's?
>
> Man, if you guy that thing, you could probably put a tribander on it !
>
> :^]
>
> jw
> K9RZZ

Yeah... that's the kicker. I don't want to guy it.

Guy supportsa get in the way of stuff like moving the lawn, and I'd have
to situate the mast in a different location than I would want.

Thanks for the ideas.
73 joe
WB2JQT

2596. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 14:17:51 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8qbqf$jq6$1@hercules.btinternet.com>
Source record: 94851

Andrew,

Conjugate matching may be a very interesting subject and is indeed a much discussed topic on these walls.

However, amongst the amateur fraternity, a "conjugate match" should be classified as being off topic. It does not exist. Not even when the tuner has been adjusted exactly for a VSWR equal to 1 to 1.

Why?

Because the internal impedance of the transmitter is not 50 ohms. It is not relevant.

What is the internal impedance of YOUR transmitter? You will not find it mentioned in the manufacturer's operating or maintenance handbooks. In all likelihood you will not know what it is even if you designed and built the transmitter yourself!

Reg, G4FGQ

2597. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 14:20:28 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0b406_1@corp.newsgroups.com>
Source record: 94852

Henry Kolesnik wrote:

> I know that any power not dissipated by an antenna is reflected back to the
> transmitter. Then the transmitter "reflects" this reflection back to
> antenna, ad nauseum until its all gone. I also know that a short or an open
> is required to reflect power and I'm searching for which it is, an open or a
> short. I'm inclined to think it's a virtual open but I'm at a loss to
> understand that and I wonder if someone has a good explanation or analogy
> and some math wouldn't hurt.

Hank, EM reflections are covered on this web page.

http://www.mellesgriot.com/products/optics/oc_2_1.htm

In particular: "Clearly, if the wavelength of the incident light and the thickness of the film are such that a phase difference exists between reflections of p, then reflected wavefronts interfere destructively, and overall reflected intensity is a minimum. If the two reflections are of equal amplitude, then this amplitude (and hence intensity) minimum will be zero."

"In the absence of absorption or scatter, the principle of conservation of energy indicates all "lost" reflected intensity will appear as enhanced intensity in the transmitted beam. The sum of the reflected and transmitted beam intensities is always equal to the incident intensity. This important fact has been confirmed experimentally."

In order for (rearward-traveling) "reflected intensity" to "appear as (forward-traveling) enhanced intensity in the transmitted beam", the momentum of that (rearward-traveling) intensity must change directions. Thus, it appears that total destructive interference between two rearward-traveling reflected waves in a transmission line will reverse the direction of momentum of the energy in those canceled reflected waves.

We need to change a few of your statements:

Any power not dissipated or radiated by an antenna is reflected back. "Dissipation" means EM energy transformed into heat, according to the IEEE Dictionary.

The transmitter/tuner end will not re-reflect 100% of the reflected energy unless there exists a short, open, pure reactance, or "total destructive interference" as explained in _Optics_, by Hecht.

Besides a short or an open, a purely reactive impedance will cause 100% energy reflection. Apparently, so will "total destructive interference". Quoting from _Microwave_Transmission_, by J. C. Slater:

"The method of eliminating reflections is based on the interference
between waves. ... The fundamental principle behind the elimination
of reflections is then to have each reflected wave canceled by another
wave of equal amplitude and opposite phase."

That's pretty clear. We get one set of rearward-traveling reflections
at the match point. We get another set of rearward-traveling reflections
at the antenna. If these two sets of reflections are equal in magnitude
and opposite in phase at the match point, they cancel each other and the
rearward-traveling momentum energy in those two waves is conserved by
changing direction to become part of a forward-traveling wave.
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2598. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 14:25:28 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <9eadnb3u9ePSKS3dRVn-hw@comcast.com>
Source record: 94853

"Dave" <noone@nowhere.com> wrote in message
news:PMGdnbvsaYpoGC3d4p2dnA@crocker.com...
>
> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> news:c8peg8$5ft$1@titan.btinternet.com...
>
> > Reflected power is a mere fiction. Power which is not radiated from an
> > antenna never actually arrives there. In fact it never leaves the
> > transmitter.
>
> but, but, but, i can SEE reflected power! it shows on my TDR, i can see
> ghosts in video from it, i can measure it, i can catch it in a circulator!
> how can it be fiction?!?!?!
>
>
Clearly there is reflected power. Just don't take the SWR meter too
literally. It does not actually measure power, but the scale has been fudged
so it indicates the correct power if the load is equal to some design value.
I can see a long thread here.

Tam/WB2TT

2599. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 14:29:05 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <gJudnTVls_G1KC3dRVn-ig@comcast.com>
Source record: 94854

From the previous posting, I can guess who is going to jump all over this.
Keep up the good work.

Tam
"Dave" <noone@nowhere.com> wrote in message
news:-e-dnecv786bGC3dRVn-vA@crocker.com...
> ok, bonzo, i'll bite on the troll bait. but only because its early in the
> morning and the normal endless discussion of this stuff hasn't taken over
> yet.
>
> "Lord Snooty" <bonzo@dog.com> wrote in message
> news:aFZrc.6955$be.4189@newsread2.news.pas.earthlink.net...
> > There has been some discussion in the past months about conjugate
> matching,
> > VSWR, and power transfer from source to load.
> > I've come across a puzzle while noodling on this.
> > My main issue here is how the heck my VSWR meter is measuring the way it
> is.
> >
> > My elementary hook-up is an RF power amp feeding directly into a VSWR
> meter,
> > and from there into a load consisting of a carbon resistor and a
variable
> > capacitor rigged in series. The meter connects to the load via about a
> foot of
> > 50 ohm coax. The frequency is between 1 and 10 MHz.
> > Model the source impedance as Zs = R + jX, and the load impedance as Zl
=
> r +
> > jx (or use phasors if you prefer :).
> > The following two statements are true:
> > 1) The power dissipated in the load (r) is maximised when x = -X
> (so-called
> > "conjugate matching"), whatever the value of (r).
>
> wrong. you must transform the R+jX along the transmission line to get
back
> to the load seen by the source. you stipulate a low frequency and short
> line, so you are close anyway.
>
> > 2) The classical VSWR is minimised (zero "reflected power") when x = +X,
> > whatever the value of (r).
>
> doubly wrong. vswr is on a cable and is independent of the source. it

> knows nothing of R+jX only the characteristic impedance of the cable. all
> following calculations are wrong for this reason alone.
>
> >
> > However, my VSWR meter, whch is a conventional 2-diode bridge and short
> > transmission line, indicates that minimum indicated VSWR
> > corresponds to max power dissipated in (r).!! (i.e. at conjugate match,
> and
> > NOT when reflected power is zero).
> >
> > The equation normally used for VSWR is
> > VSWR = ABS((1 + |p|) / (1 - |p|))
> > where
> > p = (Zl - Zs) / (Zl + Zs)
>
> wrong again, the impedance used must be that of the cable not of the
source.
> its not worth commenting further until you understand this.
>
> > and p is a measure of the amount of power reflected back to the source,
> called
> > the "voltage reflection coefficient"
> >
> > I plotted something I call "conjugate VSWR" or VSWR*. which is the same
> > expression as above, but with p defined as
> > p = (Zl - Zs*) / (Zl + Zs)
> > where Zs* indicates the complex conjugate of Zs.
> > and the behaviour of this VSWR* thingie absolutely matches what I see on
> my
> > meter. Aye, there's the rub.
> >
> > Some points to note
> > a) Classical VSWR shows NO minimum for all r, when x has the opposite
sign
> to
> > X
> > b) VSWR* always has a minimum at the same r-value which causes maximum
> power
> > to be dissipated in r, whatever the value of x.
> >
> > Again, I flat don't understand how my VSWR meter can indicate VSWR* when
I
> > know it should indicate VSWR.
> >
> > Here are a couple of links to flesh out the theory.
> >
> > 1. Wade through this at your peril - it's you lot fighting abou this
issue
> and
> > is VERY long

> >
>
http://www.ibiblio.org/pub/academic/agriculture/agronomy/ham/ANTENNAS/20030831.ant
> >
> > 2. This is much more succint - cut to the chase on p47
> >
>
http://my.ece.ucsb.edu/yorklab/Useful%20Stuff/Tutorials/RFPower_Meas%20AN64-1B.pdf
> >
> > Best,
> > Andrew
> >
> >
>
>

2600. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:06:15 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0bec1_8@corp.newsgroups.com>
Source record: 94855

Richard Clark wrote:
> As for the math, you will find it by
> the reams, once you've been overwhelmed with the arcana of hyperbolic
> descriptions of a novel physics that have to proceed its proof.

A scattering parameter analysis, described in HP Application Note
95-1 (available on the web) is ideal for analyzing what happens
at a match point in a typical ham radio antenna system.

b1 = s11(a1) + s12(a2)

b2 = s21(a1) + s22(a2)

b1 is the net forward voltage, b2 is the net reflected voltage
a1 is the incident forward voltage, a2 is the incident reflected voltage

Quoting from HP AN 95-1: Another advantage of s-parameters springs
from the simple relationship between the variables a1, a2, b1, and
b2, and various power waves:

|a1|^2 = Power incident on the input of the network.
(forward power incident on the match point)

|a2|^2 = Power reflected from the load.

|b1|^2 = Power reflected from the input port of the network.
(power reflected from the match point back toward the source)

|b2|^2 = Power incident on the load.

The previous four equations show that s-parameters are simply
related to power gain and mismatch loss, quantities which are
often of more interest than the corresponding voltage functions.

|s11|^2 = Power reflected from the network input divided by
power incident on the network input

|s22|^2 = Power reflected from the network output divided by
power incident on the network output

|s21|^2 = Power delivered to a Z0 load divided by power available
from a Z0 source

|s12|^2 = Reverse transducer power gain with Z0 load and source

End quote.

b2 is the voltage reflected back toward the source and

b2 = s21(a1) + s22(a2)

It should be obvious that b2 cannot be zero unless there exists
total destructive interference between s21(a1) and s22(a2), i.e.
s21(a1) is equal in magnitude and opposite in phase to s22(a2).
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2601. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:14:41 UTC
From: Keyboard In The Noise <KITN@cat.net>
Message-ID: <Bd3sc.14048$wa.2175@fed1read07>
Source record: 94856

Golly Gee -- what happened to the great R7 radial debate ??? (:-(

Not one single reply to the excellent post below -- guess it did end the argument (:-)

Thanks for the post Tom

"Tom Ring" <tarnews@taring.org> wrote in message
> Ok, I spoke to the designer this evening, and I'll pass on what I
> learned. He was speaking fast, as he normally does, so I'm sure I
> missed a lot. Roy can confirm that, and Roy can confirm that he handed
> over another copy of his software to him just last week.
>
> Per the designer
>
> The R7 was built because he needed a multiband antenna in the fall of
> 90. The R5 was used as the base idea for the design. He worked on it
> over late fall and winter 90/91. The antenna project was up and down 2
> to 3 times a day at times.
>
> The owner of Cushcraft heard of the backyard project in spring 1991, and
> "asked" that it be brought to work. Tomorrow at the latest.
>
> The antenna is not a half wave antenna, it is about a 3/8 wave antenna.
> The impedance is approximately 250 ohms, and a roughly 4.5 to 1
> transform is done. There is a series cap of 41 pF for 40m.
>
> There are 7 radials of 49 inches, because Cushcraft had tons of 49 inch
> 5/8 whips for 2m. The R5 had 4, this needed more.
>
> There is a false resonance on 75m or 80m, and if you put power into it
> at that freq, you will burn up the matching system.
>
> And, to end this argument, do not ever add radials to the system, and do
> not remove any of the ones it comes with. It's a touchy match.
>
> tom
> K0TAR
>
>

2602. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:20:37 UTC
From: Dave <noone@nowhere.com>
Message-ID: <3q6dneezQc3XXC3d4p2dnA@crocker.com>
Source record: 94857

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:9eadnb3u9ePSKS3dRVn-hw@comcast.com...
> Clearly there is reflected power. Just don't take the SWR meter too
> literally. It does not actually measure power, but the scale has been
fudged
> so it indicates the correct power if the load is equal to some design
value.
> I can see a long thread here.

see my last replies to this thread... i'm done... cecil and reg are back and
will undoubtedly re-hash optical methods and conjugate matches till the
server dies... as for me, this thread is now over.

2603. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:22:10 UTC
From: Dave <noone@nowhere.com>
Message-ID: <SNydnX8mSKo6XC3dRVn-jw@crocker.com>
Source record: 94858

nope, all done. reg is here and cecil can't be far behind. i've had my
fun, time to do other more productive things than watch them re-hash
conjugal matches for the next month or two.

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:gJudnTVls_G1KC3dRVn-ig@comcast.com...
> From the previous posting, I can guess who is going to jump all over this.
> Keep up the good work.
>
> Tam
> "Dave" <noone@nowhere.com> wrote in message
> news:-e-dnecv786bGC3dRVn-vA@crocker.com...
> > ok, bonzo, i'll bite on the troll bait. but only because its early in
the
> > morning and the normal endless discussion of this stuff hasn't taken
over
> > yet.
> >
> > "Lord Snooty" <bonzo@dog.com> wrote in message
> > news:aFZrc.6955$be.4189@newsread2.news.pas.earthlink.net...
> > > There has been some discussion in the past months about conjugate
> > matching,
> > > VSWR, and power transfer from source to load.
> > > I've come across a puzzle while noodling on this.
> > > My main issue here is how the heck my VSWR meter is measuring the way
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> > is.
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> > > My elementary hook-up is an RF power amp feeding directly into a VSWR
> > meter,
> > > and from there into a load consisting of a carbon resistor and a
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> > > capacitor rigged in series. The meter connects to the load via about a
> > foot of
> > > 50 ohm coax. The frequency is between 1 and 10 MHz.
> > > Model the source impedance as Zs = R + jX, and the load impedance as
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> =
> > r +
> > > jx (or use phasors if you prefer :).
> > > The following two statements are true:
> > > 1) The power dissipated in the load (r) is maximised when x = -X
> > (so-called
> > > "conjugate matching"), whatever the value of (r).

> >
> > wrong. you must transform the R+jX along the transmission line to get
> back
> > to the load seen by the source. you stipulate a low frequency and short
> > line, so you are close anyway.
> >
> > > 2) The classical VSWR is minimised (zero "reflected power") when x =
+X,
> > > whatever the value of (r).
> >
> > doubly wrong. vswr is on a cable and is independent of the source. it
> > knows nothing of R+jX only the characteristic impedance of the cable.
all
> > following calculations are wrong for this reason alone.
> >
> > >
> > > However, my VSWR meter, whch is a conventional 2-diode bridge and
short
> > > transmission line, indicates that minimum indicated VSWR
> > > corresponds to max power dissipated in (r).!! (i.e. at conjugate
match,
> > and
> > > NOT when reflected power is zero).
> > >
> > > The equation normally used for VSWR is
> > > VSWR = ABS((1 + |p|) / (1 - |p|))
> > > where
> > > p = (Zl - Zs) / (Zl + Zs)
> >
> > wrong again, the impedance used must be that of the cable not of the
> source.
> > its not worth commenting further until you understand this.
> >
> > > and p is a measure of the amount of power reflected back to the
source,
> > called
> > > the "voltage reflection coefficient"
> > >
> > > I plotted something I call "conjugate VSWR" or VSWR*. which is the
same
> > > expression as above, but with p defined as
> > > p = (Zl - Zs*) / (Zl + Zs)
> > > where Zs* indicates the complex conjugate of Zs.
> > > and the behaviour of this VSWR* thingie absolutely matches what I see
on
> > my
> > > meter. Aye, there's the rub.
> > >
> > > Some points to note
> > > a) Classical VSWR shows NO minimum for all r, when x has the opposite

> sign
> > to
> > > X
> > > b) VSWR* always has a minimum at the same r-value which causes maximum
> > power
> > > to be dissipated in r, whatever the value of x.
> > >
> > > Again, I flat don't understand how my VSWR meter can indicate VSWR*
when
> I
> > > know it should indicate VSWR.
> > >
> > > Here are a couple of links to flesh out the theory.
> > >
> > > 1. Wade through this at your peril - it's you lot fighting abou this
> issue
> > and
> > > is VERY long
> > >
> >
>
http://www.ibiblio.org/pub/academic/agriculture/agronomy/ham/ANTENNAS/20030831.ant
> > >
> > > 2. This is much more succint - cut to the chase on p47
> > >
> >
>
http://my.ece.ucsb.edu/yorklab/Useful%20Stuff/Tutorials/RFPower_Meas%20AN64-1B.pdf
> > >
> > > Best,
> > > Andrew
> > >
> > >
> >
> >
>
>

2604. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:23:49 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0c2e0_8@corp.newsgroups.com>
Source record: 94859

Reg Edwards wrote:
> Reflected power is a mere fiction. Power which is not radiated from an
> antenna never actually arrives there. In fact it never leaves the
> transmitter.

Therefore, radar cannot work since it relies upon reflected
joules/second. Mirrors also cannot work since there is an ExB
amount of power in those reflections.

Reg, for a 291.5 ohm antenna to accept 100 watts requires the forward
power to the antenna to be 200 watts. 100 watts is accepted by the
antenna and 100 watts is rejected by the antenna. 200 watts to the
antenna is routinely accomplished by a 100 watt ham transmitter and
a Z0-match provided by a tuner.

This is exactly like a partially silvered mirror that reflects half
the irradiance and allows half the irradiance through.

Assume a one second long lossless unterminated transmission line.
Pour 1000 watts into it for one second. During the next second, we
disconnect the line from the source and you grab the two wires, one
in each hand. Then tell us whether reflected power exists or not.
--
73, Cecil http://www.qsl.net/w5dxp

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2605. Re: Dipole/Balun? Commercially Produced Alternative?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:27:03 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0c3a0$1_8@corp.newsgroups.com>
Source record: 94860

Rich wrote:

> I should have been more precise in my estimating (I know ... doesn't
> make sense). I actually have 59' to play with. Dohhht!
>
> Cecil, any chance you can take one more look-see for me with EZNEC?
> How well do you think it will radiate on all the bands?

Since an analysis of a 51 ft. G5RV-shorty would be interesting
to the group, I will do that, hopefully today.
--
73, Cecil http://www.qsl.net/w5dxp

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2606. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:31:47 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <vi4nl3SjPMsAFAMC@ifwtech.co.uk>
Source record: 94861

Dave wrote:
>> > That is because "forward and reflected power waves" is a derivative
>> > concept. It depends on concepts of voltage and current waves for its
>> > existence; but it doesn't add anything useful that we didn't already
>> > know.
>>
>> i know that, i was just trying to get in all the bogus arguments before
>> anyone else did.

Oh... in that case: "Well done - a noble effort, sir!"

(You forgot to mention the slotted line, which mercifully saved you from
a perfect score :-)

>> 'power waves' are a concept invented to simplify some
>> concepts, but instead they just hide the important details. we have been
>> over and over that on here in the past and always end up in the same
>place,
>> i was just hoping to skip right to the end.
>>

What, in this newsgroup?

>>
>maybe if i had learned to use smileys it would have helped.... what is
>the sarcastic one?? something like ;-^ or something like that??

Sorry I missed the deliberate irony on your part, Dave, but the same
things have often been said here in total seriousness. And here we go
again...

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

2607. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:33:27 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0c521_8@corp.newsgroups.com>
Source record: 94862

Ian White, G3SEK wrote:
> After the first microsecond the transmitter is operating into a
> steady-state load impedance. The only *useful* question then is: "Given
> that particular value of load impedance, how much power can my
> transmitter generate?" But that isn't an antenna/transmission-line
> problem at all - the answer lies in the transmitter, and *only* the
> transmitter.

Using 200 ft. of unterminated RG-58 on 440 MHz, the transmitter
sees close to 50 ohms and can deliver its full rated power into
the coax with no antenna. Therefore, I seriously doubt that your
question above is the "only *useful* question".
--
73, Cecil http://www.qsl.net/w5dxp

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2608. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:42:30 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <kf2dnYh3OdDDWy3dRVn-hQ@comcast.com>
Source record: 94863

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b0b406_1@corp.newsgroups.com...
> Henry Kolesnik wrote:
>
> > I know that any power not dissipated by an antenna is reflected back to
the
> > transmitter. Then the transmitter "reflects" this reflection back to
> > antenna, ad nauseum until its all gone. I also know that a short or an
open
> > is required to reflect power and I'm searching for which it is, an open
or a
> > short. I'm inclined to think it's a virtual open but I'm at a loss to
> > understand that and I wonder if someone has a good explanation or
analogy
> > and some math wouldn't hurt.
>
> Hank, EM reflections are covered on this web page.
>
> http://www.mellesgriot.com/products/optics/oc_2_1.htm
>
> In particular: "Clearly, if the wavelength of the incident light and the
> thickness of the film are such that a phase difference exists between
> reflections of p, then reflected wavefronts interfere destructively, and
> overall reflected intensity is a minimum. If the two reflections are of
> equal amplitude, then this amplitude (and hence intensity) minimum will
> be zero."
>
> "In the absence of absorption or scatter, the principle of conservation of
> energy indicates all "lost" reflected intensity will appear as enhanced
> intensity in the transmitted beam. The sum of the reflected and
transmitted
> beam intensities is always equal to the incident intensity. This important
> fact has been confirmed experimentally."
>
> In order for (rearward-traveling) "reflected intensity" to "appear as
> (forward-traveling) enhanced intensity in the transmitted beam", the
> momentum of that (rearward-traveling) intensity must change directions.
> Thus, it appears that total destructive interference between two rearward-
> traveling reflected waves in a transmission line will reverse the
direction
> of momentum of the energy in those canceled reflected waves.
>
> We need to change a few of your statements:
>

> Any power not dissipated or radiated by an antenna is reflected back.
> "Dissipation" means EM energy transformed into heat, according to
> the IEEE Dictionary.
>
> The transmitter/tuner end will not re-reflect 100% of the reflected energy
> unless there exists a short, open, pure reactance, or "total destructive
> interference" as explained in _Optics_, by Hecht.
>
> Besides a short or an open, a purely reactive impedance will cause
> 100% energy reflection. Apparently, so will "total destructive
> interference". Quoting from _Microwave_Transmission_, by J. C. Slater:
>
> "The method of eliminating reflections is based on the interference
> between waves. ... The fundamental principle behind the elimination
> of reflections is then to have each reflected wave canceled by another
> wave of equal amplitude and opposite phase."
>
> That's pretty clear. We get one set of rearward-traveling reflections
> at the match point. We get another set of rearward-traveling reflections
> at the antenna. If these two sets of reflections are equal in magnitude
> and opposite in phase at the match point, they cancel each other and the
> rearward-traveling momentum energy in those two waves is conserved by
> changing direction to become part of a forward-traveling wave.
> --
> 73, Cecil http://www.qsl.net/w5dxp
Cecil,

I am not quite sure what you are saying. But, I ran a SPICE simulation of
the following:
1V 1MHz source with resistor R0 feeding a 50 Ohm 250 ns transmission line
shorted at the far end. Independent of R0, in steady state the voltage at
the input end of the transmission line will be 1V. The effect of R0 is to
limit how long it takes to reach steady state. For R0 = 50 Ohms, it is one
cycle; for R0 = 500 Ohms, it is about 8 cycles, as eyeballed off the
waveform display.

2609. Re: G5RVh COAX feeder lengths dilemma ? Help please

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:42:43 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0c75b$1_3@corp.newsgroups.com>
Source record: 94864

PatW wrote:
> Modeling of the G5RV shows that the best length for the Coax section
> is 0 feet!

Depends upon your definition of "best length". If "best
length" is defined as the length that provides the lowest
SWR at the source, zero is not it.
--
73, Cecil http://www.qsl.net/w5dxp

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2610. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 15:56:08 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0ca71$1_2@corp.newsgroups.com>
Source record: 94865

dada wrote:
>
> J999w wrote:
>>Man, if you guy that thing, you could probably put a tribander on it !
>
> Yeah... that's the kicker. I don't want to guy it.

Use two of them at 90 degrees?

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2611. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:18:45 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0cfc0_2@corp.newsgroups.com>
Source record: 94866

Dave wrote:
> nope, all done. reg is here and cecil can't be far behind. i've had my
> fun, time to do other more productive things than watch them re-hash
> conjugal matches for the next month or two.

I guess I need to say this again. My take on discussions of conjugate matching in ham antenna systems is that it is a waste of time. If reflected energy is not allowed to reach the source, e.g. typical ham Z0-matched systems, the source impedance is irrelevant and doesn't affect anything in the system except for efficiency.
--
73, Cecil http://www.qsl.net/w5dxp

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2612. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:27:44 UTC
From: tdonaly@aol.com
Message-ID: <20040523122744.18981.00001787@mb-m13.aol.com>
Source record: 94867

Henry wrote,
>
>I know that any power not dissipated by an antenna is reflected back to the
>transmitter. Then the transmitter "reflects" this reflection back to
>antenna, ad nauseum until its all gone. I also know that a short or an open
>is required to reflect power and I'm searching for which it is, an open or a
>short. I'm inclined to think it's a virtual open but I'm at a loss to
>understand that and I wonder if someone has a good explanation or analogy
>and some math wouldn't hurt.
>tnx
>Hank WD5JFR
>
>

This post is guaranteed to get Cecil revivified. Here's a hint: quit thinking solely in
terms of power, that's for fellows who want to explain how it all works without going into
any of the complicated details. Get an undergraduate physics text that discusses
waves, and read it, or, better yet, take a class. Take all explanations you read in
amateur publications with a grain of salt. After you've done this, you still won't be
able to argue with Cecil, because that requires an extensive knowledge of the moronic,
unfair, and downright pathalogical debating techniques of which Cecil is a master.
But, it will be harder for you to fall for some of the crackpot ideas you're liable to
read on this newsgroup, and it will give you something to think about when sipping
your after-dinner port.

73,
Tom Donaly, KA6RUH

2613. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:34:34 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0d377_5@corp.newsgroups.com>
Source record: 94868

Tam/WB2TT wrote:
> I am not quite sure what you are saying. But, I ran a SPICE simulation of
> the following:
> 1V 1MHz source with resistor R0 feeding a 50 Ohm 250 ns transmission line
> shorted at the far end. Independent of R0, in steady state the voltage at
> the input end of the transmission line will be 1V. The effect of R0 is to
> limit how long it takes to reach steady state. For R0 = 50 Ohms, it is one
> cycle; for R0 = 500 Ohms, it is about 8 cycles, as eyeballed off the
> waveform display.

Does SPICE report the steady-state forward and reflected waves
or just the superposition of those two waves? We all know what
they look like when superposed. The question is whether the
identity of the forward and reflected waves disappear after
they are superposed. To the best of my knowledge, the very
existence of standing waves requires the existence of a forward-
traveling wave and a rearward-traveling wave.

I have asked for examples of standing waves void of rearward-
traveling waves and none has been forthcoming.
--
73, Cecil http://www.qsl.net/w5dxp

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2614. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:39:19 UTC
From: Lord Snooty <bonzo@dog.com>
Message-ID: <Xs4sc.7251$be.80@newsread2.news.pas.earthlink.net>
Source record: 94869

Indeed so, because the whole idea of characterising my SWR meter is towards
the goal of measuring the output impedance of my RF amp!
I agree that it isn't 50 ohms - it's R + jX, and I want a bulletproof
procedure to find R and X. Got one?

Cheers,
Andrew
G3UHD

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c8qbqf$jq6$1@hercules.btinternet.com...
> Andrew,
>
> Conjugate matching may be a very interesting subject and is indeed a much
> discussed topic on these walls.
>
> However, amongst the amateur fraternity, a "conjugate match" should be
> classified as being off topic. It does not exist. Not even when the tuner
> has been adjusted exactly for a VSWR equal to 1 to 1.
>
> Why?
>
> Because the internal impedance of the transmitter is not 50 ohms. It is not
> relevant.
>
> What is the internal impedance of YOUR transmitter? You will not find it
> mentioned in the manufacturer's operating or maintenance handbooks. In all
> likelihood you will not know what it is even if you designed and built the
> transmitter yourself!
> ---
> Reg, G4FGQ
>
>

2615. Re: Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:42:23 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <Pv4sc.56291$V_.2434564@twister.southeast.rr.com>
Source record: 94870

If it is an old apartment, the plumbing might be copper all the way to the ground. In a new one, you might want to check if there is plastic pipe between you and ground.

Good luck,

Bill, W4WNT

"Rich" <rseifertweb@earthlink.net> wrote in message news:75639161.0405220130.5486ee6c@posting.google.com...
> Hi all. I'm sitting here trying to figure out how to get on the air!
> I'm in a big apartment building ... I have these hot water pipes which
> feed radiators on every floor ... I'm on the 11th floor.
>
> I'm thinking that I can throw 100' wire out the window (to radiate)
> and ground to the hot water pipes. Thoughts? Any risk of damage to
> the heating system? I don't know how the water's heated...
>
> Thanks,
> Rich
> (Please don't reply via e-mail ... dead address)

2616. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:42:27 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0d55b_5@corp.newsgroups.com>
Source record: 94771

Tdonaly wrote:
> This post is guaranteed to get Cecil revivified. Here's a hint: quit thinking
> solely in terms of power, that's for fellows who want to explain how it all
> works without going into any of the complicated details.

Like Hewlett Packard in their AN 95-1 publication? "Another advantage
of the s-parameters springs from the simple relationship between the
variables a1, a2, b1, and b2, and *various power waves*. ... The previous
four equations show that s-parameters are simply related to power gain and
mismatch loss, quantities which are often of more interest than the
corresponding voltage functions."
--
73, Cecil http://www.qsl.net/w5dxp

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2617. Re: Antenna Tuner/Coupler Ground ... Hot Water Pipe?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:45:25 UTC
From: dplatt@radagast.org
Message-ID: <10b1l95251tdg4d@corp.supernews.com>
Source record: 94772

In article <75639161.0405230058.620f408a@posting.google.com>,
Rich <rseifertweb@earthlink.net> wrote:

>Hi all. Thanks for your replies. To give you more info, I'm only
>capable of up to 100w. I'm thinking about adding a Bencher 1.8-30 MHz
>Bandpass Filter to my set-up to minimize TV interference (even if I
>use a dipole, ref. my other post, "Re: Dipole/Balun? Commercially
>Produced Alternative?"

This sort of bandpass filter may not help matters much if at all, for
several reasons:

- If you're using a commercially-built transceiver, it almost
certainly meets the FCC's harmonic-suppression filtering rules right
out of the box - it has the necessary low-pass filters built into
its output section. You _might_ get some additional, useful
suppression via an external filter, but I suspect that the benefit
will be rather minor.

- These days, it's more usual for RFI/TVI to be caused by
"fundamental overload". TV sets usually have wideband tuner
circuitry, and they can be overloaded by strong RF signals outside
of the frequency range to which they're currently tuned. The RF
drives their first stage into saturation, and can wipe out
reception of _all_ channels. This cannot be avoided or treated
with a low-pass filter on the transmitter - it requires a high-pass
filter at the TV set's antenna terminals (and, in some cases, a few
ferrites on the power and speaker wires, to keep RF from leaking
into the set through these paths).

- If you're using pipes/radiators/gutters as part of your antenna or
counterpoise, you have to worry to some extent about the
possibility of rectification at metal-to-metal junctions. This can
cause the generation of harmonics (including some in the TV band)
even if your transmitter's output is perfectly clean. Eliminating
this problem requires finding the corroded metal-to-metal junctions
which are acting as rectifying diodes, and correcting the problem
(either isolating the metals completely, or "bonding" them more
securely with rivets, wire, contact-surface cleaning and
preservation, etc.

> The pipes/radiators throughout the building
>would be the counterpoise to the hot-wire ... not at all intended as a
>ground. I'm poised to do this rather quickly, minus the bandpass
>filter, which I need to order from HRO or AES.

Well, it's probably worth a try, but I suspect that the risk of
problems is nontrivial.

>So maybe I will try this out... Any last words about safety? Not
>blowing up the furnace room and heating oil tank? ;-)

Keep your transmit power relatively low. Fundamental overload and
other RFI/TVI problems seem to be less common at transmitter outputs
below 20 watts.

Just remember that the RF voltages appearing at certain points on your
antenna and "counterpoise" can be quite high, even at moderate power
levels. You may be exposing people to a significant risk of shock or
RF burns. If somebody gets "bitten" when they touch a radiator,
they're likely to be really irate with you.

I'd encourage you to run through the FCC's RF-exposure calculations,
assuming an "uncontrolled" operating environment, and very small
working distances between people and the antenna/counterpoise.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

2618. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:46:48 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <Yz4sc.2242$Gi2.799@newssvr22.news.prodigy.com>
Source record: 94773

I just want to know the reflection physics in the Tx, no antenna tuner, just
a mismatched antenna. I recall no pysics book that tell me how the
reflection sees the transmitter.
73
Hank WD5JFR
There are no stupid questions, just stupid people asking!
"Tdonaly" <tdonaly@aol.com> wrote in message
news:20040523122744.18981.00001787@mb-m13.aol.com...
> Henry wrote,
> >
> >I know that any power not dissipated by an antenna is reflected back to
the
> >transmitter. Then the transmitter "reflects" this reflection back to
> >antenna, ad nauseum until its all gone. I also know that a short or an
open
> >is required to reflect power and I'm searching for which it is, an open
or a
> >short. I'm inclined to think it's a virtual open but I'm at a loss to
> >understand that and I wonder if someone has a good explanation or analogy
> >and some math wouldn't hurt.
> >tnx
> >Hank WD5JFR
> >
> >
>
> This post is guaranteed to get Cecil revivified. Here's a hint: quit
thinking
> solely in
> terms of power, that's for fellows who want to explain how it all works
without
> going into
> any of the complicated details. Get an undergraduate physics text that
> discusses
> waves, and read it, or, better yet, take a class. Take all explanations
you
> read in
> amateur publications with a grain of salt. After you've done this, you
still
> won't be
> able to argue with Cecil, because that requires an extensive knowledge of
the
> moronic,
> unfair, and downright pathalogical debating techniques of which Cecil is a
> master.

> But, it will be harder for you to fall for some of the crackpot ideas
you're
> liable to
> read on this newsgroup, and it will give you something to think about when
> sipping
> your after-dinner port.
>
> 73,
> Tom Donaly, KA6RUH
>
>

2619. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:52:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0d7aa$1_5@corp.newsgroups.com>
Source record: 94775

Lord Snooty wrote:
> Indeed so, because the whole idea of characterising my SWR meter is towards
> the goal of measuring the output impedance of my RF amp!
> I agree that it isn't 50 ohms - it's R + jX, and I want a bulletproof
> procedure to find R and X. Got one?

R + jX is a linear function. As your amp is probably push-pull
AB1 class, you could only ever obtain the averaged impedance of
two non-linear devices. Is that what you want?
--
73, Cecil http://www.qsl.net/w5dxp

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2620. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 16:53:27 UTC
From: fractenna@aol.com
Message-ID: <20040523125327.19969.00001996@mb-m10.aol.com>
Source record: 94774

>Freq. MHz. Efficiency Average Gain Peak Gain
>MHz % DBi DBi
>
>3.5 9.6 -10.43 -8.49
>7.15 41.24 -3.85 -1.33
>14.2 23.21 -6.36 -1.59
>21.2 30.01 -5.23 -1.36
>29 53.81 -2.69 2.17
>
>73
>Danny, K6MHE
>

80M is a bit lower than I expect, but not by much:referring to dBmax values. It probably picks up a dB or more at the high end of 75M.

It doesn't mean much to discuss 'average gain' values unless its an isotropic or (within a certain elevation range) an omni antenna. Sometimes vertical dipoles are described as having an 'average gain', but I haven't seen that used for horizontal ones:-)

The pattern is not bidirectional on the higher bands BTW... ar least that's what intuition tells me...

73,
Chip N1IR

2621. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 17:05:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0dabb$1_5@corp.newsgroups.com>
Source record: 94776

Henry Kolesnik wrote:
> I just want to know the reflection physics in the Tx, no antenna tuner, just
> a mismatched antenna. I recall no pysics book that tell me how the
> reflection sees the transmitter.

The reflected waves obey the laws of physics. The kicker is that we
don't know (and apparently cannot directly measure) the source impedance.
What the reflections can do is modify the designed-for load line through
superposition of the forward and reflected waves. Modification of the
designed-for load line is not desirable and, if unprotected, can cause
over-voltage, over-current, or phase problems.
--
73, Cecil http://www.qsl.net/w5dxp

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2622. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 17:18:52 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <025sc.2251$BQ2.1271@newssvr22.news.prodigy.com>
Source record: 94777

OK, if we shine a flashlight at a mirror the light bounces back and what
ever is caught by the reflector will be reflected. Take away the reflector
and the reflection just keeps going. If someone can tell me what the hot
filament does perhaps I can understand what happens in the finals, or
whatever.
tnx
Hank WD5JFR
"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b0dabb$1_5@corp.newsgroups.com...
> Henry Kolesnik wrote:
> > I just want to know the reflection physics in the Tx, no antenna tuner,
just
> > a mismatched antenna. I recall no pysics book that tell me how the
> > reflection sees the transmitter.
>
> The reflected waves obey the laws of physics. The kicker is that we
> don't know (and apparently cannot directly measure) the source impedance.
> What the reflections can do is modify the designed-for load line through
> superposition of the forward and reflected waves. Modification of the
> designed-for load line is not desirable and, if unprotected, can cause
> over-voltage, over-current, or phase problems.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
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2623. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 17:27:11 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0dfc9_3@corp.newsgroups.com>
Source record: 94779

Henry Kolesnik wrote:
> OK, if we shine a flashlight at a mirror the light bounces back and what
> ever is caught by the reflector will be reflected. Take away the reflector
> and the reflection just keeps going. If someone can tell me what the hot
> filament does perhaps I can understand what happens in the finals, or
> whatever.

The hot filament provides a source of electrons. How many
electrons are emitted depends on the instantaneous voltages
on the other elements, the plate and grids. Reflected waves
have an effect on those instantaneous voltages but IMO,
there's not much sense in pursuing the "filament" line of
reasoning.
--
73, Cecil http://www.qsl.net/w5dxp

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2624. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 17:28:37 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0405230928.58f359ff@posting.google.com>
Source record: 94778

It's true in the case of transmission lines that there are standing waves and reflections but, unfortunately, this concept has somehow come to dominate and confuse the concept of matching a tranmitter to an antenna -- a generator to a load. Like in many areas of science, mathematicians and scientists often find convenient ways to mathematically describe and predict physical phenomenon that hinders, even misleads, the understanding of how it actually works.

If you leave out the complex part of impedences for the moment and think of 100 volt generator that has a 50 ohm internal impedance driving a 50 ohm load, current is 1 amp and the power dissipated by the load is 50 watts. There is also 50 watts dissipated by the generator's internal impedance, for a total of 100 watts dissipated by the entire system. Therefore, the "available" power for this generator is 50 watts.

Maximum available I^2*R power only occurs when the load impedance is equal to the generator's characteristic impedance, 50 ohms (do the math). Any load impedance higher or lower, ALWAYS produces less "available" power.

Herein lies one of the big problems with the "reflection" definition, conceptually. The generator (transmitter) is not a constant-power device. When a manufacturer says that it's XYZ transmitter produces 100 watts, it only produces (has available) 100 watts (after internal dissipation) into a 50 ohm load. Any other load *always* produces less available power, due to simple I^2*R laws. It has nothing to do with reflections or standing waves, although, mathmatically, reflection formulas accurately describe it.

A couple of examples using a 100 volt constant voltage generator and an internal impedance (RG) of 50 ohms:

1) Load (RL) = 50 ohms. Current = 100 / (50 + 50) = 1 amp
Power dissipated in RL (PL) = (1)^2*50 = 50 watts
Power dissipated in RG (PG) = (1)^2*50 = 50 watts
SWR = RL/RG = PL/PG = 1:1

2) Load (RL) = 100 ohms. Current = 100 / (50 + 100) = .667 amp
Power dissipated in RL (PL) = (.667)^2*100 = 44.5 watts
Power dissipated in RG (PG) = (.667)^2*50 = 22.25 watts
SWR = RL/RG = PL/PG = 2:1

3) Load (RL) = 25 ohms. Current = 100 / (50 + 25) = 1.34 amp
Power dissipated in RL (PL) = (1.34)^2*25 = 44.9 watts
Power dissipated in RG (PG) = (1.34)^2*50 = 89.8 watts

SWR = RG/RL = PG/PL = 2:1

Notice that the total power dissipated in all three examples is
different. The transmitter is NOT a constant-power source, but it's
also not a unlimited power source and has operational limits.

Therefore, what is commonly called "reflected power" is power that
never leaves the transmitter and is dissipated as heat by the
transmitter's internal 50 ohm impedance (if the transmitter's design
doesn't prematurely shut down first).

Al

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:<lHTrc.1908$Da5.28@newssvr22.news.prodigy.com>...
> I know that any power not dissipated by an antenna is reflected back to the
> transmitter. Then the transmitter "reflects" this reflection back to
> antenna, ad nauseum until its all gone. I also know that a short or an open
> is required to reflect power and I'm searching for which it is, an open or a
> short. I'm inclined to think it's a virtual open but I'm at a loss to
> understand that and I wonder if someone has a good explanation or analogy
> and some math wouldn't hurt.
> tnx
> Hank WD5JFR

2625. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 17:37:18 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0e228$1_3@corp.newsgroups.com>
Source record: 94780

alhearn wrote:
> Herein lies one of the big problems with the "reflection" definition,
> conceptually.

That's why I often resort to a signal generator with a circulator/load
to illustrate my point. That signal generator *is* a constant power
source.

> Therefore, what is commonly called "reflected power" is power that
> never leaves the transmitter and is dissipated as heat by the
> transmitter's internal 50 ohm impedance (if the transmitter's design
> doesn't prematurely shut down first).

You can mount an argument that if the source doesn't see its
source impedance, then there is a reflection at that internal
mismatch. But that's not what is commonly called reflected power.

When we talk about reflected power on this newsgroup, we are usually
referring to the forward power rejected by a mismatch between the
transmission line Z0 and the antenna impedance (associated with mismatch
loss). In a typical ham radio antenna system, the "lost" reflected power
is forced to engage in destructive interference at the tuner and thus
joins the forward power wave.
--
73, Cecil http://www.qsl.net/w5dxp

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2626. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 17:43:48 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <op5sc.2263$l23.1824@newssvr22.news.prodigy.com>
Source record: 94781

I thought filaments produced photons/light waves as well. You took me to
light now you want to leave!
Come on I just want a good basic understand on what it is the the Tx
reflects the power , how it does it and a little simple math. My dad used
to say if you can't explain something you think you know to someone else it
might because you don't understand it yourself or lack command of the
language. In this case for me it's both.
73
Hank WD5JFR
"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b0dfc9_3@corp.newsgroups.com...
> Henry Kolesnik wrote:
> > OK, if we shine a flashlight at a mirror the light bounces back and what
> > ever is caught by the reflector will be reflected. Take away the
reflector
> > and the reflection just keeps going. If someone can tell me what the
hot
> > filament does perhaps I can understand what happens in the finals, or
> > whatever.
>
> The hot filament provides a source of electrons. How many
> electrons are emitted depends on the instantaneous voltages
> on the other elements, the plate and grids. Reflected waves
> have an effect on those instantaneous voltages but IMO,
> there's not much sense in pursuing the "filament" line of
> reasoning.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
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2627. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 17:46:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4po1b019ghufbeptk5rjhm4qip0mgsoebc@4ax.com>
Source record: 94782

On Sun, 23 May 2004 10:06:15 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> As for the math, you will find it by
>> the reams, once you've been overwhelmed with the arcana of hyperbolic
>> descriptions of a novel physics that have to proceed its proof.
>
>A scattering parameter analysis,...
arcana deleted as an obviously fulfilled prophecy.

2628. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 17:50:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <deo1b0pb8fv38iekho58s6575g2j75bhhl@4ax.com>
Source record: 94783

On Sun, 23 May 2004 09:31:10 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>This is a basic cross-check that should always be applied... but
>regrettably isn't.

Hi Ian,

Perhaps in this immediate thread. However, I have demonstrated both sides coming to the same conclusions several many times, and one example as recently as within this last week.

This issue is not about being right, it is about ego foremost else why all the debate? Hank has asked a fairly straightforward question with rather simple terms he could accept as a compelling case. To this point (some 22 entries) that has been largely abandoned with each scribbler answering their own imagining of how to discover the philosopher's stone.

73's
Richard Clark, KB7QHC

2629. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 18:05:53 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0e8dc_4@corp.newsgroups.com>
Source record: 94784

Henry Kolesnik wrote:
> I thought filaments produced photons/light waves as well. You took me to
> light now you want to leave!

Well, the light emitted by tube filaments is irrelevant to the RF
function. I use light examples because light and RF are both EM
waves and a lot more is known about light than about RF.

> Come on I just want a good basic understand on what it is the the Tx
> reflects the power , how it does it and a little simple math. My dad used
> to say if you can't explain something you think you know to someone else it
> might because you don't understand it yourself or lack command of the
> language. In this case for me it's both.

What I am trying to say is that I don't know what happens inside
a transmitter. Under Z0-matched conditions, as with a tuner, I
believe that what happens inside a transmitter is pretty much
irrelevant. The transmitter sees its designed-for impedance and
that is essentially all that matters.

What I am willing to discuss in detail is what happens at a Z0-match
point (x) in an antenna system with reflections - something like the
following:

XMTR---51.5 ohm line---x---1/4WL 300 ohm line---1749 ohm load
100W --> 200W -->
<-- 0W <-- 100W

For these typical conditions, all voltages and currents are either
in-phase or 180 degrees out of phase at the match point (x), which
makes a power analysis the most simple analysis of all.
--
73, Cecil http://www.qsl.net/w5dxp

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2630. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 18:10:39 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0e9fa_4@corp.newsgroups.com>
Source record: 94786

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>A scattering parameter analysis,...
>
> arcana deleted as an obviously fulfilled prophecy.

Richard, you are the only technical person I know of who
ever considered s-paramater analysis to be a secret or
mystery. It is one of the more technically popular methods
of analysis, ideally suited to transmission line analysis.
--
73, Cecil http://www.qsl.net/w5dxp

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2631. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 18:10:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <i9p1b05n1q7cmnchg6g4aiikighi879uqr@4ax.com>
Source record: 94785

On Sun, 23 May 2004 02:07:13 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>I know that any power not dissipated by an antenna is reflected back to the
>transmitter. Then the transmitter "reflects" this reflection back to
>antenna, ad nauseum until its all gone. I also know that a short or an open
>is required to reflect power and I'm searching for which it is, an open or a
>short. I'm inclined to think it's a virtual open but I'm at a loss to
>understand that and I wonder if someone has a good explanation or analogy
>and some math wouldn't hurt.
>tnx
>Hank WD5JFR
>

Hi Hank,

Round Two.

A short or an open certainly reflects. However, as you have observed
through your question, so does a poorly matched antenna; thus you must
agree that it presents neither a short nor an open. As such,
reflection is not confined to these two conditions.

We can display a condition where we have a 2:1 mismatch. This is
fairly commonplace as a consideration, if not as a reality. Here, the
reflected power is less than the total applied (some 12% if dead
reckoning is correct). That is, if the antenna presents a 2:1
mismatch to the power applied to it, nearly 90% of that power will
proceed to be radiated with a trivial portion returned to the source
(or the tuner). If we boost that mismatch to 10:1, that increases the
reflection substantially (let's call it 90% in this spirit of dead
reckoning) and naturally less is radiated. The math is quite as
simple as a balance ledger.

10:1 for a 50 Ohm source would mean either the load presents a Z of
500 Ohms, or 5 Ohms. From this you can see that we are approaching
either an open (hi-Z) or a short (lo-Z) and either perform the same
job of reflection - short of total reflection. As such, there is no
distinction to the power whether it encounters either, the reflection
ensues by virtue of the simple mismatch, not by the literal condition.
The computation of mismatch defines how reflective the interface is.

73's
Richard Clark, KB7QHC

2632. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 18:16:47 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <svOdnT53d9USdy3dRVn-jA@adelphia.com>
Source record: 94787

Bob Miller wrote:
> On Sat, 22 May 2004 17:25:34 -0700, "CW" <clinton.magers@comcast.net>
> wrote:
>
>
>>I don't recall anyone in this thread claiming that Gore had said that he
>>invented the internet. Where did that come from?
>
>
> It came from you, sir:
>
> No, he just claimed he did.
> "Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
> news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
>
>>Gore didn't invent the Internet, >

Aww, c'mon, Bob! CW didn't claim that Gore said he invented the
internet. He was just sayin....

SPANK!

- Mike -

2633. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 18:35:28 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <tjr1b0po5sceck0oopkskrm5ipf046ntq6@4ax.com>
Source record: 94788

On Sun, 23 May 2004 14:16:47 -0400, Mike Coslo <mcoslo@adelphia.net>
wrote:

>
>
>Bob Miller wrote:
>> On Sat, 22 May 2004 17:25:34 -0700, "CW" <clinton.magers@comcast.net>
>> wrote:
>>
>>
>>>I don't recall anyone in this thread claiming that Gore had said that he
>>>invented the internet. Where did that come from?
>>
>>
>> It came from you, sir:
>>
>> No, he just claimed he did.
>> "Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
>> news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
>>
>>>Gore didn't invent the Internet, >
>
>
> Aww, c'mon, Bob! CW didn't claim that Gore said he invented the
>internet. He was just sayin....
>
> SPANK!
>
> - Mike -

Sorry... I'm still ticked at the year 2000 Florida debacle...

Gore should be President...

Bob
k5qwg

2634. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 18:41:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <07r1b05j271r43vssq1luak89pan3djb60@4ax.com>
Source record: 94789

On Sun, 23 May 2004 14:17:51 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:

>Because the internal impedance of the transmitter is not 50 ohms. It is not
>relevant.

Old Son,

Lord Kelvinator would be saddened by such a dismissal of actually
delving into "knowing" by your meagre understanding that fails to
offer an actual value that it IS. Such superstition that dominates
this paucity would lead us to believe the Z is as slight as an angel
wafting past in a dream (would that be in English Units, or metric?).

Definitions by negatives is an amusing troll however. I do enjoy
participation in kind:

Let's see, the Z of a transmitter is NOT
a dead parrot, nor
five farthings, nor
10 inches, nor
a polka dot dress, nor
the gross national income of Lithuania, nor
the combined weight of all your dead white scientists.

I'm sure I missed a few.... ;-)

73's
Richard Clark, KB7QHC

2635. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:04:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <63s1b09o7k5nm1cp7glq8kd69n4jtvev04@4ax.com>
Source record: 94790

On Sun, 23 May 2004 16:39:19 GMT, "Lord Snooty" <bonzo@dog.com> wrote:

>Indeed so, because the whole idea of characterising my SWR meter is towards
>the goal of measuring the output impedance of my RF amp!
>I agree that it isn't 50 ohms - it's R + jX, and I want a bulletproof
>procedure to find R and X. Got one?
>
>Cheers,
>Andrew
>G3UHD

Hi Andrew,

You have asked an inescapable question that will lead to a deluge of scribbling commemorating the best attempts of Houdini.

There are several many methods to determine exactly what you want to know. The simplest and certainly the one that contains as much information necessary is called "load pulling." To even mention this time and bench proven method will result in hoots from those who would be the last to offer you a fixed answer; however, we shall proceed.

This requires that you have access to known, but non-standard value loads capable of sustaining the power you will perform your measurement at. This is not a trivial requirement. It also requires that you can in some way defeat your ALC which will attempt to offset the pull of the non-standard load.

It is simplicity itself that only demands you consider the elements of a Thevenin model and how to determine the model's source Z (or likewise, the Norton model's source Z). You will need a means to measure the voltage across the load, or the current through it. Even here, proportionality is all that is required as long as the Load is characterized and thus the tools can be rather spartan.

In the long run, this will mean you have to construct and verify your own non-standard loads. Take care that through your verification you confirm their value across all power applications (resistors are very susceptible to drift with temperature). You should also take care to insure that all paths and leads are as short as possible. Loading directly at the terminals will save grief of complex compensation math (and reduce introducing other errors). However, you can choose to employ remote loads if you take care to characterize the lines through which they are attached (this means you should be adept at the Smith Chart).

There is more to be said, but this enough to offer you a significant lead to find that, yes, the source exhibits nearly 50 Ohms (the common Ham transmitter running at rated power will fall between 30 and 70 Ohms) - as specified and designed.

73's
Richard Clark, KB7QHC

2636. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:07:35 UTC
From: Dave <noone@nowhere.com>
Message-ID: <pNGdnTfPlZngay3d4p2dnA@crocker.com>
Source record: 94791

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b0e8dc_4@corp.newsgroups.com...
>
> What I am willing to discuss in detail is what happens at a Z0-match
> point (x) in an antenna system with reflections - something like the
> following:

what you are willing to discuss is irrelevent as it has nothing to do with
the original topic which was about what happens in the transmitter.

>
> For these typical conditions, all voltages and currents are either
> in-phase or 180 degrees out of phase at the match point (x), which
> makes a power analysis the most simple analysis of all.

that should read "For these specific conditions", those conditions are
hardly 'typical', they are a very exactly contrived example which makes it
easy to compare powers. thus making the proper analysis of currents or
voltages seem unnecessary. taking simple cases like this and improperly
generalizing them is what leads to the worst mis-conceptions and circular
arguments in this group.

2637. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:21:16 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <07ednQLbP64xZC3d4p2dnA@adelphia.com>
Source record: 94792

Richard Clark wrote:
> On Sun, 23 May 2004 05:57:28 +0000 (UTC), "Reg Edwards"
> <g4fgq.regp@ZZZbtinternet.com> wrote:
>
>>Dear Richard, you are confusing the matter even further, if that were
>>possible.
>
>
> Old Son,
>
> Have I stolen your thunder?
>
> Like the pendulum with a dull and meagre swing, your predictable
> observations on this subject return to an unremarkable SWR, a topic
> never raised without the old wife discovering it under her bed....
>
> Does the following strike a bell?
>
>>A QUOTATION:
>>
>>"When you can measure what you are speaking about and express it in numbers
>>you know something about it. But when you cannot measure it, when you cannot
>>express it in numbers, your knowledge is of a meagre and unsatisfactory
>>kind. It may be the beginning of knowledge but you have scarcely in your
>>thoughts advanced to the state of science."
>
>
> You have never offered a scintilla of quantized discussion to the
> matter.

We had a pet scintilla when I was a kid. Cutest sarn thing you ever
saw, like a cross between a rabbit and a squirrel! 8^)

hehe, - Mike KB3EIA -

2638. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:24:18 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <07ednT3bP678Zy3d4p2dnA@adelphia.com>
Source record: 94793

Cecil Moore wrote:

> Richard Clark wrote:
>
>> As for the math, you will find it by
>> the reams, once you've been overwhelmed with the arcana of hyperbolic
>> descriptions of a novel physics that have to proceed its proof.
>
>
> A scattering parameter analysis, described in HP Application Note
> 95-1 (available on the web) is ideal for analyzing what happens
> at a match point in a typical ham radio antenna system.
>
> b1 = s11(a1) + s12(a2)
>
> b2 = s21(a1) + s22(a2)
>
> b1 is the net forward voltage, b2 is the net reflected voltage
> a1 is the incident forward voltage, a2 is the incident reflected voltage
>
> Quoting from HP AN 95-1: Another advantage of s-parameters springs
> from the simple relationship between the variables a1, a2, b1, and
> b2, and various power waves:
>
> |a1|^2 = Power incident on the input of the network.
> (forward power incident on the match point)
>
> |a2|^2 = Power reflected from the load.
>
> |b1|^2 = Power reflected from the input port of the network.
> (power reflected from the match point back toward the source)
>
> |b2|^2 = Power incident on the load.
>
> The previous four equations show that s-parameters are simply
> related to power gain and mismatch loss, quantities which are
> often of more interest than the corresponding voltage functions.
>
> |s11|^2 = Power reflected from the network input divided by
> power incident on the network input
>
> |s22|^2 = Power reflected from the network output divided by
> power incident on the network output
>

> |s21|^2 = Power delivered to a Z0 load divided by power available
> from a Z0 source
>
> |s12|^2 = Reverse transducer power gain with Z0 load and source
>
> End quote.
>
> b2 is the voltage reflected back toward the source and
>
> b2 = s21(a1) + s22(a2)
>
> It should be obvious that b2 cannot be zero unless there exists
> total destructive interference between s21(a1) and s22(a2), i.e.
> s21(a1) is equal in magnitude and opposite in phase to s22(a2).
> --
> 73, Cecil http://www.qsl.net/w5dxp

Richard is right, There is the first ream!

Sorry, I'm a bit pippish today.....

- Mike KB3EIA -

2639. Re: Dipole/Balun? Commercially Produced Alternative?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:26:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0fba8_3@corp.newsgroups.com>
Source record: 94794

Rich wrote:
> Cecil, any chance you can take one more look-see for me with EZNEC?
> How well do you think it will radiate on all the bands?

Rich, the easiest way for me to present a G5RV shorty version
is by listing the 50 ohm SWR at the ladder-line/coax junction.
The antenna is a 51 ft. center-fed dipole at 40 feet. The
series-section transmission line is Z0 = 400 ohms with a VF
of 0.9. I use Z0 = 400 because "450" ohm ladder-line is
usually closer to 400 ohms.

Freq. 50 ohm SWR for n' Length of "450" ohm line
6' 9' 12' 15' 16' 19' 40'
7.2 31 16 5.8 *2.2* 2.7 8.3 >100
10.125 16 23 29 33 34 34 *1.9*
14.2 70 53 32 13 8 *1.2* 55
18.14 51 18 *1.5* 13 23 57 19
21.3 22 *1.5* 19 61 74 98 61
24.95 *1.7* 30 76 94 88 48 6
28.4 26 30 17 3.3 *2.0* 12 31

The lowest SWRs are highlighted like *n.m*. It appears
that a fixed length of about 17 ft. will be a good
performer on the harmonically related bands, 40m, 20m,
& 10m. Varying the series section length from 6' to
19' would allow covering all HF bands except 30m. A
51 ft. dipole is not a good length for 30m and requires
40' of "450" ohm line to resonate it close to 50 ohms.

IMO, any 50 ohm coax SWR above about 10:1 is unacceptable
for ordinary coax (depending on frequency).
--
73, Cecil http://www.qsl.net/w5dxp

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2640. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:35:53 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0fdf4$1_3@corp.newsgroups.com>
Source record: 94796

Dave wrote:

> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>>What I am willing to discuss in detail is what happens at a Z0-match
>>point (x) in an antenna system with reflections - something like the
>>following:
>
> what you are willing to discuss is irrelevent as it has nothing to do with
> the original topic which was about what happens in the transmitter.

Uhhhh Dave, the original topic is the Subject: line. If anything,
what happens inside a transmitter is the irrelevant subject since
appreciable reflections hardly ever reach the typical ham transmitter.

>>For these typical conditions, all voltages and currents are either
>>in-phase or 180 degrees out of phase at the match point (x), which
>>makes a power analysis the most simple analysis of all.
>
> that should read "For these specific conditions", those conditions are
> hardly 'typical', they are a very exactly contrived example which makes it
> easy to compare powers.

No, those are typical conditions, where the ham radio antenna system
is tuned to a Z0-match by a tuner, either external or internal. It is
not a "very exactly contrived example" at all. It is absolutely typical
of any ham radio installation where the final amp sees close to a 1:1 SWR
and that is the great majority. At the Z0-match point at the input of
every properly tuned transmatch, the voltages and currents are either in
phase or 180 degrees out of phase. If you don't know that, it is no
wonder that you label my power analysis stuff as "contrived".
--
73, Cecil http://www.qsl.net/w5dxp

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2641. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:37:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qvt1b0hv66jiinlef5lh41f75nvpm3063l@4ax.com>
Source record: 94795

On Sun, 23 May 2004 17:18:52 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>OK, if we shine a flashlight at a mirror the light bounces back and what
>ever is caught by the reflector will be reflected. Take away the reflector
>and the reflection just keeps going. If someone can tell me what the hot
>filament does perhaps I can understand what happens in the finals, or
>whatever.
>tnx
>Hank WD5JFR

Hi Hank,

Well I see in correspondence following this as "replies," that they
are far from satisfactory. All part of the arcana that precedes the
convolutions of math you would have had to endure.

The abandonment of this lead is simply a matter of Cecil's lack of
experience in the metaphor of light.

To answer your question above. Removing the reflector is unnecessary
as it is part of the initial condition and has nothing to do with it
serving as the correlative to a tuner that you want to remove from the
argument (which is a perfectly acceptable imposition of conditions).

Your question also goes to the heart of the matter. We begin with a
hot filament which emits radiation (and yes, no reflector is required
so we will skip that as one of your conditions). The amount of
radiation is directly correlated to the amount of heat. This will
simplify matters, but in the end it will yield a failure of metaphors
(which always occur if you cannot bridge the logic).

The radiation strikes a reflection (immaterial whether complete or
partial) and that portion which returns, impinges upon the filament,
the source. The filament absorbs the power, which in turn raises its
temperature (everyday experience proves the heat of such radiation).
This will, in turn, cause a higher radiation (given the quid-pro-quo
of heat and radiation). In a sense, this means the reflected power is
re-radiated. The confirmation of this is that if you achieved full
reflection, you then define total insulation of the radiation (no heat
escapes) and temperature rises accordingly, and this may lead to
catastrophic failure of the filament (a very bright illumination if
you could see it, and consequent fusing current - electric kilns use
this principle but tolerate the current by under rating the source).
You can imagine the correlative to transmitter failure for the same
conditions.

The failure of the metaphor? RF is not heat (common light is) and the return of power to be rendered into heat does not result in a higher RF output.

I will anticipate the sophomore's comments that RF reflections do not become heat, in and of itself:

The returned power (either through wave mechanics or lumped circuitry) must result in either a higher potential across the source, or a higher current through it. Elevated potentials yield the everyday experience of an arc (heat). Elevated currents yield the everyday experience of current density through the same element (much like the filament of our metaphor - heat). One failure mode comes with the peak power snap, followed by the muttering of "Oh Shit!" Or it comes through the more progressive thermal runaway, followed by the muttering of "what's that funny smell?"

73's
Richard Clark, KB7QHC

2642. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:38:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b0fe8b$1_3@corp.newsgroups.com>
Source record: 94798

Mike Coslo wrote:
> Richard is right, There is the first ream!
> Sorry, I'm a bit pippish today.....

Ignorance of s-parameter analysis, like ignorance of the
Smith Chart, is not a mortal sin.
--
73, Cecil http://www.qsl.net/w5dxp

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2643. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:38:46 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <msWdnaMadq4gYC3d4p2dnA@comcast.com>
Source record: 94797

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b0d377_5@corp.newsgroups.com...
> Tam/WB2TT wrote:
> > I am not quite sure what you are saying. But, I ran a SPICE simulation
of
> > the following:
> > 1V 1MHz source with resistor R0 feeding a 50 Ohm 250 ns transmission
line
> > shorted at the far end. Independent of R0, in steady state the voltage
at
> > the input end of the transmission line will be 1V. The effect of R0 is
to
> > limit how long it takes to reach steady state. For R0 = 50 Ohms, it is
one
> > cycle; for R0 = 500 Ohms, it is about 8 cycles, as eyeballed off the
> > waveform display.
>
> Does SPICE report the steady-state forward and reflected waves
> or just the superposition of those two waves? We all know what
> they look like when superposed. The question is whether the
> identity of the forward and reflected waves disappear after
> they are superposed. To the best of my knowledge, the very
> existence of standing waves requires the existence of a forward-
> traveling wave and a rearward-traveling wave.
>
> I have asked for examples of standing waves void of rearward-
> traveling waves and none has been forthcoming.
> --
> 73, Cecil http://www.qsl.net/w5dxp
It shows the composite voltage waveform, and the net current. Exactly what a
Bird wattmeter would do. Of course the Bird only shows you steady state,
Spice (SWCAD) swhows how you got there.

Tam/WB2TT

2644. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:41:36 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8qupg$q91$1@hercules.btinternet.com>
Source record: 94799

Cec et al, what have circulators, S-parameters, etc. to do with HF ?

2645. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 19:46:56 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b1008c_3@corp.newsgroups.com>
Source record: 94800

Tam/WB2TT wrote:
> It shows the composite voltage waveform, and the net current. Exactly what a
> Bird wattmeter would do.

That's not what a Bird wattmeter does. A Bird wattmeter possesses
a directional coupler. SPICE apparently does not. Is it possible
to add a directional coupler to SPICE? If you know the Z0, the net
voltage/current magnitudes/phases, it should be possible to use
phasor addition/subtraction to obtain the forward and reflected
components, just like the Bird wattmeter does.
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2646. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 20:10:21 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <Ny7sc.2288$hl5.1655@newssvr22.news.prodigy.com>
Source record: 94801

Not much but neither does much of this thread regarding my original query.
I hope someone that understands the question can answer in a way that my
feeble brain can comprehend. At least we're eliminating what's not the
answer.
73
Hank WD5JFR

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c8qupg$q91$1@hercules.btinternet.com...
> Cec et al, what have circulators, S-parameters, etc. to do with HF ?
>
>

2647. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 20:18:33 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hcf8gFbg4lrU1@uni-berlin.de>
Source record: 94802

RE: Concept below

However this is not an accurate model of a transmitter.

For an example, take an old Heathkit DX-100 generating a measured 180 watts of CW RF into a matched 50 ohm load. To do this, it does NOT also dissipate 180 watts of RF into some "virtual" internal RF load in the DX-100. In fact, the PAs and power supply in the DX-100 could not produce a total RF output power of 360 watts without exceeding their ratings.

The dissipation in the PA is essentially related only the DC to RF conversion efficiency of the PA, which in this case probably is about 75%, max (Class C). So a PA input power of about 240 watts DC is required to produce 180 watts of RF output power. The other 60 watts of plate input power is converted to heat by the PA tube anodes.

The entire RF output generated by the PA stage is applied virtually 100% to the output connector. How much of that is absorbed by the load connected there is a function of load SWR and system losses.

- RF

"alhearn" wrote
> If you leave out the complex part of impedences for the moment and
> think of 100 volt generator that has a 50 ohm internal impedance
> driving a 50 ohm load, current is 1 amp and the power dissipated by
> the load is 50 watts. There is also 50 watts dissipated by the
> generator's internal impedance, for a total of 100 watts dissipated by
> the entire system. Therefore, the "available" power for this generator
> is 50 watts.

2648. Ant Preamp AW-203-1 ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 20:31:27 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <zS7sc.2290$DI5.389@newssvr22.news.prodigy.com>
Source record: 94803
Cross-posted to: rec.radio.shortwave,rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

Another acquisition from the Belton hamfest that I'm looking for info on. It's engraved "HIGH IMPEDANCE PREAMPLIFIER MODEL AW-203-1" EO Electro International, Annapolis, MD. Someone printed by hand on it; "150 KHz - 12 MHz". It has a four position switch labeled Off, Recharge, Rod, Loop and an output BNC. It's been fitted with what looks like a non-original whip. There's no provision for a loop or rod and I'm guessing that there was a rotary joint to replace the loop. Any info appreciated. Pix posted to alt.pictures.binaries.radio.
tnx
HankWD5JFR

2649. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 20:40:11 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b10d07$1_4@corp.newsgroups.com>
Source record: 94804

Reg Edwards wrote:
> Cec et al, what have circulators, S-parameters, etc. to do with HF ?

What does scattering have to do with antenna systems with
reflections???? Maybe you should download the HP AN 95-1?
It's available at:

http://www.sss-mag.com/pdf/hpan95-1.pdf

From _Fields_and_Waves_in_Communication_Electronics_ by
Ramo, Whinnery, and Van Duzer. "11.09 Scattering and
Transmission Coefficients ... This article introduces two
of the *most* useful (two-port analysis) forms based
on wave quantities." This is a (c)1965 book, a later version
of a classic fields and waves (c)1944 book by Ramo & Whinnery.
--
73, Cecil http://www.qsl.net/w5dxp

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2650. Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 20:42:59 UTC
From: Lord Snooty <bonzo@dog.com>
Message-ID: <n18sc.7505$be.1145@newsread2.news.pas.earthlink.net>
Source record: 94805

Wise words. The true load-pulling technique advocated professionally uses a known model of the output stage using S parameters. Yuk. Not for this soldier. I'd rather sniff underwear in a geriatric clinic thank you. Whatever one did in this direction, as an amateur, would doubtless be either wrong or so inaccurate as to be not even wrong as Dr. Pauli was wont to say.

The amp is single-ended out of an MRF136, so I presume it's Class A. The amp's designation is H-10 (I bought it surplus). It's rated at around 15W, 0.1 - 30 MHz. The circuit diagram shows no hint of current limiting circuitry.

If one is serious about proper design of a matching network - a network, I might add, which attaches *directly* (near as dammit) to the Tx output - then one is all at sea without a proper knowledge of source impedance. See my comments in the other thread about this.

I tried to use a technique advised by K7ITM to measure source impedance (R + jX), and it produces a negative value of R by calculation. This is the technique, based on a load setting of (r + jx) ohms. And once again, there is no cable, folks. And it wouldn't matter if I did have a few inches of it either.

1. Determine X.
a) Set r ~= R based on a best guess (which would be R=50 ohms nominally in many systems).
b) Monitor the voltage, current, or power in the load (r).
c) Adjust (x) to maximise the monitored value.
This setting corresponds to x = -X, and we have determined X.

2. Determine R
a) Leave x = -X set as in step 1,so now the circuit is pure resistive.
b) Monitor the voltage across the resistor.
c) Set r to R(nominal) plus and minus a small percentage, and measure the monitored voltage at both values of r.
The voltage across r is given by
V/V0 = r / (R + r)
Solving the 2 simultaneous equations to eliminate V0 shows that R is determined by the equation
R = r1*r2*(V2 - V1) / (V1*r2 - V2*r1)

My problems
---
1. My measurements of V1,V2 lead to the inescapable conclusion that the above model fails, because the calculated value of R comes out negative.
Let us assume that we set (r2 > r1) and we obtain (V2 > V1), which is predicted from the model, and is also the case for my measurements. Under

these conditions, a negative value of R can only be obtained from the equation if V2/V1 > r2/r1, which in my case is true.
I undertook a full (and rather exhaustive and tedious!) calculation of the expression for R when the value of (x) was not set correctly to -X, thinking that perhaps this was the cause of the discrepancy. It turns out in this case that, if the calculated value of R is negative, it has nothing to do with the setting of (x), and depends ONLY on the condition V2/V1 > r2/r1. Since we know that the actual value of R cannot be negative, this implies a failure of the model.
How then can the model fail? Since we are maintaining frequency constant, any collection of resistances and reactances, however complicated, can be modelled as (R + jX), so it cannot be that. The only assumption left to question is the constancy of V0, and this is what the failure must be.
This leaves me with more questions than answers, because the way forward is now completely unclear.

2. I should also mention another, less serious, problem I had, and that is with the determination of X. The value of (x) I determine from measurement would be expected to be constant at a given frequency. It is in my case not so. The derived value of X appears to depend on
a) the power level setting of my amplifier
b) the value of (r) I set in the circuit when determining X.
Quite probably this second problem relates to the first problem's identification of the failure of the model, and can probably be subsumed under that category.

Best,
Andrew

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:63s1b09o7k5nm1cp7glq8kd69n4jtvev04@4ax.com...
> On Sun, 23 May 2004 16:39:19 GMT, "Lord Snooty" <bonzo@dog.com> wrote:
>
> >Indeed so, because the whole idea of characterising my SWR meter is towards
> >the goal of measuring the output impedance of my RF amp!
> >I agree that it isn't 50 ohms - it's R + jX, and I want a bulletproof
> >procedure to find R and X. Got one?
> >
> >Cheers,
> >Andrew
> >G3UHD
>
> Hi Andrew,
>
> You have asked an inescapable question that will lead to a deluge of
> scribbling commemorating the best attempts of Houdini.
>
> There are several many methods to determine exactly what you want to
> know. The simplest and certainly the one that contains as much
> information necessary is called "load pulling." To even mention this
> time and bench proven method will result in hoots from those who would

> be the last to offer you a fixed answer; however, we shall proceed.
>
> This requires that you have access to known, but non-standard value
> loads capable of sustaining the power you will perform your
> measurement at. This is not a trivial requirement. It also requires
> that you can in some way defeat your ALC which will attempt to offset
> the pull of the non-standard load.
>
> It is simplicity itself that only demands you consider the elements of
> a Thevenin model and how to determine the model's source Z (or
> likewise, the Norton model's source Z). You will need a means to
> measure the voltage across the load, or the current through it. Even
> here, proportionality is all that is required as long as the Load is
> characterized and thus the tools can be rather spartan.
>
> In the long run, this will mean you have to construct and verify your
> own non-standard loads. Take care that through your verification you
> confirm their value across all power applications (resistors are very
> susceptible to drift with temperature). You should also take care to
> insure that all paths and leads are as short as possible. Loading
> directly at the terminals will save grief of complex compensation math
> (and reduce introducing other errors). However, you can choose to
> employ remote loads if you take care to characterize the lines through
> which they are attached (this means you should be adept at the Smith
> Chart).
>
> There is more to be said, but this enough to offer you a significant
> lead to find that, yes, the source exhibits nearly 50 Ohms (the common
> Ham transmitter running at rated power will fall between 30 and 70
> Ohms) - as specified and designed.
>
> 73's
> Richard Clark, KB7QHC

2651. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 20:49:16 UTC
From: Lord Snooty <bonzo@dog.com>
Message-ID: <g78sc.7507$be.2923@newsread2.news.pas.earthlink.net>
Source record: 94806

Sorry everyone, but I just retested with no cable and the results I obtain are precisely the same. The coax cable was only 26" long anyway.
So forget about that transmission line stuff. It's irrelevant here. What I want to know is why the VSWR indications are the way they are.

If anyone's interested, I can email a small spreadsheet that deals with this simple circuit (V0->R->jX->r->jx) and allows you to set
a) R,X and r, and vary x
b) R,X and x, and vary r.
I plot side by side on the two corresponding graphs
- modulus of total load voltage
- modulus of load resistor voltage
- modulus of load reactance voltage
- power dissipated in load resistor
- VSWR between source and load
- "conjugate VSWR" between source and load.

One more time with feeling -
What I want to know is why the VSWR indications are the way they are.

Best,
Andrew

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:40b0cfc0_2@corp.newsgroups.com...
> Dave wrote:
> > nope, all done. reg is here and cecil can't be far behind. i've had my
> > fun, time to do other more productive things than watch them re-hash
> > conjugal matches for the next month or two.
>
> I guess I need to say this again. My take on discussions of conjugate
> matching in ham antenna systems is that it is a waste of time. If reflected
> energy is not allowed to reach the source, e.g. typical ham Z0-matched
> systems, the source impedance is irrelevant and doesn't affect anything
> in the system except for efficiency.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
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2652. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 21:00:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b111d1_4@corp.newsgroups.com>
Source record: 94807

Henry Kolesnik wrote:
> Not much but neither does much of this thread regarding my original query.

They have a lot to do with the subject of the thread. :-)

> I hope someone that understands the question can answer in a way that my
> feeble brain can comprehend. At least we're eliminating what's not the
> answer.

Back a dozen years ago, or so, Mr. Bruene tried to 'ping' a final amp with a slightly off-frequency signal to ascertain the output impedance of the amp and he published his results in QST. His apparent error was that he didn't do it at the frequency of operation of the amp and he didn't know what the 'Q' of a final amp really is. There has been a running argument ever since, probably best documented in QEX magazine. There are basically two sides to the argument.

1. If load-pulling causes a falloff of power on each side of the operating point, then the system is conjugately matched. That conjugate match includes such things as non-dissipative resistances.

2. Conjugate matches do not exist in a typical amateur system.

Brilliant minds have been trying to prove one or the other and both sides (IMO) have failed in that proof. There is no final, definitive proof of either position. If there was such, there would be no argument. That's why we cannot answer your question. The picture is further clouded by a definition. If reflected energy makes its way back into the final amp, it was never generated in the first place, by definition.
--
73, Cecil http://www.qsl.net/w5dxp

> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote:
>>Cec et al, what have circulators, S-parameters, etc. to do with HF ?

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2653. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 21:07:55 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <Lo8sc.2300$qc6.2263@newssvr22.news.prodigy.com>
Source record: 94808

Then why can high SWR on a TV Tx cauuse ghosts or smearing on the TV Rx?
Hank WD5JFR
"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b111d1_4@corp.newsgroups.com...
> Henry Kolesnik wrote:
> > Not much but neither does much of this thread regarding my original
query.
>
> They have a lot to do with the subject of the thread. :-)
>
> > I hope someone that understands the question can answer in a way that my
> > feeble brain can comprehend. At least we're eliminating what's not the
> > answer.
>
> Back a dozen years ago, or so, Mr. Bruene tried to 'ping' a final
> amp with a slightly off-frequency signal to ascertain the output
> impedance of the amp and he published his results in QST. His apparent
> error was that he didn't do it at the frequency of operation of the
> amp and he didn't know what the 'Q' of a final amp really is. There
> has been a running argument ever since, probably best documented in
> QEX magazine. There are basically two sides to the argument.
>
> 1. If load-pulling causes a falloff of power on each side of the
> operating point, then the system is conjugately matched. That
> conjugate match includes such things as non-dissipative resistances.
>
> 2. Conjugate matches do not exist in a typical amateur system.
>
> Brilliant minds have been trying to prove one or the other and
> both sides (IMO) have failed in that proof. There is no final,
> definitive proof of either position. If there was such, there
> would be no argument. That's why we cannot answer
> your question. The picture is further clouded by a definition.
> If reflected energy makes its way back into the final amp, it
> was never generated in the first place, by definition.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
> > "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote:
> >>Cec et al, what have circulators, S-parameters, etc. to do with HF ?
>
>
>

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2654. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 21:16:33 UTC
From: Dave <noone@nowhere.com>
Message-ID: <-KadnVx_o-gqiSzd4p2dnA@crocker.com>
Source record: 94809

probably because the meter is not measuring what you think it is. remember,
vswr meters are meant to be showing what the vswr is in a transmission line
of a given characteristic impedance. they are not impedance meters, nor are
they proper power meters even though they are often calibrated in watts...
they are only accurate in the specific characteristic impedance system they
were 'calibrated' for... and then only roughly in most cases. if you want
to make proper measurements give up on the vswr meter and measure the
voltage or current with an oscilloscope or properly calibrated rf voltmeter.

"Lord Snooty" <bonzo@dog.com> wrote in message
news:g78sc.7507$be.2923@newsread2.news.pas.earthlink.net...
> Sorry everyone, but I just retested with no cable and the results I obtain
are
> precisely the same. The coax cable was only 26" long anyway.
> So forget about that transmission line stuff. It's irrelevant here. What I
> want to know is why the VSWR indications are the way they are.
>
> If anyone's interested, I can email a small spreadsheet that deals with
this
> simple circuit (V0->R->jX->r->jx) and allows you to set
> a) R,X and r, and vary x
> b) R,X and x, and vary r.
> I plot side by side on the two corresponding graphs
> - modulus of total load voltage
> - modulus of load resistor voltage
> - modulus of load reactance voltage
> - power dissipated in load resistor
> - VSWR between source and load
> - "conjugate VSWR" between source and load.
>
> One more time with feeling -
> What I want to know is why the VSWR indications are the way they are.
>
> Best,
> Andrew
>
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> news:40b0cfc0_2@corp.newsgroups.com...
> > Dave wrote:
> > > nope, all done. reg is here and cecil can't be far behind. i've had
my
> > > fun, time to do other more productive things than watch them re-hash
> > > conjugal matches for the next month or two.
> >

> > I guess I need to say this again. My take on discussions of conjugate
> > matching in ham antenna systems is that it is a waste of time. If
reflected
> > energy is not allowed to reach the source, e.g. typical ham Z0-matched
> > systems, the source impedance is irrelevant and doesn't affect anything
> > in the system except for efficiency.
> > --
> > 73, Cecil http://www.qsl.net/w5dxp
> >
> >
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>

2655. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 21:19:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2e32b0t43uuehfbi5aabaarilkf28r1oe0@4ax.com>
Source record: 94810

On Sun, 23 May 2004 20:42:59 GMT, "Lord Snooty" <bonzo@dog.com> wrote:

>
>The amp is single-ended out of an MRF136, so I presume it's Class A. The amp's
>designation is H-10 (I bought it surplus). It's rated at around 15W, 0.1 - 30
>MHz. The circuit diagram shows no hint of current limiting circuitry.
>
>If one is serious about proper design of a matching network - a network, I
>might add, which attaches *directly* (near as dammit) to the Tx output - then
>one is all at sea without a proper knowledge of source impedance. See my
>comments in the other thread about this.

Hi Andrew.

Specification sheets respond to these issues quite well. The MRF136
is a 400MHz device, normally offering 15W max with about 16dB gain at
28Vdc (although rated higher) in a class A configuration (showing
about 60% efficiency).

As would be expected, it covers a lot of turf. In the HF, the output
Z runs easily near 50 Ohms in push-pull circuit configurations;
otherwise it is simpler to describe it in the teens to tens of Ohms
across any number of variables you do not disclose (like frequency,
the actual configuration, additional interface components). 1 - 10
MHz does not bode well towards the best implementation of an UHF
device.

Load pulling is vastly simpler than S-parameters (also specified in
the data sheets for this device, down to 1MHz), why you want to marry
the two is a mystery.

73's
Richard Clark, KB7QHC

2656. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 21:20:50 UTC
From: Dave <noone@nowhere.com>
Message-ID: <_rSdnWWfeeoliCzdRVn-vA@crocker.com>
Source record: 94811

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b0fdf4$1_3@corp.newsgroups.com...
> Dave wrote:
>
> > "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
> >>What I am willing to discuss in detail is what happens at a Z0-match
> >>point (x) in an antenna system with reflections - something like the
> >>following:
> >
> > what you are willing to discuss is irrelevent as it has nothing to do
with
> > the original topic which was about what happens in the transmitter.
>
> Uhhhh Dave, the original topic is the Subject: line. If anything,
> what happens inside a transmitter is the irrelevant subject since
> appreciable reflections hardly ever reach the typical ham transmitter.
>

here is the original:

I know that any power not dissipated by an antenna is reflected back to the
transmitter. Then the transmitter "reflects" this reflection back to
antenna, ad nauseum until its all gone. I also know that a short or an open
is required to reflect power and I'm searching for which it is, an open or a
short. I'm inclined to think it's a virtual open but I'm at a loss to
understand that and I wonder if someone has a good explanation or analogy
and some math wouldn't hurt.
tnx
Hank WD5JFR

obviously not about what is going on at some contrived transmission line
joint.

> >>For these typical conditions, all voltages and currents are either
> >>in-phase or 180 degrees out of phase at the match point (x), which
> >>makes a power analysis the most simple analysis of all.
> >
> > that should read "For these specific conditions", those conditions are
> > hardly 'typical', they are a very exactly contrived example which makes
it
> > easy to compare powers.
>
> No, those are typical conditions, where the ham radio antenna system
> is tuned to a Z0-match by a tuner, either external or internal. It is
> not a "very exactly contrived example" at all. It is absolutely typical

> of any ham radio installation where the final amp sees close to a 1:1 SWR
> and that is the great majority. At the Z0-match point at the input of
> every properly tuned transmatch, the voltages and currents are either in
> phase or 180 degrees out of phase. If you don't know that, it is no
> wonder that you label my power analysis stuff as "contrived".

of course it is contrived. no one uses loads of those exact impedances, or
lengths of coax like you do.

2657. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 21:22:12 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8r4m4$p2c$1@titan.btinternet.com>
Source record: 94812

Henry, the trouble is nobody can understand your questions. This is because a "conjugate match" is not relevant. And that's because the internal impedance of the transmitter is an unknown quantity.

The sole purpose of the so-called SWR meter is to indicate whether or not transmitter is loaded with 50 ohms.

Can anyone suggest what else it USEFULLY indicates? What else does anyone need to know?

Reg, G4FGQ

"Henry Kolesnik" wrote
> Not much but neither does much of this thread regarding my original query.
> I hope someone that understands the question can answer in a way that my
> feeble brain can comprehend. At least we're eliminating what's not the
> answer.
> 73
> Hank WD5JFR
>
> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> news:c8qupg$q91$1@hercules.btinternet.com...
> > Cec et al, what have circulators, S-parameters, etc. to do with HF ?
> >
> >
>
>

2658. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 21:49:41 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <V%8sc.4$607.0@newssvr22.news.prodigy.com>
Source record: 94813

My original question nor any subsequent questions included or even hinted
"conjugate match." SWR was not in the original question either but later as
it applies to ghosting or smearing transmitted TV pix. Again is it an open,
or short and if not what is it or can't it be explain becasue no one knows?
I guess may Sunday is a day of relaxation for minds that know!
73
Hank WD5JFR
"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c8r4m4$p2c$1@titan.btinternet.com...
> Henry, the trouble is nobody can understand your questions. This is
because
> a "conjugate match" is not relevant. And that's because the internal
> impedance of the transmitter is an unknown quantity.
>
> The sole purpose of the so-called SWR meter is to indicate whether or not
> transmitter is loaded with 50 ohms.
>
> Can anyone suggest what else it USEFULLY indicates? What else does anyone
> need to know?
> ----
> Reg, G4FGQ
>
>
> "Henry Kolesnik" wrote
> > Not much but neither does much of this thread regarding my original
query.
> > I hope someone that understands the question can answer in a way that my
> > feeble brain can comprehend. At least we're eliminating what's not the
> > answer.
> > 73
> > Hank WD5JFR
> >
> > "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> > news:c8qupg$q91$1@hercules.btinternet.com...
> > > Cec et al, what have circulators, S-parameters, etc. to do with HF ?
> > >
> > >
> >
> >
>
>

2659. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 21:59:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b11f84$1_4@corp.newsgroups.com>
Source record: 94814

Henry Kolesnik wrote:
> Then why can high SWR on a TV Tx cauuse ghosts or smearing on the TV Rx?

Hank, You're preaching to the choir, asking me that question.
I don't like that definition but if you poll the gurus on this
newsgroup, most will say that reflected power that is incident
upon the transmitter was never generated in the first place.
(Never mind the ghosting that they can see with their own eyes.)

Lots of steady-state ills can be swept under the rug by assuming
nothing but fixed frequency sine waves with zero modulation. A
guru's answer to you question is that "ghosting is not steady-
state". :-)
--
73, Cecil http://www.qsl.net/w5dxp

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2660. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:02:25 UTC
From: zeno <zeno@sonic.net>
Message-ID: <40B11F71.9A6C677@sonic.net>
Source record: 94815

If you wanted to get fancy you could maybe use this technique:

http://www.newyankee.com/getproduct3.cgi?0309

Bill K6TAJ

dada wrote:

> Hi.
> I have been thinking of making an antenna support (for center of dipole,
> support of Jpole, etc)
>
> Was thinking of using 3 4x4 pressure treated lumber 12 foot lengths.
>
> Put them in cement 4 inces aprt (cement will be approx 4x4x4 feet.
> Put 3 vertical 4x4 into cement about 2 feet.
> At top of 4x4, create a pivot point, and add 2 4x4s between the other 3.
>
> Add another at the top between the two, overlapping the 3 and 2 and 2
> and 1 4x4 by about 2 feet.
> Using 12 foot 4x4 that would give me about 30 feet.
> Will this work ? Would it stand without guying ?
> I plan to make this a tilt over at the top of the lower 3 4x4s, maybe
> extending the
> next tier of 2 4x4s with somthing on their bottoms to give more leverage
> for raising.
>
> Am I nuts ? (well.... I already know the anser to that... but will this
> work ?
>
> Thanks & 73
> Jow, WB2JQT, Newark Valley, NY

2661. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:02:47 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b12064_4@corp.newsgroups.com>
Source record: 94816

Richard Clark wrote:
> Load pulling is vastly simpler than S-parameters (also specified in
> the data sheets for this device, down to 1MHz), why you want to marry
> the two is a mystery.

A laboratory bench setup is simpler than a calculator and a couple
of sheets of paper? Egads Richard, s-parameter analysis was invented
in order to make things "vastly simpler" - and it does!
--
73, Cecil http://www.qsl.net/w5dxp

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2662. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:17:10 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hcm6sFbh5fiU1@uni-berlin.de>
Source record: 94817

RE: Quote below

Actually, it depends upon where that high SWR physically is located.

A dummy load with a 1.3:1 SWR connected directly at the tx output connector will not produce a visible ghost in the demodulated TV picture.

A 1.3:1 antenna SWR at the far end of more than about 500 feet of otherwise matched transmission line connected to that same transmitter WILL produce a visible ghost.

-RF

"Henry Kolesnik" wrote
> Then why can high SWR on a TV Tx cauuse ghosts or smearing on the TV Rx?

2663. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:17:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b123dc_4@corp.newsgroups.com>
Source record: 94818

Dave wrote:

> Cecil wrote:
>>Uhhhh Dave, the original topic is the Subject: line. If anything,
>>what happens inside a transmitter is the irrelevant subject since
>>appreciable reflections hardly ever reach the typical ham transmitter.
>>
> here is the original:

Are you saying that the original subject was wrong?

> of course it is contrived. no one uses loads of those exact impedances, or
> lengths of coax like you do.

Dave, have you ever heard of an example? What I posted is one
easy-to-understand example of virtually an infinite number of
possible examples of a Z0-match. If you like, here is another
example of a Z0-match:

XMTR------tuner---unknown length of feedline---unknown load
100W-->
<--0W

There is a Z0-match at the input of the tuner. All the voltages
and all the currents are very close to in-phase or 180 degrees
out of phase at the input of the tuner. Do you have the balls to
assert that the above configuration is "contrived"?

THE GREAT MAJORITY OF AMATEUR RADIO ANTENNA SYSTEMS ACHIEVE CLOSE
TO A Z0-MATCH!!! That means all the voltages and currents are close
to being in phase or 180 degrees out of phase. I'm sorry that technical
fact hairlips you. Since your hidden agenda is hidden, I can only
guess what it might be.
--
73, Cecil http://www.qsl.net/w5dxp

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2664. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:21:42 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b124d3_4@corp.newsgroups.com>
Source record: 94819

Reg Edwards wrote:
> Can anyone suggest what else it USEFULLY indicates?

It usefully indicates the vector sum of two voltages
proportional to the net voltage and net current. It
also usefully indicates the vector difference of the
two voltages proportional to the net voltage and net
current. Those are extremely useful indications for
the initiated. I agree it is not very useful for the
uninitiated. I trust that doesn't include you.
--
73, Cecil http://www.qsl.net/w5dxp

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2665. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:24:59 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b12598_4@corp.newsgroups.com>
Source record: 94820

Henry Kolesnik wrote:
> ... can't it be explained because no one knows?

So far, it cannot be proven one way or another, so I guess
you would be safe in assuming that "no one knows for sure".
There are many opinions, none of which can be proven (yet).
--
73, Cecil http://www.qsl.net/w5dxp

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2666. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:29:00 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b12688_4@corp.newsgroups.com>
Source record: 94722

Richard Fry wrote:
> A dummy load with a 1.3:1 SWR connected directly at the tx output connector
> will not produce a visible ghost in the demodulated TV picture.

Of course, a same-cycle reflection has virtually no effect on ghosting.

> A 1.3:1 antenna SWR at the far end of more than about 500 feet of otherwise
> matched transmission line connected to that same transmitter WILL produce a
> visible ghost.

Of course, a different-cycle reflection is what causes ghosting.
--
73, Cecil http://www.qsl.net/w5dxp

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2667. Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:31:25 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <hPOdnRXC4cehuyzd4p2dnA@adelphia.com>
Source record: 94721

I'm a tad confused about this "reflected power" thing.

I've heard some statements that reflected power is something like shining a light at a mirror.

But if the power is truly reflected, would not this be an easily quantifiable thing?

Let's say a signal goes down a wire, "sees a mismatch" and is reflected from the end. IIRC, light travels around a foot in a nanosecond. So if you have an 80 meter dipole, and send out a mismatched signal, should not you get the reflection back to the source in a quantifiable time? That the signal isn't going quite that fast is only a measurement help. The reflected signal would be delayed significantly, no?

I can easily visualize the idea that an antenna needs to be matched to a transmitter, either through the antenna's natural impedance, or through a network that makes it look like it is. Deviations on either side of the impedance will cause problems, just as they will with other systems that are expecting a particular load and getting something different. But the idea of signals being actually reflected seems hard to swallow.

I'm a real dilettante in these matters, but why would a signal be reflected if the impedance was incorrect, and not if it was correct?

Possibly I'm saying some pretty stupid things here.

- Mike KB3EIA -

2668. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:35:39 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b12818_4@corp.newsgroups.com>
Source record: 94723

Mike Coslo wrote:
> I'm a real dilettante in these matters, but why would a signal be
> reflected if the impedance was incorrect, and not if it was correct?

Dunno why, but that's just the way it is. To see for yourself,
feed a 75 ohm TV through 1000 ft. of 75 ohm coax. Then feed
the same TV through 1000 ft. of 600 ohm ladder-line. How do
you explain no ghosting in the first case and lots of ghosting
in the second case? Seeing is believing.
--
73, Cecil http://www.qsl.net/w5dxp

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2669. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:38:02 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8r94ahqb1@sparta.btinternet.com>
Source record: 94724

Sorry Henry. I confused your query with what's going on in another thread.

Short circuits and open circuits result in reflection coefficients of -1 and
+1 respectively.

Reg

2670. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:42:05 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <PuWdnahfssYgtSzdRVn-hA@adelphia.com>
Source record: 94725

Cecil Moore wrote:

> Reg Edwards wrote:
>
>> Reflected power is a mere fiction. Power which is not radiated from an
>> antenna never actually arrives there. In fact it never leaves the
>> transmitter.
>
>
> Therefore, radar cannot work since it relies upon reflected
> joules/second. Mirrors also cannot work since there is an ExB
> amount of power in those reflections.

I made note of this in a thread I just started. Is this a good analogy?
Certainly the signal goes out, hits something and then comes back.
Wouldn't this scramble the signal by some definable amount in an antenna?

> Reg, for a 291.5 ohm antenna to accept 100 watts requires the forward
> power to the antenna to be 200 watts. 100 watts is accepted by the
> antenna and 100 watts is rejected by the antenna. 200 watts to the
> antenna is routinely accomplished by a 100 watt ham transmitter and
> a Z0-match provided by a tuner.
>
> This is exactly like a partially silvered mirror that reflects half
> the irradiance and allows half the irradiance through.
>
> Assume a one second long lossless unterminated transmission line.
> Pour 1000 watts into it for one second. During the next second, we
> disconnect the line from the source and you grab the two wires, one
> in each hand. Then tell us whether reflected power exists or not.

All we have to do is get an antenna that is 186,347.3233361 miles long.
Or would that be 122,989.233401 miles?

At any rate, the answer should be pretty easy to verify by using a very
long but practical sized antenna. Anyone done that?

- Mike KB3EIA -

2671. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:43:44 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <PuWdnatfssaCtCzdRVn-hA@adelphia.com>
Source record: 94726

Cecil Moore wrote:

> Assume a one second long lossless unterminated transmission line.
> Pour 1000 watts into it for one second. During the next second, we
> disconnect the line from the source and you grab the two wires, one
> in each hand. Then tell us whether reflected power exists or not.

So if we had an infinitely long antenna, would the power put into it
last forever?

- Mike KB3EIA -

2672. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:56:19 UTC
From: * <*@*.com>
Message-ID: <2hcob7Fbe02iU1@uni-berlin.de>
Source record: 94727

They make an instrument called a Time Domain Reflectometer,
you hook it up to transmission lines and it sends out a pulse
and times how long it takes to get back.
The time it takes, reflected pulse polarity, and height says a lot about the
line.
Used for finding faults on telco/cable lines.
Does the same thing with RF lines.
Matched well, no pulse, but you can even see connectors on some of these
TDR's
Googleit, too

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b12818_4@corp.newsgroups.com...
> Mike Coslo wrote:
> > I'm a real dilettante in these matters, but why would a signal be
> > reflected if the impedance was incorrect, and not if it was correct?
>
> Dunno why, but that's just the way it is. To see for yourself,
> feed a 75 ohm TV through 1000 ft. of 75 ohm coax. Then feed
> the same TV through 1000 ft. of 600 ohm ladder-line. How do
> you explain no ghosting in the first case and lots of ghosting
> in the second case? Seeing is believing.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
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2673. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 22:58:42 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <s3b2b0tatq20qcpnl5dq2mn0b4s86maqt6@4ax.com>
Source record: 94728

On Sun, 23 May 2004 21:19:23 GMT, Richard Clark <kb7qhc@comcast.net>
wrote:

[snip

|in a class A configuration (showing
|about 60% efficiency).

Huh?

2674. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:01:37 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0405231501.6ba66a34@posting.google.com>
Source record: 94729

It's true that even a simple DC battery circuit can be described in terms of incident and reflected power, SWR, and reflection coefficients, but that's very unrealistic when trying to conceptually understand what's going on.

I suppose a point that I'm making is that understanding how to match a source with a load doesn't have much to do with reflections and standing waves although, again, it can certainly be described (unrealistically) that way.

Take the case of a transmitter and an antenna connected together with a two-port black box between them, and that black box happened to contain a transmission line. That unseen transmission line has standing waves and reflections (assuming a mismatched condition), losses, etc. all contained within the box. However, the transmitter only sees a steady state complex impedance when looking into the box (at a single frequency). Obviously there's some conjugate matching that needs to take place for maximum power transfer, but there are no reflections or standing waves involved outside the box -- unless transmission line stubs are used for matching.

In short, transmission lines have reflections and standing waves, and as a "black box" they affect how the load is seen by the source. But extending the power reflection concept outside of that black box only confuses things, even though it works mathmatically.

Al

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message news:<40b0e228$1_3@corp.newsgroups.com>...
> alhearn wrote:
> > Herein lies one of the big problems with the "reflection" definition,
> > conceptually.
>
> That's why I often resort to a signal generator with a circulator/load
> to illustrate my point. That signal generator *is* a constant power
> source.
>
> > Therefore, what is commonly called "reflected power" is power that
> > never leaves the transmitter and is dissipated as heat by the
> > transmitter's internal 50 ohm impedance (if the transmitter's design
> > doesn't prematurely shut down first).
>
> You can mount an argument that if the source doesn't see its
> source impedance, then there is a reflection at that internal
> mismatch. But that's not what is commonly called reflected power.

>
> When we talk about reflected power on this newsgroup, we are usually
> referring to the forward power rejected by a mismatch between the
> transmission line Z0 and the antenna impedance (associated with mismatch
> loss). In a typical ham radio antenna system, the "lost" reflected power
> is forced to engage in destructive interference at the tuner and thus
> joins the forward power wave.

2675. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:09:38 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b13010_2@corp.newsgroups.com>
Source record: 94730

Mike Coslo wrote:
>
> Cecil Moore wrote:
>> Therefore, radar cannot work since it relies upon reflected
>> joules/second. Mirrors also cannot work since there is an ExB
>> amount of power in those reflections.
>
> I made note of this in a thread I just started. Is this a good
> analogy? Certainly the signal goes out, hits something and then comes
> back. Wouldn't this scramble the signal by some definable amount in an
> antenna?

Of course, but the point is that there exists energy as power, ExH,
in the reflected wave. If there is no energy in a reflected wave,
radar wouldn't work. Anyone who says there is no energy in a
reflected wave is just pulling your leg.

>> Assume a one second long lossless unterminated transmission line.
>> Pour 1000 watts into it for one second. During the next second, we
>> disconnect the line from the source and you grab the two wires, one
>> in each hand. Then tell us whether reflected power exists or not.
>
> At any rate, the answer should be pretty easy to verify by using a
> very long but practical sized antenna. Anyone done that?

Anyone who has ever used a TDR on a mismatched transmission line.
--
73, Cecil http://www.qsl.net/w5dxp

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2676. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:12:30 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b130bb$1_2@corp.newsgroups.com>
Source record: 94731

Mike Coslo wrote:

> Cecil Moore wrote:
>
>> Assume a one second long lossless unterminated transmission line.
>> Pour 1000 watts into it for one second. During the next second, we
>> disconnect the line from the source and you grab the two wires, one
>> in each hand. Then tell us whether reflected power exists or not.
>
> So if we had an infinitely long antenna, would the power put into it
> last forever?

It would have a feedpoint impedance of around 600 ohms and I
don't know how long it would have to be to eliminate reflections.
A terminated rhombic comes close to the characteristics of an
infinitely long antenna.
--
73, Cecil http://www.qsl.net/w5dxp

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2677. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:21:41 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <8sCdnXDEDd6YryzdRVn-gQ@adelphia.com>
Source record: 94732

* wrote:

> They make an instrument called a Time Domain Reflectometer,
> you hook it up to transmission lines and it sends out a pulse
> and times how long it takes to get back.
> The time it takes, reflected pulse polarity, and height says a lot about the
> line.
> Used for finding faults on telco/cable lines.
> Does the same thing with RF lines.
> Matched well, no pulse, but you can even see connectors on some of these
> TDR's
> Googleit, too

Fascinating stuff! Why don't we use them more for ham radio? this page:
http://www.epanorama.net/circuits/tdr.html even has a diagram for a
homebrew pulse source and diagrams for hooking up same to an
oscilloscope. While not giving SWR, it would show up any connector
faults and crimps in the cable.

- Mike KB3EIA -

2678. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:22:56 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b1332d$1_2@corp.newsgroups.com>
Source record: 94733

alhearn wrote:
> Take the case of a transmitter and an antenna connected together with
> a two-port black box between them, and that black box happened to
> contain a transmission line. That unseen transmission line has
> standing waves and reflections (assuming a mismatched condition),
> losses, etc. all contained within the box. However, the transmitter
> only sees a steady state complex impedance when looking into the box
> (at a single frequency).

That's a steady-state shortcut which assumes pure sine waves that
don't exist in reality. Please don't confuse steady-state shortcuts
with reality. Noise and modulation cause the "steady-state complex
impedance" not to be steady-state at all. Many will say it's close
enough, but one cannot understand reflections by assuming an un-
varying steady-state.

In a TV system with ghosting due to reflections, the unvarying steady-
state condition doesn't exist. In fact, when you assume steady-state
conditions, you eliminate ghosting, at least in your own mind. In
reality, steady-state doesn't really exist because of random noise
and unpredictable modulation.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2679. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:29:18 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <kbWdnQoYZ5BQrizdRVn-hQ@adelphia.com>
Source record: 94734

Bob Miller wrote:

> On Sun, 23 May 2004 14:16:47 -0400, Mike Coslo <mcoslo@adelphia.net>
> wrote:
>
>
>>
>>Bob Miller wrote:
>>
>>>On Sat, 22 May 2004 17:25:34 -0700, "CW" <clinton.magers@comcast.net>
>>>wrote:
>>>
>>>
>>>
>>>>I don't recall anyone in this thread claiming that Gore had said that he
>>>>invented the internet. Where did that come from?
>>>
>>>
>>>It came from you, sir:
>>>
>>>No, he just claimed he did.
>>>"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
>>>news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
>>>
>>>
>>>>Gore didn't invent the Internet, >
>>
>>
>> Aww, c'mon, Bob! CW didn't claim that Gore said he invented the
>>internet. He was just sayin....
>>
>> SPANK!
>>
>> - Mike -
>
>
> Sorry... I'm still ticked at the year 2000 Florida debacle...
>
> Gore should be President...

Hey, he lost fair and square.... 5-4!

- Mike -

2680. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:36:03 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <4cadnQT2KvPHqCzdRVn-vw@comcast.com>
Source record: 94735

"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:hPOdnRXC4cehuyzd4p2dnA@adelphia.com...
> I'm a tad confused about this "reflected power" thing.
>
> I've heard some statements that reflected power is something like
> shining a light at a mirror.
>
> But if the power is truly reflected, would not this be an easily
> quantifiable thing?
>
> Let's say a signal goes down a wire, "sees a mismatch" and is reflected
> from the end. IIRC, light travels around a foot in a nanosecond. So if
> you have an 80 meter dipole, and send out a mismatched signal, should
> not you get the reflection back to the source in a quantifiable time?
> That the signal isn't going quite that fast is only a measurement help.
> The reflected signal would be delayed significantly, no?
>
> I can easily visualize the idea that an antenna needs to be matched to
> a transmitter, either through the antenna's natural impedance, or
> through a network that makes it look like it is. Deviations on either
> side of the impedance will cause problems, just as they will with other
> systems that are expecting a particular load and getting something
> different. But the idea of signals being actually reflected seems hard
> to swallow.
>
> I'm a real dilettante in these matters, but why would a signal be
> reflected if the impedance was incorrect, and not if it was correct?
>
>
> Possibly I'm saying some pretty stupid things here.
>
> - Mike KB3EIA -

Mike,
If you really want to see reflections, forget all about sine waves and steady state. Connect a pulse generator with any output impedance, except 0, to a piece of coax. Monitor its output with a scope. Now set the pulse generator to put out pulses whose width is less than the delay time of the coax. Use any convenient rep rate for the pulse generator (1 KHz is good), and you will easily be able to tell forward going pulses from the reflected. You will also be able to tell how the far end cable termination determines how much of the pulse is reflected, and what their polarity is. You do *not* need a storage scope.

Tam/WB2TT.

>

2681. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:39:37 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <efednWoy9YWkqyzdRVn-sw@adelphia.com>
Source record: 94736

Tam/WB2TT wrote:

> "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> news:hPOdnRXC4cehuyzd4p2dnA@adelphia.com...
>
>>I'm a tad confused about this "reflected power" thing.
>>
>>I've heard some statements that reflected power is something like
>>shining a light at a mirror.
>>
>>But if the power is truly reflected, would not this be an easily
>>quantifiable thing?
>>
>>Let's say a signal goes down a wire, "sees a mismatch" and is reflected
>>from the end. IIRC, light travels around a foot in a nanosecond. So if
>>you have an 80 meter dipole, and send out a mismatched signal, should
>>not you get the reflection back to the source in a quantifiable time?
>>That the signal isn't going quite that fast is only a measurement help.
>>The reflected signal would be delayed significantly, no?
>>
>>I can easily visualize the idea that an antenna needs to be matched to
>>a transmitter, either through the antenna's natural impedance, or
>>through a network that makes it look like it is. Deviations on either
>>side of the impedance will cause problems, just as they will with other
>>systems that are expecting a particular load and getting something
>>different. But the idea of signals being actually reflected seems hard
>>to swallow.
>>
>>I'm a real dilettante in these matters, but why would a signal be
>>reflected if the impedance was incorrect, and not if it was correct?
>>
>>
>>Possibly I'm saying some pretty stupid things here.
>>
>>- Mike KB3EIA -
>
>
> Mike,
> If you really want to see reflections, forget all about sine waves and
> steady state. Connect a pulse generator with any output impedance, except 0,
> to a piece of coax. Monitor its output with a scope. Now set the pulse
> generator to put out pulses whose width is less than the delay time of the
> coax. Use any convenient rep rate for the pulse generator (1 KHz is good),
> and you will easily be able to tell forward going pulses from the reflected.

> You will also be able to tell how the far end cable termination determines
> how much of the pulse is reflected, and what their polarity is. You do *not*
> need a storage scope.

This should be fun, Tam. I have some known bad cable on a mobile
antenna. I'll have to add some more cable to it because it is so short,
but it will be fun to see how close I can get to the crimp in the cable.

- Mike KB3EIA -

2682. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:41:24 UTC
From: Dave <dave@telnet.com>
Message-ID: <EEasc.100588$536.18244092@attbi_s03>
Source record: 94737

Thank God Gore is not President! Our economy would really be in a mess.
Besides, I think he is too dumb to handle the likes of what's going on now.

"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:kbWdnQoYZ5BQrizdRVn-hQ@adelphia.com...
>
>
> Bob Miller wrote:
>
> > On Sun, 23 May 2004 14:16:47 -0400, Mike Coslo <mcoslo@adelphia.net>
> > wrote:
> >
> >
> >>
> >>Bob Miller wrote:
> >>
> >>>On Sat, 22 May 2004 17:25:34 -0700, "CW" <clinton.magers@comcast.net>
> >>>wrote:
> >>>
> >>>
> >>>
> >>>>I don't recall anyone in this thread claiming that Gore had said that
he
> >>>>invented the internet. Where did that come from?
> >>>
> >>>
> >>>It came from you, sir:
> >>>
> >>>No, he just claimed he did.
> >>>"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
> >>>news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
> >>>
> >>>
> >>>>Gore didn't invent the Internet, >
> >>
> >>
> >> Aww, c'mon, Bob! CW didn't claim that Gore said he invented the
> >>internet. He was just sayin....
> >>
> >> SPANK!
> >>
> >> - Mike -
> >
> >
> >

> > Sorry... I'm still ticked at the year 2000 Florida debacle...
> >
> > Gore should be President...
>
> Hey, he lost fair and square.... 5-4!
>
> - Mike -
>

2683. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:45:42 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <GIasc.100619$536.18249074@attbi_s03>
Source record: 94738

I thought he was brighter than Kerry!

Dave wrote:

> Thank God Gore is not President! Our economy would really be in a mess.
> Besides, I think he is too dumb to handle the likes of what's going on now.
>
>
> "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> news:kbWdnQoYZ5BQrizdRVn-hQ@adelphia.com...
>
>>
>>Bob Miller wrote:
>>
>>
>>>On Sun, 23 May 2004 14:16:47 -0400, Mike Coslo <mcoslo@adelphia.net>
>>>wrote:
>>>
>>>
>>>
>>>>Bob Miller wrote:
>>>>
>>>>
>>>>>On Sat, 22 May 2004 17:25:34 -0700, "CW" <clinton.magers@comcast.net>
>>>>>wrote:
>>>>>
>>>>>
>>>>>
>>>>>>I don't recall anyone in this thread claiming that Gore had said that
>
> he
>
>>>>>>invented the internet. Where did that come from?
>>>>>
>>>>>
>>>>>It came from you, sir:
>>>>>
>>>>>No, he just claimed he did.
>>>>>"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
>>>>>news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
>>>>>
>>>>>
>>>>>
>>>>>>Gore didn't invent the Internet, >

>>>>
>>>>
>>>>Aww, c'mon, Bob! CW didn't claim that Gore said he invented the
>>>>internet. He was just sayin....
>>>>
>>>>SPANK!
>>>>
>>>>- Mike -
>>>
>>>
>>>Sorry... I'm still ticked at the year 2000 Florida debacle...
>>>
>>>Gore should be President...
>>
>>Hey, he lost fair and square.... 5-4!
>>
>>- Mike -
>>
>
>
>

2684. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:50:02 UTC
From: tdonaly@aol.com
Message-ID: <20040523195002.08318.00001571@mb-m11.aol.com>
Source record: 94739

Cecil wrote,
>
>Richard Clark wrote:
>> Load pulling is vastly simpler than S-parameters (also specified in
>> the data sheets for this device, down to 1MHz), why you want to marry
>> the two is a mystery.
>
>A laboratory bench setup is simpler than a calculator and a couple
>of sheets of paper? Egads Richard, s-parameter analysis was invented
>in order to make things "vastly simpler" - and it does!
>--
>73, Cecil http://www.qsl.net/w5dxp
>
>

S-parameters are supposed to work best on small-signal analysis, where
everything is fairly linear. In this case, the MRF 136 is a power fet and
Motorola
says you can use s-parameters as a first approximation. In the data sheet, they
provide a list
of common source scattering parameters from 2.0 Mhz up to 800 Mhz. I suppose
that's useful to someone familiar with s-parameter techniques.
73,
KA6RUH

2685. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-23 23:55:35 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <rZ6dnRggtsdzpCzd4p2dnA@comcast.com>
Source record: 94740

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b13010_2@corp.newsgroups.com...
> .....
> Of course, but the point is that there exists energy as power, ExH,
> in the reflected wave. If there is no energy in a reflected wave,
> radar wouldn't work. Anyone who says there is no energy in a
> reflected wave is just pulling your leg.
>
But its not free. If you tap it, it won't be there to re reflect. So, I think in the steady state you have changed the load impedance. BTW, (not a joke or sarcasm) Have you heard of Zero Point Energy? They calculate there is something like 10**26 Joules in a cubic meter of empty space.

Tam/WB2TT

2686. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 00:04:50 UTC
From: tdonaly@aol.com
Message-ID: <20040523200450.08318.00001572@mb-m11.aol.com>
Source record: 94741

Wes wrote,
>
>On Sun, 23 May 2004 21:19:23 GMT, Richard Clark <kb7qhc@comcast.net>
>wrote:
>
>[snip
>
>|in a class A configuration (showing
>|about 60% efficiency).
>
>Huh?
>

The data sheet doesn't say it gets 60% efficiency in a class A
configuration. It just says, under one bullet, that "Efficiency = 60%."
Further down the column it says, "Ideally Suited For Class A
Operation."
73,
Tom Donaly, KA6RUH

2687. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 00:09:54 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <zPCdnSVX5K_UoCzdRVn-vw@comcast.com>
Source record: 94742

"Richard Fry" <rfry@adams.net> wrote in message
news:2hcf8gFbg4lrU1@uni-berlin.de.....
.....
> RE: Concept below
>
> However this is not an accurate model of a transmitter.
>
> For an example, take an old Heathkit DX-100 generating a measured 180
watts
> of CW RF into a matched 50 ohm load. To do this, it does NOT also
dissipate
> 180 watts of RF into some "virtual" internal RF load in the DX-100. In
> fact, the PAs and power supply in the DX-100 could not produce a total RF
> output power of 360 watts without exceeding their ratings.
>
> The dissipation in the PA is essentially related only the DC to RF
> conversion efficiency of the PA, which in this case probably is about 75%,
> max (Class C). So a PA input power of about 240 watts DC is required to
> produce 180 watts of RF output power. The other 60 watts of plate input
> power is converted to heat by the PA tube anodes.
>
> The entire RF output generated by the PA stage is applied virtually 100%
to
> the output connector. How much of that is absorbed by the load connected
> there is a function of load SWR and system losses.
>
> - RF
There is a Motorola ap note that agrees with what Richard is saying. To
paraphrase it, if the the DX100 had an output impedance of 50 Ohms, then the
overall efficiency would be 37.5%.
.....

2688. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 00:25:30 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b141d5$1_8@corp.newsgroups.com>
Source record: 94743

Tdonaly wrote:
> S-parameters are supposed to work best on small-signal analysis, where
> everything is fairly linear.

Therefore, should work well on transmission-line analysis, where
everything is linear.
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2689. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 00:36:16 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <VOKdnWGnktfq3izdRVn-vA@comcast.com>
Source record: 94744

Aviation Week & Space Technology. March 1, 2004. P50.

Tam

2690. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 00:36:20 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b1445f_8@corp.newsgroups.com>
Source record: 94745

Tam/WB2TT wrote:

> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>>Of course, but the point is that there exists energy as power, ExH,
>>in the reflected wave. If there is no energy in a reflected wave,
>>radar wouldn't work. Anyone who says there is no energy in a
>>reflected wave is just pulling your leg.
>>
> But its not free. If you tap it, it won't be there to re reflect. So, I
> think in the steady state you have changed the load impedance.

Moral: don't use it up, just use a negligible portion for measurement
purposes. A Bird wattmeter consumes very little actual power.

> BTW, (not a
> joke or sarcasm) Have you heard of Zero Point Energy? They calculate there
> is something like 10**26 Joules in a cubic meter of empty space.

Yes, some people think that is the energy being measured, off and on,
in the cold fusion experiments. The question is: If one taps into
the energy being used to support the structure of space itself,
what happens to that space structure? IMO, space is the result of
the annihilation of matter and anti-matter in the early universe
and certainly still contains that annihilation energy.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2691. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 01:24:33 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b14ea5$0$435$5cbedd26@news.real-time.com>
Source record: 94746

Richard Clark wrote:

> Hi Ian,
>
> Perhaps in this immediate thread. However, I have demonstrated both
> sides coming to the same conclusions several many times, and one
> example as recently as within this last week.
>
> This issue is not about being right, it is about ego foremost else why
> all the debate? Hank has asked a fairly straightforward question
> with rather simple terms he could accept as a compelling case. To
> this point (some 22 entries) that has been largely abandoned with each
> scribbler answering their own imagining of how to discover the
> philosopher's stone.
>
> 73's
> Richard Clark, KB7QHC

I haven't been here terribly long, maybe 6 weeks, but I have noticed that your comment applies to around half of the threads longer than 4 or so comments.

A better ratio than many newsgroups, and people seem to have a sense of humor, which a lot of other newsgroup's participants decidedly do not. So, all in all, it could be worse.

tom
K0TAR

2692. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 01:49:00 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <iKWdnfRZwbcXySzdRVn-jg@adelphia.com>
Source record: 94747

Tom Ring wrote:

> Richard Clark wrote:
>
>> Hi Ian,
>>
>> Perhaps in this immediate thread. However, I have demonstrated both
>> sides coming to the same conclusions several many times, and one
>> example as recently as within this last week.
>>
>> This issue is not about being right, it is about ego foremost else why
>> all the debate? Hank has asked a fairly straightforward question
>> with rather simple terms he could accept as a compelling case. To
>> this point (some 22 entries) that has been largely abandoned with each
>> scribbler answering their own imagining of how to discover the
>> philosopher's stone.
>>
>> 73's
>> Richard Clark, KB7QHC
>
>
> I haven't been here terribly long, maybe 6 weeks, but I have noticed
> that your comment applies to around half of the threads longer than 4 or
> so comments.
>
> A better ratio than many newsgroups, and people seem to have a sense of
> humor, which a lot of other newsgroup's participants decidedly do not.
> So, all in all, it could be worse.

That's very true, Tom. Even with the egos, the civility level is
pretty high in here. Of course that is probably why the fringe elements
don't hang out here.

- Mike KB3EIA -

2693. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 02:02:20 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0405231802.48b0c267@posting.google.com>
Source record: 94748

Hank:

Aren't you confusing the reflections that a TV signal experiences when
it bounces off nearby buildings and structures (causing ghosts) with
transmission line refections -- two entirely different things.

Al

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:<lz1sc.2208$jq7.1749@newssvr22.news.prodigy.com>...
> If this old mind recalls correctly a TV station with an undesireable SWR
> will not transmit a clear image to its viewers because the delayed
> re-reflection arrives at the TV set later and casues a ghost or smear.
> Could you please explain the "Reflected power is a mere fiction." and the
> smear or ghost?
>
> tnx
> Hank WD5JFR
> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> news:c8peg8$5ft$1@titan.btinternet.com...
> >
> > "Richard Clark" wrote:
> > > What you describe as reflection and re-reflection occurs between the
> > > mismatched antenna and the tuner that has been adjusted to minimize
> > > power returned to the transmitter. The sole function of the tuner is
> > > to keep this power from being dissipated by the transmitter (common
> > > experience of arcing, denoting a voltage reflection, or thermal
> > > runaway, denoting a current reflection). The "virtual" reflection
> > > (offered by the tuner) is generally know as the complex conjugate of
> > > the remote load, seen at the near end of the line through which it is
> > > returning. This means that the line transforms the phase and
> > > amplitude of the reflection, and the tuner's job is to invert that
> > > relationship to counteract it, and return it to the antenna.
> > >
> > > There are both wave descriptions of this process, and lumped circuit
> > > equivalents. Both work, and both describe the same process from
> > > different points of view. One does not negate the other's validity
> > > (unless, of course, you attempt to mix the points of view and demand
> > > consistency in terms - a frequent rhetorical trap here).
> > >
> > > There will no doubt be a flurry of denials to this simple example with
> > > contortions of logic to match. As for the math, you will find it by
> > > the reams, once you've been overwhelmed with the arcana of hyperbolic
> > > descriptions of a novel physics that have to proceed its proof.
> > >

> > > Keep your eye on how your literal points in your question go abandoned
> > > with these arcane theories.
> > >
> > > 73's
> > > Richard Clark, KB7QHC
> > ==========
> >
> > Dear Richard, you are confusing the matter even further, if that were
> > possible.
> >
> > The only saving grace about your tedius message is that you yourself
> > eventually realise what a load of overcomplicated nonsense it is.
> >
> > Reflected power is a mere fiction. Power which is not radiated from an
> > antenna never actually arrives there. In fact it never leaves the
> > transmitter.
> >
> > All the power which leaves the transmiter is radiated except for that
> which
> > is lost in the line. It has nowhere else to go!
> >
> > But for the existence of so-called SWR meters, the words 'forward and
> > reflected power' would never enter people's vocabularies. For the few who
> > become involved with such matters, the misleading fiction also appears in
> > the language of mathematics.
> >
> > Names have to be invented in order to discuss mathematical equations in
> > plain English. But there's no reason why they should be propagated, just
> to
> > confuse, into the real World.
> >
> > The sole purpose of an SWR meter is to indicate whether or not the
> > transmitter is loaded with 50 ohms.
> > ----
> > Reg, G4FGQ
> >
> >

2694. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 02:41:56 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <Uhdsc.52700$pJ1.24834@lakeread02>
Source record: 94749

"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:kbWdnQoYZ5BQrizdRVn-hQ@adelphia.com...
>
>
> Bob Miller wrote:
>
> > On Sun, 23 May 2004 14:16:47 -0400, Mike Coslo <mcoslo@adelphia.net>
> > wrote:
> >
> >
> >>
> >>Bob Miller wrote:
> >>
> >>>On Sat, 22 May 2004 17:25:34 -0700, "CW" <clinton.magers@comcast.net>
> >>>wrote:
> >>>
> >>>
> >>>>I don't recall anyone in this thread claiming that Gore had said that
he
> >>>>invented the internet. Where did that come from?
> >>>
> >>>
> >>>It came from you, sir:
> >>>
> >>>No, he just claimed he did.
> >>>"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
> >>>news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
> >>>
> >>>
> >>>>Gore didn't invent the Internet, >
> >>
> >>
> >> Aww, c'mon, Bob! CW didn't claim that Gore said he invented the
> >>internet. He was just sayin....
> >>
> >> SPANK!
> >>
> >> - Mike -
> >
> >
> > Sorry... I'm still ticked at the year 2000 Florida debacle...
> >
> > Gore should be President...

>
> Hey, he lost fair and square.... 5-4!
>
> - Mike -
>

Is there a human being alive today that questions what 50 recounts came up with everytime, that Gore NEVER won that state, no matter who counts it, he lost every time, by every tally.

Jack

2695. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 02:47:47 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <ondsc.52701$pJ1.9973@lakeread02>
Source record: 94750

"Fractenna" <fractenna@aol.com> wrote

> >Chip, how did we digress to comparing a "high B&W" to a "low dipole"?
When
> >the two are each at their optimal height (and why would we ever compare
> >anything else..) then the dipole has it all over a B&W. I use my (amost
1/2
> >wave height) dipole only for DX, without a tuner on it's two resonant
> >frequencies and with a tuner on two bands well above, with amazing
results.
> >5, 8, 11 and 15 mhz to Alaska, Equador, Venezuela and Canadian Maritimes,
if
> >that qualifies as "DX".
> >
> >73
> >
> >Jack Painter
> >Virginia Beach, Va
> >
>
> Hi Jack,
>
> It seems relevant to me in two big contexts: (1) why do some folks do well
> (relatively) with the BW antenna; (2) what does it replace?
>
> My response clearly explains (1). In the case of (2), I can think of many
> circumstances where it is preferable to put one dipole (BW) up high than a
slew
> of dipoles up high. If you have neighbors, you know what I mean:-)
>
> Don't know what DX is to me anymore; I have DXCC #1 Honor Roll and haven't
been
> active on the low bands in several years. To someone else, DX is what you
> haven't heard or worked yet:-) I say go for it.
>
> Some folks don't live in a perfect world, Jack, and its good to know when
a
> compromise is a true degradation.
>
> A BW antenna, up high, is a good antenna for DX across many bands. It is
hardly
> a dummy load.
>
> Hope this helps on this question.

>
> 73,
> Chip N1IR

Hi Chip,

Yes it does help to hear it works reasonably well when other circumstances limit the options. I can't for instance squeeze more long dipoles up, but I could try one of the T2 varieties someday. Since the dipole I now have works across many bands well with a tuner, the B&W could never replace it, but it might augment it someday.

Cheers and thanks,

Jack Painter
Virginia Beach, Va

2696. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 02:53:08 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8ro2k$9oh$1@sparta.btinternet.com>
Source record: 94751

> It usefully indicates the vector sum of two voltages
> proportional to the net voltage and net current. It
> also usefully indicates the vector difference of the
> two voltages proportional to the net voltage and net
> current. Those are extremely useful indications for
> the initiated. I agree it is not very useful for the
> uninitiated. I trust that doesn't include you.
> --
> 73, Cecil
>

An SWR meter does NOT usefully indicate the vector sum of two voltages or the vector difference between two voltages. I've never seen a meter with such scales.

Even if it did, of what possible use would it be to anyone who is already reliably informed his transmitter is loaded with 50 ohms.

Reg, G4FGQ

2697. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 02:54:19 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <ioo2b0tqlps6toid6iog1sirt24p88f04i@4ax.com>
Source record: 94752

On Sun, 23 May 2004 23:41:24 GMT, "Dave" <dave@telnet.com> wrote:

>Thank God Gore is not President! Our economy would really be in a mess.
>Besides, I think he is too dumb to handle the likes of what's going on now.

Too dumb? Yes, and, of course, Mr. Bush is just the picture of a
bright, articulate man -- every time he holds a press conference, boy,
does he sound smart.

Bob
k5qwg

>
>
>"Mike Coslo" <mcoslo@adelphia.net> wrote in message
>news:kbWdnQoYZ5BQrizdRVn-hQ@adelphia.com...
>>
>>
>> Bob Miller wrote:
>>
>> > On Sun, 23 May 2004 14:16:47 -0400, Mike Coslo <mcoslo@adelphia.net>
>> > wrote:
>> >
>> >
>> >>
>> >>Bob Miller wrote:
>> >>
>> >>>On Sat, 22 May 2004 17:25:34 -0700, "CW" <clinton.magers@comcast.net>
>> >>>wrote:
>> >>>
>> >>>
>> >>>
>> >>>>I don't recall anyone in this thread claiming that Gore had said that
>he
>> >>>>invented the internet. Where did that come from?
>> >>>
>> >>>
>> >>>It came from you, sir:
>> >>>
>> >>>No, he just claimed he did.
>> >>>"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
>> >>>news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
>> >>>
>> >>>
>> >>>>Gore didn't invent the Internet, >

>> >>
>> >>
>> >> Aww, c'mon, Bob! CW didn't claim that Gore said he invented the
>> >>internet. He was just sayin....
>> >>
>> >> SPANK!
>> >>
>> >> - Mike -
>> >
>> >
>> > Sorry... I'm still ticked at the year 2000 Florida debacle...
>> >
>> > Gore should be President...
>>
>> Hey, he lost fair and square.... 5-4!
>>
>> - Mike -
>>
>

2698. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 03:07:41 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <YP6dnRoDw7hg-yzdRVn-jg@adelphia.com>
Source record: 94753

Jack Painter wrote:

> "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> news:kbWdnQoYZ5BQrizdRVn-hQ@adelphia.com...
>
>>
>>Bob Miller wrote:
>>
>>
>>>On Sun, 23 May 2004 14:16:47 -0400, Mike Coslo <mcoslo@adelphia.net>
>>>wrote:
>>>
>>>
>>>
>>>>Bob Miller wrote:
>>>>
>>>>
>>>>>On Sat, 22 May 2004 17:25:34 -0700, "CW" <clinton.magers@comcast.net>
>>>>>wrote:
>>>>>
>>>>>
>>>>>
>>>>>>I don't recall anyone in this thread claiming that Gore had said that
>
> he
>
>>>>>>invented the internet. Where did that come from?
>>>>>
>>>>>
>>>>>It came from you, sir:
>>>>>
>>>>>No, he just claimed he did.
>>>>>"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
>>>>>news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
>>>>>
>>>>>
>>>>>
>>>>>>Gore didn't invent the Internet, >
>>>>
>>>>
>>>>Aww, c'mon, Bob! CW didn't claim that Gore said he invented the
>>>>internet. He was just sayin....
>>>>

>>>>SPANK!
>>>>
>>>>- Mike -
>>>
>>>
>>>Sorry... I'm still ticked at the year 2000 Florida debacle...
>>>
>>>Gore should be President...
>>
>>Hey, he lost fair and square.... 5-4!
>>
>>- Mike -
>>
>
>
> Is there a human being alive today that questions what 50 recounts came up
> with everytime, that Gore NEVER won that state, no matter who counts it, he
> lost every time, by every tally.

Is there a human being alive today that questions that if the other
party lost while getting a majority of the votes, we wouldn't be looking
at a massive attempt to abolish the electoral college?

And there was a lot more going on there than the "official" results.

- Mike -

2699. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 03:09:56 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3mp2b0pemj0f5rd7nk24b4gfnu0ikt0pnp@4ax.com>
Source record: 94754

On 24 May 2004 00:04:50 GMT, tdonaly@aol.com (Tdonaly) wrote:

>Wes wrote,
>>
>>On Sun, 23 May 2004 21:19:23 GMT, Richard Clark <kb7qhc@comcast.net>
>>wrote:
>>
>>[snip
>>
>>|in a class A configuration (showing
>>|about 60% efficiency).
>>
>>Huh?
>>
>
>The data sheet doesn't say it gets 60% efficiency in a class A
>configuration. It just says, under one bullet, that "Efficiency = 60%."
>Further down the column it says, "Ideally Suited For Class A
>Operation."
>73,
>Tom Donaly, KA6RUH
>

Hi Guys,

I trust both of you appreciate the difference between a vaguely described system and trying to fit a spec sheet to it. Far easier to proceed direct from one or the other, but making a fit between the two is like stepping from one boat to another with a high chance of standing on neither.

73's
Richard Clark, KB7QHC

2700. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 03:12:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dtp2b05v08q4lldvvmo0obb96iacdvlchq@4ax.com>
Source record: 94755

On 23 May 2004 19:02:20 -0700, alhearn@earthlink.net (alhearn) wrote:

>Hank:
>
>Aren't you confusing the reflections that a TV signal experiences when
>it bounces off nearby buildings and structures (causing ghosts) with
>transmission line refections -- two entirely different things.
>
>Al

Hi Al,

No, he has it correct. There is no material difference between the
two except for the velocity constant (which has no bearing on the
matter).

73's
Richard Clark, KB7QHC

2701. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 03:14:58 UTC
From: dada <sman1@stny.rr.com>
Message-ID: <40B16B26.99D6B9E8@stny.rr.com>
Source record: 94756

Cecil Moore wrote:

> dada wrote:
> >
> > J999w wrote:
> >>Man, if you guy that thing, you could probably put a tribander on it !
> >
> > Yeah... that's the kicker. I don't want to guy it.
> >
> Use two of them at 90 degrees?

Two guys ? or 2 supports ?

Thanks
Joe WB2JQT

>
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2702. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 03:43:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1lq2b0172fq1jrta0eds4856eqcn1n1b5i@4ax.com>
Source record: 94757

On Sun, 23 May 2004 18:31:25 -0400, Mike Coslo <mcoslo@adelphia.net>
wrote:

>I'm a tad confused about this "reflected power" thing.
>
> I've heard some statements that reflected power is something like
>shining a light at a mirror.

Hi Mike,

It is more like shining light against a dirty window. Very few,
natural occurrences of reflection are total (make that zero if you go
out enough decimal places).

> But if the power is truly reflected, would not this be an easily
>quantifiable thing?

The concept is easy, the fulfillment (measuring it) proves to require
you meet exceptional circumstances.

> Let's say a signal goes down a wire, "sees a mismatch" and is reflected
>from the end. IIRC, light travels around a foot in a nanosecond. So if
>you have an 80 meter dipole, and send out a mismatched signal, should
>not you get the reflection back to the source in a quantifiable time?

Yes, I presume you can do the math.

>That the signal isn't going quite that fast is only a measurement help.
>The reflected signal would be delayed significantly, no?

Ah, now you get to the nut of the matter. Significant? That is in
the eye of the measuring device. Would a Simpson 260 catch it? Not
on your life. Would a 100MHz O'Scope? With a rise time of several
nS, compare this to your computation from the math I presumed you
could do. Use a long enough transmission line with enough voltage
driving it, and probably so. You will still need to do more
computation to render the reading into a conventionally expressed
answer.

> I can easily visualize the idea that an antenna needs to be matched to
>a transmitter, either through the antenna's natural impedance, or
>through a network that makes it look like it is. Deviations on either
>side of the impedance will cause problems, just as they will with other
>systems that are expecting a particular load and getting something
>different. But the idea of signals being actually reflected seems hard
>to swallow.

It is all a matter of experience and the time scale you are typically involved with the phenomenon. Nanosecond phenomenon barely registers in the HF scale as a time distinctive characteristic (that is, to distinguish reflections as such, it is more convenient to think of these problems in terms of lumped circuit elements).

> I'm a real dilettante in these matters, but why would a signal be >reflected if the impedance was incorrect, and not if it was correct?

This is more a matter of degree. When you look through a dirty window you don't really notice the dirt, or the reflection of your face looking through the window if you are looking at something interesting. The degree is found in your attention. If you examine this closely, you begin to see the dirt (attenuation) and your reflection (mismatch) and if you took the window away, you immediately appreciate the difference (no attenuation, no mismatch). Tilt the window to eliminate the reflection (of your face that is), and wash its surface, and you will note no difference between the window being, or not being before you and the object you are looking at. This is a common trick of department store windows that face lit streets.

> Possibly I'm saying some pretty stupid things here.

Actually the answers have been quite competitive in that respect.

73's
Richard Clark, KB7QHC

2703. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 03:55:01 UTC
From: Dave <dave@telnet.com>
Message-ID: <pmesc.104494$iF6.9627201@attbi_s02>
Source record: 94758

There's only 1 democrat out there that is smart enough to be President, and
that is Sam Nun. All of the others are real duds, i.e. dickhead gephart,
nancy paloosie, ,john kerry, hillary, wesley clark, etc., etc., etc.

"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:ioo2b0tqlps6toid6iog1sirt24p88f04i@4ax.com...
> On Sun, 23 May 2004 23:41:24 GMT, "Dave" <dave@telnet.com> wrote:
>
> >Thank God Gore is not President! Our economy would really be in a mess.
> >Besides, I think he is too dumb to handle the likes of what's going on
now.
>
> Too dumb? Yes, and, of course, Mr. Bush is just the picture of a
> bright, articulate man -- every time he holds a press conference, boy,
> does he sound smart.
>
> Bob
> k5qwg
>
>
> >
> >"Mike Coslo" <mcoslo@adelphia.net> wrote in message
> >news:kbWdnQoYZ5BQrizdRVn-hQ@adelphia.com...
> >>
> >>
> >> Bob Miller wrote:
> >>
> >> > On Sun, 23 May 2004 14:16:47 -0400, Mike Coslo <mcoslo@adelphia.net>
> >> > wrote:
> >> >
> >> >
> >> >>
> >> >>Bob Miller wrote:
> >> >>
> >> >>>On Sat, 22 May 2004 17:25:34 -0700, "CW"
<clinton.magers@comcast.net>
> >> >>>wrote:
> >> >>>
> >> >>>
> >> >>>>I don't recall anyone in this thread claiming that Gore had said
that
> >>he

> >> >>>>invented the internet. Where did that come from?
> >> >>>
> >> >>>
> >> >>>It came from you, sir:
> >> >>>
> >> >>>No, he just claimed he did.
> >> >>>"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
> >> >>>news:skkla0thk6i56p5hfujpmr9uaov6o7kfaf@4ax.com...
> >> >>>
> >> >>>
> >> >>>>Gore didn't invent the Internet, >
> >> >>
> >> >>
> >> >> Aww, c'mon, Bob! CW didn't claim that Gore said he invented the
> >> >>internet. He was just sayin....
> >> >>
> >> >> SPANK!
> >> >>
> >> >> - Mike -
> >> >
> >> >
> >> > Sorry... I'm still ticked at the year 2000 Florida debacle...
> >> >
> >> > Gore should be President...
> >>
> >> Hey, he lost fair and square.... 5-4!
> >>
> >> - Mike -
> >>
> >
>

2704. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 03:57:16 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <suKdnc0IL4cJ7yzdRVn-jA@comcast.com>
Source record: 94759

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b1008c_3@corp.newsgroups.com...
> Tam/WB2TT wrote:
> > It shows the composite voltage waveform, and the net current. Exactly
what a
> > Bird wattmeter would do.
>
> That's not what a Bird wattmeter does. A Bird wattmeter possesses
> a directional coupler.

Sort of. I have built circuits that subtract out the transmitted signal,
leaving the received signal.signal. The Bird is cruder than that.

>SPICE apparently does not.

I was driving it with a sine wave, but did a transient analysis. The whole
point is it does not have to know about reflections. It calculates the
waveform by using the same rules that are used to derive standing waves and
reflections.

> Is it possible
> to add a directional coupler to SPICE?

I have built a SPICE model of a Kenwood power/SWR meter (Have better
schematic than for a Bird). Actually, an idealized version that is not
physically realizable; I did this on purpose. Clearly shows what the
limitations are. Interesting thing is that there is information present that
no SWR meter that I know of displays. For an SWR other than 1:1, you can
deduce whether RL is bigger or smaller than Z0 by comparing two voltages.

If you know the Z0, the net
> voltage/current magnitudes/phases, it should be possible to use
> phasor addition/subtraction to obtain the forward and reflected
> components, just like the Bird wattmeter does.

But there is only one voltage sample, which is the sum of Vf and Vr. There
are two current samples, but they are exactly the same, only one is 180
degrees out of phase due to looking at the opposite end of the current
transformer.

Here is what happens. Say you want a meter that shows 100W full scale when
feeding a 50 Ohm load. That is 70.7 V and 1.414 A. In the "Forward"
direction this leads to

100 = 70.7K1 + 1.414K2

In the "Reverse"direction, we know that Pr=0, so

0 = 70.7K1 - 1.414K2 (The minus sign comes from reversing the current reading).

You have 2 equations, so you can solve for K1 and K2. You know it can't *really* measure power, because there is no multiplier. Just like the Bird, it *adds* (vector wise) voltage and current.

> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
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2705. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 04:17:31 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b17837_4@corp.newsgroups.com>
Source record: 94760

Reg Edwards wrote:
> An SWR meter does NOT usefully indicate the vector sum of two voltages or
> the vector difference between two voltages. I've never seen a meter with
> such scales.

That's the way a Bird wattmeter works. The vector sum of two
voltages is the forward power on the scale. The vector difference
of those same two voltages is the reflected power on the scale.
One voltage is proportional to the net voltage. The other voltage
is proportional to the net current.

> Even if it did, of what possible use would it be to anyone who is already
> reliably informed his transmitter is loaded with 50 ohms.

In addition to my 50 ohm SWR meter, I have 450 ohm and 300 ohm
SWR meters, Reg. They indicate the forward/reflected powers and
SWR on the antenna side of the tuner which I find most helpful.
--
73, Cecil http://www.qsl.net/w5dxp

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2706. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 04:19:05 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b17893$1_4@corp.newsgroups.com>
Source record: 94761

Mike Coslo wrote:
> Is there a human being alive today that questions that if the other
> party lost while getting a majority of the votes, we wouldn't be looking
> at a massive attempt to abolish the electoral college?

Too bad this is a republic and not a democracy.

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2707. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 04:21:34 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b17929$1_4@corp.newsgroups.com>
Source record: 94762

dada wrote:

> Cecil Moore wrote:
>>Use two of them at 90 degrees?
>
> Two guys ? or 2 supports ?

Two supports. Four 2x4's connected at the top and
bent outward at the bottom.
--
73, Cecil http://www.qsl.net/w5dxp

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2708. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 04:30:03 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b17b26$1_4@corp.newsgroups.com>
Source record: 94764

Tam/WB2TT wrote:
> You have 2 equations, so you can solve for K1 and K2. You know it can't
> *really* measure power, because there is no multiplier. Just like the Bird,
> it *adds* (vector wise) voltage and current.

Exactly, and if you work out the math, you will find it yields
a meter deflection that can be calibrated in watts of forward
or reflected power.

In your example, assume that 70.7v yields a 5v sample and 1.414a
yields a 5v sample. If they are in phase, 10v will indicate 100
watts forward and zero volts will indicate zero watts reflected.
If they are not equal and not in phase, their sum still indicates
forward watts and their difference still indicates reflected watts.
--
73, Cecil http://www.qsl.net/w5dxp

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2709. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 04:30:08 UTC
From: dada <sman1@stny.rr.com>
Message-ID: <40B17CC4.7D967DD@stny.rr.com>
Source record: 94763

Cecil Moore wrote:

> dada wrote:
>
> > Cecil Moore wrote:
> >>Use two of them at 90 degrees?
> > >
> > > Two guys ? or 2 supports ?
>
> Two supports. Four 2x4's connected at the top and
> bent outward at the bottom.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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Seems like it would be tough to make that tiltable.

Thanks.

Joe
WB2JQT

2710. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 04:34:33 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b17c34$1_4@corp.newsgroups.com>
Source record: 94765

dada wrote:

> Cecil Moore wrote:
>>Two supports. Four 2x4's connected at the top and
>>bent outward at the bottom.

> Seems like it would be tough to make that tiltable.

The upper half could be hinged. That's the way I designed
my present supports.
--
73, Cecil http://www.qsl.net/w5dxp

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2711. Goodness of ground Radials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 05:02:49 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8rvlp$il1$1@sparta.btinternet.com>
Source record: 94766

We are accustomed to using the *number* of radials as a measure of the goodness of a system of shallow-buried or surface-laid radials. But what really matters is the resistance to Mother Earth as is effective at the system center or off-center as the case may be.

We are familiar with associating soil resistivity data with 'goodness' of the soil or the terrain.

Forgetting all about what the regulations may specify about commercial transmitting stations, what are the ranges of ground electrode resistance which amateurs consider to be excellent, good, average, poor, awful. Or perhaps some other descriptions.

The following ranges are suggested:

Excellent : 2 ohms or less.
Good : 2 to 5 ohms.
Average : 5 to 15 ohms.
Poor : 15 to 50 ohms.
Awful : Greater than 50 ohms.

Are these in the right ball-parks? Depends on frequencies of occurrence.
What do you think?

Anyway, it makes a change from circulators and S-parameters at SHF.

Reg, G4FGQ

2712. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 05:21:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <v603b05taquhacpsg0ojuc2ih9tjhfbg0o@4ax.com>
Source record: 94767

On 23 May 2004 23:50:02 GMT, tdonaly@aol.com (Tdonaly) wrote:

>S-parameters are supposed to work best on small-signal analysis, where
>everything is fairly linear.

Hi All,

Tom's implication (S-parameters don't fit to power amps) is supported
by a simple comparison of another UHF transistor, 2N3948:
by S-param as measured
input R 9 Ohms 38 Ohms
input X 12nH 21pF
output R 199 Ohms 92 Ohms
output X 4.6pF 5pF

S-params may be useful for comparing devices, but are inadequate for
power application design - unless, of course, you can tolerate 400%
error and inverted reactances.

73's
Richard Clark, KB7QHC

2713. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 05:43:55 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b18c77_8@corp.newsgroups.com>
Source record: 94769

Richard Clark wrote:
> S-params may be useful for comparing devices, but are inadequate for
> power application design - unless, of course, you can tolerate 400%
> error and inverted reactances.

The actual subject of the s-parameter analysis was a linear Z0-match
network point, not an amplifier, so your statements are irrelevant.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2714. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 05:46:01 UTC
From: Lord Snooty <bonzo@dog.com>
Message-ID: <t_fsc.8120$be.7140@newsread2.news.pas.earthlink.net>
Source record: 94768

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:3mp2b0pemj0f5rd7nk24b4gfnu0ikt0pnp@4ax.com...
> Hi Guys,
>
> I trust both of you appreciate the difference between a vaguely
> described system and trying to fit a spec sheet to it. Far easier to
> proceed direct from one or the other, but making a fit between the two
> is like stepping from one boat to another with a high chance of
> standing on neither.
>
> 73's
> Richard Clark, KB7QHC

There are uncharacterised components surrounding my MRF136, and I'd rather determine their lumped behaviour with the transistor than unsolder them one by one and try and predict the answer. But that's because I think it's possible to determine what's going on. One reason I *don't* think this is the following little bench test this afternoon - with the load jammed directly on the amp output; no cable, no VSWR meter.
At 8.000 Mhz and a load consisting of 50 ohms carbon 10W 10% in series with a capacitance trimmer bank, at an output power level of about 2W, a load capacitor value of 250 +/- 10pF (-j80 ohms @ 8 MHz) was found to produce a minimum in the total voltage across the load. Also, as capacitance was increased over the range 100-700pF, the voltage across the load resistor increased monotonically.

The latter is easy to explain (it means the source reactance is positive, and smaller than +j28.4 ohms), but the former is beyond my ken.

Best,
Andrew

2715. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 06:39:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <eb43b0lrpdra1gdub1tviavrs217ebf5pg@4ax.com>
Source record: 94770

On Mon, 24 May 2004 05:46:01 GMT, "Lord Snooty" <bonzo@dog.com> wrote:

>At 8.000 Mhz and a load consisting of 50 ohms carbon 10W 10% in series with a
>capacitance trimmer bank, at an output power level of about 2W, a load
>capacitor value of 250 +/- 10pF (-j80 ohms @ 8 MHz) was found to produce a
>minimum in the total voltage across the load. Also, as capacitance was
>increased over the range 100-700pF, the voltage across the load resistor
>increased monotonically.
>
>The latter is easy to explain (it means the source reactance is positive, and
>smaller than +j28.4 ohms), but the former is beyond my ken.
>
>Best,
>Andrew

Hi Andrew,

You got me confused too.

Is the "load" the resistor, or the resistor-cap combination when you
measure these voltages?

You describe a voltage minimum across the load for a cap setting of
250pF; but you also maintain that the voltage across the load
increases for the variation in capacitance from 100 to 700pF which
contradicts the first measurement.

Further, the construction of a high power semiconductor does not lend
itself to supporting inductive reactances (the junctions are quite
manifestly capacitive in structure). By specification the device is
characterized as exhibiting 27pF @ 1 MHz (for 28Vdc although there is
not much variation until below 10Vdc). There are a world of other
variables to consider, but none portray inductance within the device.
This alone should provoke you to re-examine your premise.

73's
Richard Clark, KB7QHC

2716. Re: Antenna support ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 07:26:31 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10b38td6i0u4n0b@corp.supernews.com>
Source record: 94671

I've had a 40+ foot version of the 2X4 Handbook A-frame up for about 25 years now. It can be walked up by one person with some difficulty, easily by two. I made a 2X3 version about 35 feet high some time back. It was up for around 10 years and still ok when I took it down. It was easy for one person to walk up. But with 3 or so pulleys at the top of each one, I didn't have to take them down except rarely.

Roy Lewallen, W7EL

dada wrote:

>
> Cecil Moore wrote:
>
>
>>dada wrote:
>>
>>
>>>Cecil Moore wrote:
>>>
>>>>Use two of them at 90 degrees?
>>>
>>>Two guys ? or 2 supports ?
>>
>>Two supports. Four 2x4's connected at the top and
>>bent outward at the bottom.
>>--
>>73, Cecil http://www.qsl.net/w5dxp
>>
>>-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>>http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>>-----== Over 100,000 Newsgroups - 19 Different Servers! =-----
>
>
> Seems like it would be tough to make that tiltable.
>
> Thanks.
>
> Joe
> WB2JQT
>

2717. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 10:37:07 UTC
From: Dave <noone@nowhere.com>
Message-ID: <w6qdnTUjZdHHTSzd4p2dnA@crocker.com>
Source record: 94672

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b123dc_4@corp.newsgroups.com...
> Dave wrote:
>
> > Cecil wrote:
> >>Uhhhh Dave, the original topic is the Subject: line. If anything,
> >>what happens inside a transmitter is the irrelevant subject since
> >>appreciable reflections hardly ever reach the typical ham transmitter.
> >>
> > here is the original:
>
> Are you saying that the original subject was wrong?

no, only that you ignored the body of the message and answered what you
wanted to discuss instead of what was asked.

>
> > of course it is contrived. no one uses loads of those exact impedances,
or
> > lengths of coax like you do.
>
> Dave, have you ever heard of an example? What I posted is one
> easy-to-understand example of virtually an infinite number of
> possible examples of a Z0-match. If you like, here is another
> example of a Z0-match:
>
> XMTR------tuner---unknown length of feedline---unknown load
> 100W-->
> <--0W
>
> There is a Z0-match at the input of the tuner. All the voltages
> and all the currents are very close to in-phase or 180 degrees
> out of phase at the input of the tuner. Do you have the balls to
> assert that the above configuration is "contrived"?

nope, that is a real world situation, but not the one under discussion.

>
> THE GREAT MAJORITY OF AMATEUR RADIO ANTENNA SYSTEMS ACHIEVE CLOSE
> TO A Z0-MATCH!!! That means all the voltages and currents are close
> to being in phase or 180 degrees out of phase. I'm sorry that technical
> fact hairlips you. Since your hidden agenda is hidden, I can only
> guess what it might be.

so which is it, in phase or 180 degrees out of phase???

2718. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 10:45:38 UTC
From: Dave <noone@nowhere.com>
Message-ID: <fYudnUBxwqTETyzdRVn-vw@crocker.com>
Source record: 94673

"Mike Coslo" <mcoslo@adelphia.net> wrote in message
news:8sCdnXDEDd6YryzdRVn-gQ@adelphia.com...
>
> * wrote:
>
> > They make an instrument called a Time Domain Reflectometer,
> > you hook it up to transmission lines and it sends out a pulse
> > and times how long it takes to get back.
> > The time it takes, reflected pulse polarity, and height says a lot about
the
> > line.
> > Used for finding faults on telco/cable lines.
> > Does the same thing with RF lines.
> > Matched well, no pulse, but you can even see connectors on some of these
> > TDR's
> > Googleit, too
>
> Fascinating stuff! Why don't we use them more for ham radio? this page:
> http://www.epanorama.net/circuits/tdr.html even has a diagram for a
> homebrew pulse source and diagrams for hooking up same to an
> oscilloscope. While not giving SWR, it would show up any connector
> faults and crimps in the cable.
>
> - Mike KB3EIA -

i use one regularly in my station here. most people don't use them because
a simple swr meter is adequate for testing most antenna./feedline
combinations in use by amateurs.

2719. Re: Goodness of ground Radials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 12:18:35 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0405240418.7c6ebd2b@posting.google.com>
Source record: 94674

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:<c8rvlp$il1$1@sparta.btinternet.com>...

Hi Reg,
unmistakably, the number of radials is not the only measure of the
goodness of RF grounding. Their length related to the working
wavelength is certainly significant as well - imagine 120 radials 1
meter long each at 160 m ... The soil structures underneath and beyond
the radials play an important role, too. An analysis of this problem
is given in the famous book by John ON4UN.

> The following ranges are suggested:
>
> Excellent : 2 ohms or less.
> Good : 2 to 5 ohms.
> Average : 5 to 15 ohms.
> Poor : 15 to 50 ohms.
> Awful : Greater than 50 ohms.
>
> Are these in the right ball-parks? Depends on frequencies of occurrence.

IMHO they are right at shortwaves. One problem: how to measure the
grounding resistance simply ? It should be measured at the working
band. Measurements with a ground resistance meter may apply to static
and lightning protection (which is VERY IMPORTANT, too), but not to
RF.

BR from Ivan OK1SIP

2720. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 12:28:40 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <YTlsc.106$nR2.38@newssvr22.news.prodigy.com>
Source record: 94675

SWR ghosts are usually smear because the transmission line is short and the
displacement fo the image is small compared to object reflection shost which
have a greater image displacement becasue the reflected signal travels over
a greater distance.
73
Hank WD5JFR
"alhearn" <alhearn@earthlink.net> wrote in message
news:361741e8.0405231802.48b0c267@posting.google.com...
> Hank:
>
> Aren't you confusing the reflections that a TV signal experiences when
> it bounces off nearby buildings and structures (causing ghosts) with
> transmission line refections -- two entirely different things.
>
> Al
>
>
> "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:<lz1sc.2208$jq7.1749@newssvr22.news.prodigy.com>...
> > If this old mind recalls correctly a TV station with an undesireable SWR
> > will not transmit a clear image to its viewers because the delayed
> > re-reflection arrives at the TV set later and casues a ghost or smear.
> > Could you please explain the "Reflected power is a mere fiction." and
the
> > smear or ghost?
> >
> > tnx
> > Hank WD5JFR
> > "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> > news:c8peg8$5ft$1@titan.btinternet.com...
> > >
> > > "Richard Clark" wrote:
> > > > What you describe as reflection and re-reflection occurs between the
> > > > mismatched antenna and the tuner that has been adjusted to minimize
> > > > power returned to the transmitter. The sole function of the tuner
is
> > > > to keep this power from being dissipated by the transmitter (common
> > > > experience of arcing, denoting a voltage reflection, or thermal
> > > > runaway, denoting a current reflection). The "virtual" reflection
> > > > (offered by the tuner) is generally know as the complex conjugate of
> > > > the remote load, seen at the near end of the line through which it
is
> > > > returning. This means that the line transforms the phase and
> > > > amplitude of the reflection, and the tuner's job is to invert that

> > > > relationship to counteract it, and return it to the antenna.
> > > >
> > > > There are both wave descriptions of this process, and lumped circuit
> > > > equivalents. Both work, and both describe the same process from
> > > > different points of view. One does not negate the other's validity
> > > > (unless, of course, you attempt to mix the points of view and demand
> > > > consistency in terms - a frequent rhetorical trap here).
> > > >
> > > > There will no doubt be a flurry of denials to this simple example
with
> > > > contortions of logic to match. As for the math, you will find it by
> > > > the reams, once you've been overwhelmed with the arcana of
hyperbolic
> > > > descriptions of a novel physics that have to proceed its proof.
> > > >
> > > > Keep your eye on how your literal points in your question go
abandoned
> > > > with these arcane theories.
> > > >
> > > > 73's
> > > > Richard Clark, KB7QHC
> > > > ====================================
> > >
> > > Dear Richard, you are confusing the matter even further, if that were
> > > possible.
> > >
> > > The only saving grace about your tedius message is that you yourself
> > > eventually realise what a load of overcomplicated nonsense it is.
> > >
> > > Reflected power is a mere fiction. Power which is not radiated from
an
> > > antenna never actually arrives there. In fact it never leaves the
> > > transmitter.
> > >
> > > All the power which leaves the transmiter is radiated except for that
> > which
> > > is lost in the line. It has nowhere else to go!
> > >
> > > But for the existence of so-called SWR meters, the words 'forward and
> > > reflected power' would never enter people's vocabularies. For the few
who
> > > become involved with such matters, the misleading fiction also appears
in
> > > the language of mathematics.
> > >
> > > Names have to be invented in order to discuss mathematical equations
in
> > > plain English. But there's no reason why they should be propagated,
just
> > to

> > > confuse, into the real World.
> > >
> > > The sole purpose of an SWR meter is to indicate whether or not the
> > > transmitter is loaded with 50 ohms.
> > > ----
> > > Reg, G4FGQ
> > >
> > >

2721. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 12:50:37 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2he9chFb98nuU1@uni-berlin.de>
Source record: 94676

RE: TV Ghosting (quotes below)

To elaborate, the visibility of a ghost image in analog TV systems is related to the magnitude, phase and time displacement of the RF reflection that produced it as compared to the original, or non-reflected waveform.

The round-trip transit time from the TV tx output to the mismatch in its antenna system will determine the time displacement of the ghost, at the rate of 1 microsecond of displacement per ~490 feet of distance between the tx and the reflection plane (vp = 0.997c).

The visible part of a TV image is scanned onto the display screen at a horizontal rate of about 1 line per 50 microseconds.* An internal reflection from a transmit antenna connected to the tx by 1,000 feet of transmission line will create a ghost image ~1 microsecond after the main image -- or ~1/2" to the right side of it in a 25" wide picture. As the narrowest vertical line that can be viewed on a display using a 4MHz video bandwidth is a bit less than 0.35 microseconds wide, a ghost image of it displaced by 1 microsecond is clearly and separately visible on a 25" wide display, and will not appear as a "smear" of the main image.

Ghosts also can be produced by external reflections of the radiated TV signal from buildings, large signs, etc. Often these ghosts have much greater displacement from the main image than those that can be transmitted from reflections in the TV transmit antenna system. This is the result of the greater transit time for those reflections w.r.t. the direct ray, that are common for reflecting and scattering surfaces where located in the propagation environment.

Reflections with "short" time displacements are more difficult to resolve separately as ghosts, but still affect and limit the visual quality of the TV image. Reflections 40dB or more suppressed from the main image have no practical, visible affect on it -- regardless of their time displacement.

R. Fry, RCA Broadcast Field Engineer 1965-1980

*allows for the H&V sync pulse intervals and some overscan

R. Fry wrote
> > A 1.3:1 antenna SWR at the far end of more than
> > about 500 feet of otherwise matched transmission
> > line connected to that same transmitter WILL produce
> > a visible ghost.

"Cecil Moore" responded
> Of course, a different-cycle reflection is what causes ghosting.

2722. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 13:38:52 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <J7qdnQgtMcJ_ZyzdRVn-gQ@comcast.com>
Source record: 94677

Dave,

What happens when you ping your antenna? Clearly the spectrum of the pulse
is wider than the bandwidth of a typical antenna, but is there any useful
information?

Tam/WB2TT
"Dave" <noone@nowhere.com> wrote in message
news:fYudnUBxwqTETyzdRVn-vw@crocker.com...
>
> "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> news:8sCdnXDEDd6YryzdRVn-gQ@adelphia.com...
> >
> > * wrote:
> >
> > > They make an instrument called a Time Domain Reflectometer,
> > > you hook it up to transmission lines and it sends out a pulse
> > > and times how long it takes to get back.
> > > The time it takes, reflected pulse polarity, and height says a lot
about
> the
> > > line.
> > > Used for finding faults on telco/cable lines.
> > > Does the same thing with RF lines.
> > > Matched well, no pulse, but you can even see connectors on some of
these
> > > TDR's
> > > Googleit, too
> >
> > Fascinating stuff! Why don't we use them more for ham radio? this page:
> > http://www.epanorama.net/circuits/tdr.html even has a diagram for a
> > homebrew pulse source and diagrams for hooking up same to an
> > oscilloscope. While not giving SWR, it would show up any connector
> > faults and crimps in the cable.
> >
> > - Mike KB3EIA -
>
> i use one regularly in my station here. most people don't use them
because
> a simple swr meter is adequate for testing most antenna./feedline
> combinations in use by amateurs.
>
>

2723. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 13:46:08 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <8pu3b0lq6gut08u0ltnt20t863ima1m9ur@4ax.com>
Source record: 94678

On Sun, 23 May 2004 08:14:41 -0700, "Keyboard In The Noise"
<KITN@cat.net> wrote:

>Golly Gee -- what happened to the great R7 radial debate ??? (:-(
>
>Not one single reply to the excellent post below -- guess it did end the
>argument (:-)

Well, I found it interesting that the R7 is a 3/8 wave antenna, not a
1/2-waver. Which means radials might work as well as those 2-meter
whips/decouplers sticking out at the base.

Funny, I've never seen Cushcraft refer in their ads to their designs
being "1/2 wave." Maybe that's just a myth somebody started...

Bob
k5qwg

>
>Thanks for the post Tom
>---
>
>"Tom Ring" <tarnews@taring.org> wrote in message
>> Ok, I spoke to the designer this evening, and I'll pass on what I
>> learned. He was speaking fast, as he normally does, so I'm sure I
>> missed a lot. Roy can confirm that, and Roy can confirm that he handed
>> over another copy of his software to him just last week.
>>
>> Per the designer
>>
>> The R7 was built because he needed a multiband antenna in the fall of
>> 90. The R5 was used as the base idea for the design. He worked on it
>> over late fall and winter 90/91. The antenna project was up and down 2
>> to 3 times a day at times.
>>
>> The owner of Cushcraft heard of the backyard project in spring 1991, and
>> "asked" that it be brought to work. Tomorrow at the latest.
>>
>> The antenna is not a half wave antenna, it is about a 3/8 wave antenna.
>> The impedance is approximately 250 ohms, and a roughly 4.5 to 1
>> transform is done. There is a series cap of 41 pF for 40m.
>>
>> There are 7 radials of 49 inches, because Cushcraft had tons of 49 inch
>> 5/8 whips for 2m. The R5 had 4, this needed more.
>>
>> There is a false resonance on 75m or 80m, and if you put power into it

>> at that freq, you will burn up the matching system.
>>
>> And, to end this argument, do not ever add radials to the system, and do
>> not remove any of the ones it comes with. It's a touchy match.
>>
>> tom
>> K0TAR
>>
>>
>

2724. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 13:47:20 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <85v3b0hf59ibmu4iac2ihesfcv9q5l4ldk@4ax.com>
Source record: 94679

On Sun, 23 May 2004 23:19:05 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Mike Coslo wrote:
>> Is there a human being alive today that questions that if the other
>> party lost while getting a majority of the votes, we wouldn't be looking
>> at a massive attempt to abolish the electoral college?
>
>Too bad this is a republic and not a democracy.

What's the difference, Cecil?

Bob
k5qwg

>
>
>
>-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2725. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 13:55:17 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <-I6dncOY3fEmYyzdRVn-jA@comcast.com>
Source record: 94680

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:dtp2b05v08q4lldvvmo0obb96iacdvlchq@4ax.com...
> On 23 May 2004 19:02:20 -0700, alhearn@earthlink.net (alhearn) wrote:
>
> >Hank:
> >
> >Aren't you confusing the reflections that a TV signal experiences when
> >it bounces off nearby buildings and structures (causing ghosts) with
> >transmission line refections -- two entirely different things.
> >
> >Al
>
> Hi Al,
>
> No, he has it correct. There is no material difference between the
> two except for the velocity constant (which has no bearing on the
> matter).
>
> 73's
> Richard Clark, KB7QHC

There is a third case, which will cause the same results. Namely, the effect of passing the signal through a filter with a nonlinear phase characteristic.

Tam/WB2TT

2726. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 14:20:29 UTC
From: Dave <noone@nowhere.com>
Message-ID: <qb2dnUyJSOMpmS_dRVn-gg@crocker.com>
Source record: 94681

on yagi's and other antennas with matching networks you usually just see the matching network. i use it the most on my beverage antennas which kind of look like long transmission lines and also to find faults in transmission lines themselves. with 25 lines or so ranging from about 50' to 500' or so it makes for a quick check... especially in winter.

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:J7qdnQgtMcJ_ZyzdRVn-gQ@comcast.com...
> Dave,
>
> What happens when you ping your antenna? Clearly the spectrum of the pulse
> is wider than the bandwidth of a typical antenna, but is there any useful
> information?
>
> Tam/WB2TT
> "Dave" <noone@nowhere.com> wrote in message
> news:fYudnUBxwqTETyzdRVn-vw@crocker.com...
> >
> > "Mike Coslo" <mcoslo@adelphia.net> wrote in message
> > news:8sCdnXDEDd6YryzdRVn-gQ@adelphia.com...
> > >
> > > * wrote:
> > >
> > > > They make an instrument called a Time Domain Reflectometer,
> > > > you hook it up to transmission lines and it sends out a pulse
> > > > and times how long it takes to get back.
> > > > The time it takes, reflected pulse polarity, and height says a lot
> about
> > the
> > > > line.
> > > > Used for finding faults on telco/cable lines.
> > > > Does the same thing with RF lines.
> > > > Matched well, no pulse, but you can even see connectors on some of
> these
> > > > TDR's
> > > > Googleit, too
> > >
> > > Fascinating stuff! Why don't we use them more for ham radio? this
page:
> > > http://www.epanorama.net/circuits/tdr.html even has a diagram for
a
> > > homebrew pulse source and diagrams for hooking up same to an
> > > oscilloscope. While not giving SWR, it would show up any connector
> > > faults and crimps in the cable.

> > >
> > > - Mike KB3EIA -
> >
> > i use one regularly in my station here. most people don't use them
> because
> > a simple swr meter is adequate for testing most antenna./feedline
> > combinations in use by amateurs.
> >
> >
>
>

2727. Re: Cushcraft R7

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 14:36:15 UTC
From: Keyboard In The Noise <KITN@cat.net>
Message-ID: <ALnsc.17998$wa.3411@fed1read07>
Source record: 94682

Hi Bob -- see URL:
http://www.cushcraft.com/support/pdf/r5.pdf

Sez -- "Your R5 is a half wavelength vertical which does not require
traditional ground radials"
--
Keyboard In The Noise

Opinions are the cheapest commodities in the world. Author unknown but
"right on"

"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:8pu3b0lq6gut08u0ltnt20t863ima1m9ur@4ax.com...

>
> Funny, I've never seen Cushcraft refer in their ads to their designs
> being "1/2 wave." Maybe that's just a myth somebody started...
>
> Bob
> k5qwg
>

2728. Re: Dipole/Balun? Commercially Produced Alternative?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 14:45:04 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <40b20ab9_4@newsfeed.slurp.net>
Source record: 94683

Rich, coax can be a consideration when loking at multi-band tuning. There are a number of books out threre with the formulae.

As to baluns, you might not even need one. Many hams mistakenly include baluns automatically in ther antennas, and introduce problems. I would suggest you try a dipole with no baluns, and only add one if you discover TVI or RFI problems.

- KI6PR
El Rancho R.F., CA

"Rich" wrote
> Hello all. I'm thinking about a wire antenna ... even thinking about
> buying a pre-made 40-10m (short) antenna ... I have about 40' to play
> with on the 11th floor balcony facing due west (USAF member stationed
> in Ankara, Turkey). I also have a tuner that I've never used. I
> think I'm primarily interested in primarily 10, 20 and 40 ... and
> perhaps 12, 15, 17 and 30? I'd love to work Europe and possibly back
> to the states if possible (barefoot).
>
> I happened across an ad for Van Gorden Engineering baluns &
> insulators, Hi-Q 1:1 or Hi-Q 4:1 Baluns. I have no clue as to how to
> choose one beyond knowing they connect coax to a dipole. Is coax
> length important?
>
> Can anyone explain how I'd choose and install a balun given my desire?
> 1:1 or 4:1 impedance ratio?
>
> Finally, can anyone suggest an off-the-shelf antenna based on their
> experiences with it?
>
> Thanks!
> Rich
> (Please don't reply via e-mail ... deed address)

2729. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 14:54:58 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8t2c2kll1@titan.btinternet.com>
Source record: 94684

> but is there any useful
> information?
>
> >most people don't use them
> >because a simple swr meter is adequate for testing
> > most antenna./feedline
> > combinations in use by amateurs.
> >
==========

Following a query, Guru's feel an urgent desire to display their knowledge about S-parameters, Time domain reflectometers, Circulators, and High power UHF TV transmitters.

As a consequence, the unfortunate original questioner, with his solitary 1.8 to 30 MHz SWR meter, is entirely forgotten about and remains suspended in mid-air.

Reg, G4FGQ

2730. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 15:12:11 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <10b446ootk7ro30@corp.supernews.com>
Source record: 94685

Jack Painter wrote:

> "Fractenna" <fractenna@aol.com> wrote
>
>
>>>Chip, how did we digress to comparing a "high B&W" to a "low dipole"?
>
> When
>
>>>the two are each at their optimal height (and why would we ever compare
>>>anything else..) then the dipole has it all over a B&W. I use my (amost
>
> 1/2
>
>>>wave height) dipole only for DX, without a tuner on it's two resonant
>>>frequencies and with a tuner on two bands well above, with amazing
>
> results.
>
>>>5, 8, 11 and 15 mhz to Alaska, Equador, Venezuela and Canadian Maritimes,
>
> if
>
>>>that qualifies as "DX".
>>>
>>>73
>>>
>>>Jack Painter
>>>Virginia Beach, Va
>>>
>>
>>Hi Jack,
>>
>>It seems relevant to me in two big contexts: (1) why do some folks do well
>>(relatively) with the BW antenna; (2) what does it replace?
>>
>>My response clearly explains (1). In the case of (2), I can think of many
>>circumstances where it is preferable to put one dipole (BW) up high than a
>
> slew
>
>>of dipoles up high. If you have neighbors, you know what I mean:-)
>>
>>Don't know what DX is to me anymore; I have DXCC #1 Honor Roll and haven't

>
> been
>
>>active on the low bands in several years. To someone else, DX is what you
>>haven't heard or worked yet:-) I say go for it.
>>
>>Some folks don't live in a perfect world, Jack, and its good to know when
>
> a
>
>>compromise is a true degradation.
>>
>>A BW antenna, up high, is a good antenna for DX across many bands. It is
>
> hardly
>
>>a dummy load.
>>
>>Hope this helps on this question.
>>
>>73,
>>Chip N1IR
>
>
> Hi Chip,
>
> Yes it does help to hear it works reasonably well when other circumstances
> limit the options. I can't for instance squeeze more long dipoles up, but I
> could try one of the T2 varieties someday. Since the dipole I now have works
> across many bands well with a tuner, the B&W could never replace it, but it
> might augment it someday.
>
> Cheers and thanks,
>
> Jack Painter
> Virginia Beach, Va
>
>
As I have said many times here, The B&W antenna is for those that need
it not those who can/need/want to use other means of connecting with the
ether. It is definitely not the most efficient means of wireless
communications but it is definitely fool proof in operation.

Dave WD9BDZ

2731. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 15:39:44 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hej9kFbpqkeU1@uni-berlin.de>
Source record: 94686

RE: Quote below.

The on-channel TDR pulse performance of a narrowband antenna can be seen by controlling the RF bandwidth and spectrum span of the test process to fit the application. The pulse (ping) itself is modulated onto an RF carrier set at the operating frequency.

Not practical for most hams, but very useful in evaluating and optimising TV transmit antenna systems.

If anyone is interested in seeing a jpg of such a measurement, pls e-mail me directly.

- RF

"Tam/WB2TT" wrote in message >
> What happens when you ping your antenna? Clearly the spectrum of the pulse
> is wider than the bandwidth of a typical antenna, but is there any useful
> information?

2732. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 15:45:35 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b2186e$0$438$5cbedd26@news.real-time.com>
Source record: 94687

Bob Miller wrote:

> On Sun, 23 May 2004 23:19:05 -0500, Cecil Moore
> <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Mike Coslo wrote:
>>
>>> Is there a human being alive today that questions that if the other
>>>party lost while getting a majority of the votes, we wouldn't be looking
>>>at a massive attempt to abolish the electoral college?
>>
>>Too bad this is a republic and not a democracy.
>
>
> What's the difference, Cecil?
>
> Bob
> k5qwg

Oh boy. This is one of the reasons our country is such a mess. People
do not know the difference.

To put it _really_ simply. In a true democracy the population would get
to have a say in everything that the government at every level does,
which would be unwieldy at best, unworkable at worst. In a democratic
republic, the population elects representatives that they trust to
represent their interests, which means the representatives don't always
do what you'd like, especially if they are from the party you didn't
vote for.

tom
K0TAR

2733. Re: Autotuner and dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 15:52:06 UTC
From: Larry Loucks <Larry.Loucks@attglobal.net>
Message-ID: <40B21A82.2E8CC7AF@attglobal.net>
Source record: 94688

The LDG tuners will tune a fairly large range and should work in your application. Look at the QST reviews of a collection of auto tuners for details. Are you using a balanced feedline? If so, you should use a 1-1 or 4-1 current balun to make the connection to the tuner. If you are using coax feed use a 1-1 current balun at the feed point.

Knowing just the SWR does not give you the feed line input impedance which you need to know to understand if the tuner will match. You can use Eznec to tell you the feed point impedance and a program like TLW to model the input impedance and calculate the L and C values for a L network tuner (LDG is a L network tuner). Of course, if you can borrow an analyzer you can just measure it. Depending on the feed line length you may just be unlucky and a change in the feed line length will transform the impedance into something that will match. TLW will help you figure that out.

I use a LDG RT-11 to feed my 136' dipole and it will match on 160 through 10. I use a length of 450 ohm ladder line to a 4-1 current balun to the tuner and of course coax to the radio. I selected the length of the ladder line to insure the match.

Larry

Greg wrote:
>
> I recently acquired an ldg lz 100 and hooked it up as soon as I got
> it. The dipole I have now will tune with a manual tuner to below
> 1.5:1 on 40m-10m. The autotuner won't tune to below 1.5:1 in any
> band. Am I doing something wrong or did I just not get a decent
> tuner. I oftentimes won't even get an SWR green light to show it has
> tuned and when I do, the SWR is high. Should I put a balun on or
> what? The dipole is 66 feet long in my attic... but as I stated, it
> tunes awesome with the manual tuner. If you want to email me, please
> email to ki4bbl@arrl.net The email here is incorrect.

2734. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 16:29:33 UTC
From: richardharrison@webtv.net
Message-ID: <5367-40B222ED-435@storefull-3257.bay.webtv.net>
Source record: 94689

Mike, KB3EIA wrote:
"But the idea of signals being actually reflected seems hard to swallow."

It`s true that antennas are measured in degrees. A 1/4-wave antenna is 90-degrees. This is based on how many degrees the signal has changed at the antenna input by the time the signal reaches the tip end of the antenna.

When signal reaches the end of a 1/4-wave whip, there is an abrupt discontinuity. Only displacement current flows without conductors. The tip of the whip accepts only a small fraction of the current available in the forward power traveling on the whip. The only path for the rejected power is back toward the feedpoint. Direction and phase of the current reverse in the reflected power, but the voltages of the incident and reflected waves have the same phase (see 1955 Terman, page 89).

Best regards, Richard Harrison, KB5WZI

2735. Re: Goodness of ground Radials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 16:49:28 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8t92odcl1@hercules.btinternet.com>
Source record: 94690

"OK1SIP" wrote
> "Reg Edwards" wrote
> Hi Reg,
> unmistakably, the number of radials is not the only measure of the
> goodness of RF grounding. Their length related to the working
> wavelength is certainly significant as well - imagine 120 radials 1
> meter long each at 160 m ... The soil structures underneath and beyond
> the radials play an important role, too. An analysis of this problem
> is given in the famous book by John ON4UN.
>
> > The following ranges are suggested:
> >
> > Excellent : 2 ohms or less.
> > Good : 2 to 5 ohms.
> > Average : 5 to 15 ohms.
> > Poor : 15 to 50 ohms.
> > Awful : Greater than 50 ohms.
> >
> > Are these in the right ball-parks? Depends on frequencies of
occurrence.
>
> IMHO they are right at shortwaves. One problem: how to measure the
> grounding resistance simply ? It should be measured at the working
> band. Measurements with a ground resistance meter may apply to static
> and lightning protection (which is VERY IMPORTANT, too), but not to
> RF.
>
> BR from Ivan OK1SIP

==========
99.9 percent of amateurs don't know what their ground connection resistance is. But it's readily easy to determine.

Just erect a random height vertical antenna above the ground connection, tune it, and measure the tuned RESISTANCE between the bottom end and the ground connection using a simple, hand-held antenna analyser. In the tuned condition the antenna input impedance ia always R + j*Zero.

Calculate the radiation resistance of the vertical wire. Deduct radiation resistance plus loading coil loss resistance from the measured value and there you have it.

Loading coil loss resistance is estimated from a crude guess of coil Q. Crude is quite accurate enough if you havn't got a Q meter.

For heights less than 0.3 wavelengths, Radiation resistance can be accurately enough estimated from -

Rrad = Square(24 * Height / Wavelength) ohms

Which is near enough exact when height = 1/4 wavelength.

Measurements need be made at no more than two frequencies, say 3.5 or 7 MHz, and 14 or 21 MHz. This is because ground impedance changes fairly slowly with frequency. And nobody is interested in ground connection resistance above 30 MHz anyway.

What ground REACTANCE may be is neither here nor there because it is not a loss component. In practice it is tuned out simultaneously with tuning up a vertical antenna and merely affects the tuner settings. Ground reactance may be either inductive or capacitative depending on the number and length of radials and on soil resistivity and permittivity. At HF it can be of the same magnitude as the resistive component. But what does a 10-ohm capacitative reactance matter?

By the way, an example of an 'awful' ground connection is a single 4 to 8 feet rod - unless submerged in salt sea water. Depending on the antenna they very often 'work' and, if it's your very first ground electrode, inevitably you will place great faith in it.

Thanks Ivan for your comments. I would like a few more views from amateurs with experience of known ground connection resistance values. Isolated examples, especially with a description of the type of soil, would be especially interesting and useful.

But everybody already knows that 120 radials, of any reasonable length, in any sort of soil is "Excellent".

Yours, Reg, G4FGQ

2736. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 17:32:48 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8tbk0$4dh$1@titan.btinternet.com>
Source record: 94692

> (see 1955 Terman, page 89).
>
> Best regards, Richard Harrison, KB5WZI
>
==========

From where can I obtain a Frederick Emmons Terman prayer mat ?
;o)

Reg.

2737. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 17:37:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cta4b01mhtfb2nin11jchcha67rkjfoluj@4ax.com>
Source record: 94693

On Mon, 24 May 2004 10:45:35 -0500, Tom Ring <tarnews@taring.org>
wrote:
>Bob Miller wrote:
>> On Sun, 23 May 2004 23:19:05 -0500, Cecil Moore
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Mike Coslo wrote:
>>>Too bad this is a republic and not a democracy.
>> What's the difference, Cecil?
>Oh boy. This is one of the reasons our country is such a mess. People
>do not know the difference.
>
>To put it _really_ simply. In a true democracy the population would get
>to have a say in everything that the government at every level does,
>which would be unwieldy at best, unworkable at worst. In a democratic
>republic, the population elects representatives that they trust to
>represent their interests, which means the representatives don't always
>do what you'd like, especially if they are from the party you didn't
>vote for.

Then there is the Weimar republic. They managed the voting to
accommodate a political upstart who they installed as chancellor. He
and his cadre brought in their own party faithful to dominate the
function of government, who then jailed, assassinated, or executed
those who installed him. Judges who favored a political climate of
security over individual rights were found and benched so that this
leader could then build special camps for those who were no longer
entitled to their rights of citizenship (due to a possibility of
political terror threat). The enlightened leader then set his army
out to change regimes in other countries so as to allow their citizens
to enjoy peace and freedom from the tyranny and oppression they
formerly slaved under.

There are the illusions of comfort in political labels, thought only
to serve headlines and talk-show topics; and then there are the
consequences where newspapers are neutralized, and talk show hosts
elevated to the minister of propaganda.

The test of history is can you fill in the names alluded to? The test
of freedom is can you pin the mustache on any current Fï¿½rher?

73's
Richard Clark, KB7QHC

2738. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 17:46:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <q1d4b05vq7k8spl23lmlog6gl26o8n31k5@4ax.com>
Source record: 94694

On Mon, 24 May 2004 17:32:48 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:

>From where can I obtain a Frederick Emmons Terman prayer mat ?
> ;o)
Same place that sells the Kelvinator sacred artifacts and lord
plushbottom hymnals.

2739. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 17:49:24 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <qad4b0lrn92gamkajc4aek00mtoa3oge31@4ax.com>
Source record: 94695

On Mon, 24 May 2004 10:45:35 -0500, Tom Ring <tarnews@taring.org>
wrote:

>Bob Miller wrote:
>
>> On Sun, 23 May 2004 23:19:05 -0500, Cecil Moore
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>
>>>Mike Coslo wrote:
>>>
>>>> Is there a human being alive today that questions that if the other
>>>>party lost while getting a majority of the votes, we wouldn't be looking
>>>>at a massive attempt to abolish the electoral college?
>>>
>>>Too bad this is a republic and not a democracy.
>>
>>
>> What's the difference, Cecil?
>>
>> Bob
>> k5qwg
>
>Oh boy. This is one of the reasons our country is such a mess. People
>do not know the difference.
>
>To put it _really_ simply. In a true democracy the population would get
>to have a say in everything that the government at every level does,
>which would be unwieldy at best, unworkable at worst. In a democratic
>republic, the population elects representatives that they trust to
>represent their interests, which means the representatives don't always
>do what you'd like, especially if they are from the party you didn't
>vote for.
>
>tom
>K0TAR

Thank you for the definition. Are there any true democracies on the
planet at this time?

Bob
k5qwg

2740. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 17:49:39 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b23691_4@corp.newsgroups.com>
Source record: 94696

Dave wrote:
> no, only that you ignored the body of the message and answered what you
> wanted to discuss instead of what was asked.

Yes, I did. I didn't know anything about the original question so
I kindly offered to discuss something I know something about. If that
is against netnews guidelines, could you show me where it says so?

> nope, that is a real world situation, but not the one under discussion.

A 1/4WL matching section is not a "real world situation"? Since when?
Everything I post is a real-world situation except for the obvious,
e.g. one-second long lossless transmission lines.

> so which is it, in phase or 180 degrees out of phase???

It depends upon which signal we are talking about and whether the
impedance discontinuity steps-up or steps-down. Assuming the generated
forward wave (a1) has the voltage and current in phase at zero degrees:

For a step-up impedance discontinuity, the s11(a1) reflection term
will have the voltage at zero degrees (and the current at 180 degrees).

For a Z0-match, b1 will be zero so s12(a2) must be equal magnitude
and opposite phase to s11(a1). That puts the reflection from the
load with voltage at 180 degrees (and current at zero degrees).
All interference at port1 is totally destructive for a Z0-match.

The s21(a1) term has voltage at zero degrees (and current at zero
degrees). All interference at port2 is constructive so s22(a2) also
has the voltage at zero degrees (and current at zero degrees).

For a step-down impedance discontinuity associated with a Z0-match,
the phases of the reflected voltages and currents are shifted by 180
degrees and b1 still equals zero.

The above is exactly what happens at the match point at the input
of a tuner. ***Therefore, the great majority of ham radio antenna
systems have the voltages and currents either in-phase or 180 degrees
out of phase at the tuner match point.*** In fact, all a tuner does is
shift the magnitude and phase of the reflected waves from a mismatched
antenna to be equal in magnitude and 180 degrees out of phase with the
reflections from the match point. Therefore, all reflections are canceled
at the match point but not between the match point and the antenna.

This was all explained 64 years ago (when I was two years old) by J. C.
Slater in _Microwave_Transmission_. Why do I have to explain it all over
again?

--
73, Cecil http://www.qsl.net/w5dxp

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2741. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 17:53:22 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B23692.162B0DE6@uci.edu>
Source record: 94704

Cecil Moore wrote:
> the
> rearward-traveling momentum energy in those two waves is conserved by
> changing direction to become part of a forward-traveling wave.

Yeeesh. You had it on, dog, up until that. And don't try to tell me (again) that I'm lying that you said it.

(Remember when you wrote this? "If reflected energy makes its way back into the final amp, it was never generated in the first place, by definition." Hint: apply the same idea to your "rearward-traveling momentum" and you'll have it.)

73, Jim AC6XG

2742. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 17:56:19 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b23821_4@corp.newsgroups.com>
Source record: 94698

Henry Kolesnik wrote:
> SWR ghosts are usually smear because the transmission line is short and the
> displacement fo the image is small compared to object reflection shost which
> have a greater image displacement becasue the reflected signal travels over
> a greater distance.

If reflected waves don't make a round trip back toward the source
and get re-reflected, how can there be ghosts? :-)
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2743. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 17:58:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bod4b0dk0qa8jfpmcpgb2tuidvdgobv7e2@4ax.com>
Source record: 94697

On Mon, 24 May 2004 12:49:39 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>I didn't know anything about the original question
Stock answer.

>This was all explained 64 years ago (when I was two years old) by J. C.
>Slater in _Microwave_Transmission_. Why do I have to explain it all over
>again?
Possibly because you so ill understood it then as now?

2744. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:02:08 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b2397e_4@corp.newsgroups.com>
Source record: 94699

Richard Fry wrote:

> RE: TV Ghosting (quotes below)
>
> To elaborate, the visibility of a ghost image in analog TV systems is
> related to the magnitude, phase and time displacement of the RF reflection
> that produced it as compared to the original, or non-reflected waveform.
>
> The round-trip transit time from the TV tx output to the mismatch in its
> antenna system will determine the time displacement of the ghost, at the
> rate of 1 microsecond of displacement per ~490 feet of distance between the
> tx and the reflection plane (vp = 0.997c).

Richard, you know you are going against the conventional wisdom on
this newsgroup. Ghosting cannot exist during steady-state so if
ghosting exists it simply means that you are still in the transient
state and the steady-state doesn't exist (yet).
--
73, Cecil http://www.qsl.net/w5dxp

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2745. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:06:57 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b23a9f_4@corp.newsgroups.com>
Source record: 94700

Bob Miller wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Too bad this is a republic and not a democracy.
>
> What's the difference, Cecil?

There's lots of differences but one is that in a pure
democracy my three-year old grandson could vote on
every proposed law. If you eliminate any citizen from
voting for any reason, it is not a pure democracy.

If your elected representative votes on proposed laws,
rather than you, it is a republic, not a democracy.
--
73, Cecil http://www.qsl.net/w5dxp

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2746. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:10:19 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b23a59$0$434$5cbedd26@news.real-time.com>
Source record: 94701

Richard Clark wrote:

>
> There are the illusions of comfort in political labels, thought only
> to serve headlines and talk-show topics; and then there are the
> consequences where newspapers are neutralized, and talk show hosts
> elevated to the minister of propaganda.
>
> The test of history is can you fill in the names alluded to? The test
> of freedom is can you pin the mustache on any current Fï¿½rher?
>
> 73's
> Richard Clark, KB7QHC

Wow, I never realized Goebbels was a talk show host. :)

tom
K0TAR

2747. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:13:30 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b23b18$0$434$5cbedd26@news.real-time.com>
Source record: 94702

Bob Miller wrote:

>K0TAR
>
>
> Thank you for the definition. Are there any true democracies on the
> planet at this time?
>
> Bob
> k5qwg
>
>

I don't know, possibly some very small population could pull it off.

tom
K0TAR

2748. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:14:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b23c4c_4@corp.newsgroups.com>
Source record: 94703

Bob Miller wrote:
> Thank you for the definition. Are there any true democracies on the
> planet at this time?

Nope, the father of true democracies proved they don't work.
Socrates drank hemlock after a democratic vote for him to do so.
In a pure democracy, everyone named Bob Miller could be voted
into prison or made into slaves or worse.
--
73, Cecil http://www.qsl.net/w5dxp

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2749. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:19:41 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b23d9b$1_4@corp.newsgroups.com>
Source record: 94706

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>This was all explained 64 years ago (when I was two years old) by J. C.
>>Slater in _Microwave_Transmission_. Why do I have to explain it all over
>>again?
>
> Possibly because you so ill understood it then as now?

Well Richard, here's your chance. Please enlighten us on J.C.
Slater's meaning of: "The method of eliminating reflections
is based on the interference between waves. ... The fundamental
principle behind the elimination of reflections is then to have
each reflected wave canceled by another wave of equal amplitude
and opposite phase."
--
73, Cecil http://www.qsl.net/w5dxp

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2750. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:20:27 UTC
From: Dave <noone@nowhere.com>
Message-ID: <L8adnSPvHOpvoS_dRVn-sA@crocker.com>
Source record: 94705

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b23691_4@corp.newsgroups.com...
> Dave wrote:
> > no, only that you ignored the body of the message and answered what you
> > wanted to discuss instead of what was asked.
>
> Yes, I did. I didn't know anything about the original question so
> I kindly offered to discuss something I know something about. If that
> is against netnews guidelines, could you show me where it says so?

of course it is against guidelines. you were starting a new thread without
changing the subject. in effect hijacking the thread for your own
discussion.

>
> > nope, that is a real world situation, but not the one under discussion.
>
> A 1/4WL matching section is not a "real world situation"? Since when?
> Everything I post is a real-world situation except for the obvious,
> e.g. one-second long lossless transmission lines.

i said it was real world, but it is not what the original thread was about.

2751. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:25:30 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B23E1A.A5185404@uci.edu>
Source record: 94713

Cecil Moore wrote:
>
> Jim Kelley wrote:
> >
> > Cecil Moore wrote:
> >>rearward-traveling momentum energy in those two waves is conserved by
> >>changing direction to become part of a forward-traveling wave.
> >
> > Yeeesh. You had it on, dog, up until that. And don't try to tell me
> > (again) that I'm lying that you said it.
> >
> > (Remember when you wrote this? "If reflected energy makes its way back
> > into the final amp, it was never generated in the first place, by
> > definition." Hint: apply the same idea to your "rearward-traveling
> > momentum" and you'll have it.)
>
> Egads Jim, exactly how much of reality do you think I am capable of
> ignoring?

You're evidently capable of ignoring at least some, Cecil.

> I *don't* agree with that definition above and your implication that
> momentum and energy don't need to be conserved is simply metaphysics
> in action.

We both know that momentum and energy must be conserved. We just
disagree agree on how nature chooses to do that. And, because of that
disagreement, I'm forced to endure your beligerant rhetoric.

73, Jim AC6XG

2752. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:31:29 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <bpqdnbx_LYUfoi_dRVn-uw@comcast.com>
Source record: 94707

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b2397e_4@corp.newsgroups.com...
> Richard Fry wrote:
>
> > RE: TV Ghosting (quotes below)
> >
> > To elaborate, the visibility of a ghost image in analog TV systems is
> > related to the magnitude, phase and time displacement of the RF
reflection
> > that produced it as compared to the original, or non-reflected waveform.
> >
> > The round-trip transit time from the TV tx output to the mismatch in its
> > antenna system will determine the time displacement of the ghost, at the
> > rate of 1 microsecond of displacement per ~490 feet of distance between
the
> > tx and the reflection plane (vp = 0.997c).
>
> Richard, you know you are going against the conventional wisdom on
> this newsgroup. Ghosting cannot exist during steady-state so if
> ghosting exists it simply means that you are still in the transient
> state and the steady-state doesn't exist (yet).
> --
> 73, Cecil http://www.qsl.net/w5dxp
Looking for the smiley face. It is probably fair to say that in the *general
case* there is no steady reflection in video transmission, unless the round
trip delay is N horizontal lines. BTW, weirdest case I saw came when the dog
chewed through the cable. Now I was seeing the main signal coming from the
cable, plus a ghost that was picked up directly from the transmitter. The
ghost was to the left and above the main signal.

Tam/WB2TT

2753. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:40:57 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b24297$1_2@corp.newsgroups.com>
Source record: 94708

Jim Kelley wrote:
>
> Cecil Moore wrote:
>>rearward-traveling momentum energy in those two waves is conserved by
>>changing direction to become part of a forward-traveling wave.
>
> Yeeesh. You had it on, dog, up until that. And don't try to tell me
> (again) that I'm lying that you said it.
>
> (Remember when you wrote this? "If reflected energy makes its way back
> into the final amp, it was never generated in the first place, by
> definition." Hint: apply the same idea to your "rearward-traveling
> momentum" and you'll have it.)

Egads Jim, exactly how much of reality do you think I am capable of
ignoring? Obviously, not as much as you. Why not just say, "God is
the cause of everything I (Jim) cannot explain or understand."?
The meaning would be virtually identical to your present positions.

I *don't* agree with that definition above and your implication that
momentum and energy don't need to be conserved is simply metaphysics
in action. You can argue against energy conservation all you want.
Conservation of Momentum has got you over a barrel in this argument
whether you realize it or not. Somehow, the momentum in the wave
reflected from a mismatched load is reversed. Please explain how
that happens without changing directions. Somehow, the energy in
the wave reflected from a mismatched load changes directions. Please
enlighten us on exactly the mechanism involved. Hint: J.C.Slater
explained it all in _Microwave_Transmissions_ before you were born.
--
73, Cecil http://www.qsl.net/w5dxp

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2754. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:50:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gsg4b0lt2hh167d97qpt9eqik361cu5uom@4ax.com>
Source record: 94709

On Mon, 24 May 2004 13:19:41 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>Well Richard, here's your chance. Please enlighten us on J.C.
What was the original question? [accredited stock response]

2755. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:50:38 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b244dc$1_2@corp.newsgroups.com>
Source record: 94711

Dave wrote:
> of course it is against guidelines. you were starting a new thread without
> changing the subject. in effect hijacking the thread for your own
> discussion.

Of course, it is not against the guidelines as the subject was "Reflected Power". I simply continued to talk about reflected power, the subject of the thread. That's a broad subject. Perhaps the originator erred in choosing that broad of a subject but he chose that subject nevertheless. All of my postings to this thread have been about reflected power, including this one, in defense of my postings about reflected power.

> i said it was real world, but it is not what the original thread was about.

The original thread was about "Reflected Power". My example was about reflected power. I might not even have read the text of the original posting. It would be interesting to know why your agenda requires diverting the issue away from "reflected power"? What are you afraid of?
--
73, Cecil http://www.qsl.net/w5dxp

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2756. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:52:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <52h4b05l9mbp4180t1f3so2d04bapttsur@4ax.com>
Source record: 94710

On Mon, 24 May 2004 13:10:19 -0500, Tom Ring <tarnews@taring.org>
wrote:
>Wow, I never realized Goebbels was a talk show host. :)
Still is....

2757. Need Telrex Beam Assembly Info

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:55:02 UTC
From: jhgraves@gis.net
Message-ID: <8014a38c.0405241055.286c5cf2@posting.google.com>
Source record: 94712

Our club has 2 Telrex beams donated to them and we need assembly and model information. If someone had a scanned catalog that would be a start. We are hoping to use them on FD.

The first is what appears to be a tri-band beam with a tri-band director and driven element with a full size element on 10M and a dual trapped reflector on 15/20m. The matching section is gone so we are looking for details there as well.

The second is a 2 element tri-bander with a matching section in pieces.

I can be reached here or at wb1ehl@nsradio.org

TIA
John / WB1EHL

2758. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 18:58:49 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b246c7$1_2@corp.newsgroups.com>
Source record: 94714

Tam/WB2TT wrote:

> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>>Richard, you know you are going against the conventional wisdom on
>>this newsgroup. Ghosting cannot exist during steady-state so if
>>ghosting exists it simply means that you are still in the transient
>>state and the steady-state doesn't exist (yet).

> Looking for the smiley face.

Is there a smiley face that means, "sad but true"? Many otherwise
intelligent, knowledgeable, educated engineers have attempted to force
their metaphysical "steady-state" agenda on uninitiated and unsuspecting
victims. One is saddened by such an event and one wonders why. Does
a steady-state religion or creed exist within amateur radio? If so,
what are its purpose and goals?
--
73, Cecil http://www.qsl.net/w5dxp

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2759. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 19:03:54 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b247f9_2@corp.newsgroups.com>
Source record: 94716

Jim Kelley wrote:
> We both know that momentum and energy must be conserved. We just
> disagree agree on how nature chooses to do that.

Well then, please enlighten us, Jim. How does nature choose to reverse the momentum in the wave reflected from a mismatched source? It is obvious that the wave reflected from a mismatched source has momentum in the rearward direction. Exactly what reverses that momentum? Please be specific. Remember that standing waves prove that the rearward-traveling wave exists in reality and thus possesses energy and momentum in the rearward direction, both of which must be conserved.

Maybe you should read _Microwave_Transmission_ by J. C. Slater before you continue?
--
73, Cecil http://www.qsl.net/w5dxp

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2760. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 19:05:32 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hevbfFc8115U1@uni-berlin.de>
Source record: 94715

RE: Cecil Moore quote below & 'steady state'

The transmitter is continuously generating incident power, which is continuously subject to reflection(s) by any mismatch in the antenna system. Given the right magnitude, phase and time displacement, each reflection will produce a continuous ghost on the TV screen.

These ghosts can be seen (continuously) in/on the output waveform of a TV demodulator connected at the output of the transmitter -- both in time domain on an oscilloscope, and visually on a monitor. I've seen these continuous reflections scores of times at TV tx sites all over the US as a field engineer for RCA Broadcast Division.

"Conventional wisdom" on this NG may say otherwise, but hopefully some may learn the reality from this exchange.

- RF

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:40b2397e_4@corp.newsgroups.com...
> Richard Fry wrote:
>
> > RE: TV Ghosting (quotes below)
> >
> > To elaborate, the visibility of a ghost image in analog TV systems is
> > related to the magnitude, phase and time displacement of the RF reflection
> > that produced it as compared to the original, or non-reflected waveform.
> >
> > The round-trip transit time from the TV tx output to the mismatch in its
> > antenna system will determine the time displacement of the ghost, at the
> > rate of 1 microsecond of displacement per ~490 feet of distance between the
> > tx and the reflection plane (vp = 0.997c).
>
> Richard, you know you are going against the conventional wisdom on
> this newsgroup. Ghosting cannot exist during steady-state so if
> ghosting exists it simply means that you are still in the transient
> state and the steady-state doesn't exist (yet).
>

2761. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 19:06:28 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b24892_2@corp.newsgroups.com>
Source record: 94717

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Well Richard, here's your chance. Please enlighten us on J.C.
>
> What was the original question? [accredited stock response]

When totally ignorant, divert the issue as long as possible.
Why am I not surprised?
--
73, Cecil http://www.qsl.net/w5dxp

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2762. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 19:12:44 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b24a0a$1_2@corp.newsgroups.com>
Source record: 94718

Cecil Moore wrote:
> Well then, please enlighten us, Jim. How does nature choose to
> reverse the momentum in the wave reflected from a mismatched
> source? It is obvious that the wave reflected from a mismatched
> source has momentum in the rearward direction.

Typo: please change "source" to "load" in the above. Sorry.

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2763. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 19:27:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <e2j4b0dn41jv1afo6bcd1gipjm3h0i9m34@4ax.com>
Source record: 94719

On Mon, 24 May 2004 14:06:28 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>> What was the original question? [accredited stock response]
>When totally ignorant, divert the issue as long as possible.
>Why am I not surprised?
Are you sure this is the original question? [accredited stock
response]

2764. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 19:39:01 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B24F55.10CBBDB6@uci.edu>
Source record: 94621

Henry Kolesnik wrote:
>
> I know that any power not dissipated by an antenna is reflected back to the
> transmitter. Then the transmitter "reflects" this reflection back to
> antenna, ad nauseum until its all gone. I also know that a short or an open
> is required to reflect power and I'm searching for which it is, an open or a
> short. I'm inclined to think it's a virtual open but I'm at a loss to
> understand that and I wonder if someone has a good explanation or analogy
> and some math wouldn't hurt.
> tnx
> Hank WD5JFR

Hi Hank,

Here's a link which talks about (and illustrates) the physics of waves
at a boundary.

http://www.physicsclassroom.com/Class/waves/U10L3a.html

It shows what happens at the two extremes for transverse waves along a
string - not unlike electromagnetic waves in a transmission line in some
ways. In one instance, the string is fastened directly to the boundary
- a rod in this case. This is analogous to a short across a
transmission line. It will be seen that a reflection occurs, and that
the wave becomes inverted upon reflecting.

In the other case, the string is fastened to a ring which can slide
freely up and down the rod. This case is analogous to an unterminated,
or open transmission line. It can be seen that this too causes a
reflection, only this time the wave is reflected back without a phase
reversal. The amplitude of the reflected wave in both these cases
equals the amplitude of the incident wave.

Now imagine that some friction between the sliding ring and the rod can
be added in varying amounts. This friction would be proportional to the
conductance in an electrical circuit, and would be infinite at one
extreme and zero at the other. The greater the friction, the greater
the conductance (and the lower the electrical resistance). As we begin
to increase the friction (conductance) from zero, the amplitude of the
inverted, reflected wave begins to decrease. The decrease in amplitude
continues with increasing friction until the amplitude of the reflected
wave becomes zero. It could be said that this value is equal to the Z0
of the transmission line.

As the amount of friction is increased still further, a small reflection
once again begins to appear. Only now the phase is opposite from what

it was before. Further increases in friction produce further increases in reflection amplitude until the amplitude of the reflected wave once again equals the amplitude of the incident wave.

What we noticed in the exercise is that there is some value of friction (conductance or resistance) for which no reflection occurs. The exact value depends on the medium through which the wave is propagating. All other values produced a reflection.

There is no perfect explanation, and this certainly isn't a perfect analogy but I hope that it will at least help give you a little more of a feel for the idea.

73, Jim AC6XG

2765. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 19:46:38 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B2511E.57FDDC66@uci.edu>
Source record: 94622

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > We both know that momentum and energy must be conserved. We just
> > disagree agree on how nature chooses to do that.
>
> How does nature choose to
> reverse the momentum in the wave reflected from a mismatched
> source?

The definition is accurate as well as descriptive. As I've explained at least a dozen times, energy only moves in the direction of transfer.

73, Jim AC6XG

2766. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 19:54:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <m9CdnWSZ5fJyzy_dRVn-ug@crocker.com>
Source record: 94720

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b244dc$1_2@corp.newsgroups.com...
> Dave wrote:
> > of course it is against guidelines. you were starting a new thread
without
> > changing the subject. in effect hijacking the thread for your own
> > discussion.
>
> Of course, it is not against the guidelines as the subject was "Reflected
> Power". I simply continued to talk about reflected power, the subject of
> the thread. That's a broad subject. Perhaps the originator erred in
choosing
> that broad of a subject but he chose that subject nevertheless. All of my
> postings to this thread have been about reflected power, including this
one,
> in defense of my postings about reflected power.

then obviously you just struck on the convenient subject line and ignored
the original question, subverting the whole thread for your own twisted
use... including the argument that you were not taking over the discussion.
this obviously just raises the noise floor and does nothing to help the
original poster who by now is likely heading for his local library if he is
smart.

2767. Re: Helping a Blind Ham

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:23:57 UTC
From: Jim Menning <jmenning@new.rr.com>
Message-ID: <xRssc.47018$oQ6.14092@twister.rdc-kc.rr.com>
Source record: 94623
Cross-posted to: alt.binaries.pictures.radio,alt.binaries.schematics.electronic,alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"Bunnydawg" <bunnydawg@hotmail.com> wrote in message
news:eOpsc.14624$tb4.553207@news20.bellglobal.com...
> There was a post not long ago of a ham helping a blind ham looking for an
> audio version of a service manual.
> Anyone remember that one. I have some info that might help them. I
can't
> locate the post now.
> Robert
> VE3 something or other
>
>

Maybe this will help?

http://groups.google.com/groups?q=ham+blind&ie=UTF-8&hl=en

jim menning

2768. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:27:08 UTC
From: tdonaly@aol.com
Message-ID: <20040524162708.13561.00000910@mb-m27.aol.com>
Source record: 94624

Cecil wrote,
>
>Bob Miller wrote:
>> Thank you for the definition. Are there any true democracies on the
>> planet at this time?
>
>Nope, the father of true democracies proved they don't work.
>Socrates drank hemlock after a democratic vote for him to do so.
>In a pure democracy, everyone named Bob Miller could be voted
>into prison or made into slaves or worse.
>--
>73, Cecil http://www.qsl.net/w5dxp
>

Most forms of government can be made to work for awhile if the
people who are supposed to make them work are serious and honest
about what they're charged with doing. Conversely, there is no form of
government that can work for any length of time if it's run by crooks,
con artists, cheap politicians, and hicks.
73,
Tom Donaly, KA6RUH

2769. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:28:40 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b25bd7$1_3@corp.newsgroups.com>
Source record: 94625

Richard Clark wrote:
> Are you sure this is the original question?

I am sure that our solar system and homo sapiens didn't exist
when the original question was asked.

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2770. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:32:03 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b25ca3_3@corp.newsgroups.com>
Source record: 94627

Jim Kelley wrote:
> It shows what happens at the two extremes for transverse waves along a
> string - not unlike electromagnetic waves in a transmission line in some
> ways.

Where are the E and H fields in the string response?
--
73, Cecil http://www.qsl.net/w5dxp

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2771. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:33:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <1tm4b013mj809ujo3r4usnd36o3gthq0qq@4ax.com>
Source record: 94626

On Mon, 24 May 2004 15:28:40 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>I am sure that our solar system and homo sapiens didn't exist
>when the original question was asked.
So the question is which came first, the homo or the solar system?

2772. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:38:09 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40B25D31.5000106@psu.edu>
Source record: 94628

Tom Ring wrote:
> Bob Miller wrote:
>
>> On Sun, 23 May 2004 23:19:05 -0500, Cecil Moore
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>
>>> Mike Coslo wrote:
>>>
>>>> Is there a human being alive today that questions that if the
>>>> other party lost while getting a majority of the votes, we wouldn't
>>>> be looking at a massive attempt to abolish the electoral college?
>>>
>>>
>>> Too bad this is a republic and not a democracy.
>>
>>
>>
>> What's the difference, Cecil?
>>
>> Bob
>> k5qwg
>
>
> Oh boy. This is one of the reasons our country is such a mess. People
> do not know the difference.
>
> To put it _really_ simply. In a true democracy the population would get
> to have a say in everything that the government at every level does,
> which would be unwieldy at best, unworkable at worst. In a democratic
> republic, the population elects representatives that they trust to
> represent their interests, which means the representatives don't always
> do what you'd like, especially if they are from the party you didn't
> vote for.

And it is a very good system indeed! Our system of checks and balances
has done a pretty good job of keeping the country moving on the right path.

Pure democracy has one big problem in that people often vote
emotionally and sometimes upon reflection realize they did so in error.
And of course, a pure democracy can vote to abolish itself! 8^)

- Mike -

2773. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:39:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b25e63$1_3@corp.newsgroups.com>
Source record: 94630

Jim Kelley wrote:
> The definition is accurate as well as descriptive. As I've explained at
> least a dozen times, energy only moves in the direction of transfer.

Energy moves in whatever direction energy moves. According to
you, if we reflect light energy from Alpha Centauri back to
Alpha Centauri, no energy movement has occurred. Never mind
that it takes 20 years to accomplish that energy movement.
Your "no work equals no energy" concept is as bogus as it
possibly can be. Joules of energy passing a point in delta-
time is power, by IEEE definition.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2774. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:40:41 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40B25DC9.7020806@psu.edu>
Source record: 94629

Cecil Moore wrote:
> Bob Miller wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>
>>> Too bad this is a republic and not a democracy.
>>
>>
>> What's the difference, Cecil?
>
>
> There's lots of differences but one is that in a pure
> democracy my three-year old grandson could vote on
> every proposed law. If you eliminate any citizen from
> voting for any reason, it is not a pure democracy.

That could be kewl, Cecil! Cake and ice cream every night, lotsa cool cartoons on tv. Sounds like the good thing to me!

- Mike -

2775. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:43:40 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b25f5c_3@corp.newsgroups.com>
Source record: 94632

Dave wrote:
> then obviously you just struck on the convenient subject line and ignored
> the original question, ...

Nope, you must have missed the posting where I said I didn't
possess sufficient knowledge to answer the original question
but I was willing to discuss something related to the subject
line for which I do possess sufficient knowledge.

Why all the logical diversions? What are you afraid of?
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2776. Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:45:25 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hf56pFca08bU1@uni-berlin.de>
Source record: 94631

To me, the threads about reflected power on this NG over the last few days are rather revealing. Some posters quote Terman, Lord Kelvin and others with inapplicable/incomplete statements or formulae attempting to prove (or intimidate) NG readers into accepting that poster's particular point of view -- even when it has been shown by field experience NOT to fit the observed, and measured reality.

Perhaps we should be more willing to further research and modify our favourite, personal hypotheses when valid field experiences show them to be inaccurate.

RF

Visit http://rfry.org for FM broadcast RF system papers.

2777. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:46:08 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b25fee$1_3@corp.newsgroups.com>
Source record: 94633

Tdonaly wrote:
> Conversely, there is no form of
> government that can work for any length of time if it's run by crooks,
> con artists, cheap politicians, and hicks.

Thank goodness you are an engineer and not a politician, eh? :-)

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2778. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 20:57:41 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b262a5$1_3@corp.newsgroups.com>
Source record: 94634

Richard Fry wrote:
> Perhaps we should be more willing to further research and modify our
> favourite, personal hypotheses when valid field experiences show them to be
> inaccurate.

Actually what has happened, Richard, is that a bunch of engineers and scientists, including gurus on this newsgroup, believe that their math models dictate reality, rather than vice versa. We can thank Einstein, himself, for the following quote:

"One thing I have learned in a long life: that all our science, measured against reality, is primitive and childlike ..." Albert Einstein

Too bad that some people on this newsgroup have adopted their steady-state math models as their unquestioned religion, unrelated to reality.
--
73, Cecil http://www.qsl.net/w5dxp

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2779. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:05:42 UTC
From: Dave <noone@nowhere.com>
Message-ID: <9b2dnb7fj5Qz_i_dRVn-tw@crocker.com>
Source record: 94635

the last few days??? these same discussions have been going on for years
with the same predictable outcome. i was unfortunately sucked back into the
recent ones becaues of a failure in my posting filters... that unfortunate
problem has been rectified.

"Richard Fry" <rfry@adams.net> wrote in message
news:2hf56pFca08bU1@uni-berlin.de...
> To me, the threads about reflected power on this NG over the last few days
> are rather revealing. Some posters quote Terman, Lord Kelvin and others
> with inapplicable/incomplete statements or formulae attempting to prove
(or
> intimidate) NG readers into accepting that poster's particular point of
> view -- even when it has been shown by field experience NOT to fit the
> observed, and measured reality.
>
> Perhaps we should be more willing to further research and modify our
> favourite, personal hypotheses when valid field experiences show them to
be
> inaccurate.
>
> RF
>
> Visit http://rfry.org for FM broadcast RF system papers.
>
>

2780. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:14:56 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b266ae_4@corp.newsgroups.com>
Source record: 94636

Dave wrote:
> the last few days??? these same discussions have been going on for years
> with the same predictable outcome. i was unfortunately sucked back into the
> recent ones becaues of a failure in my posting filters... that unfortunate
> problem has been rectified.

Translation: My "posting filters" allow me to deny reality. :-)

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2781. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:17:13 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b26737$1_4@corp.newsgroups.com>
Source record: 94637

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>I am sure that our solar system and homo sapiens didn't exist
>>when the original question was asked.
>
> So the question is which came first, the homo or the solar system?

For what it is worth, I believe that the first homo sapien
originated about a quarter of a million years ago and was
a female with dominant genes.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2782. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:33:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5eq4b0p7adpvpuc514h0ch7haibdnucmqj@4ax.com>
Source record: 94638

On Mon, 24 May 2004 16:17:13 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>For what it is worth, I believe that the first homo sapien
>originated about a quarter of a million years ago and was
>a female with dominant genes.
Strange belief for a creation of barely 5000 years old. What has this
to do with Reflected Power?

2783. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:33:14 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B26A1A.4BDAF5C0@uci.edu>
Source record: 94647

Cecil Moore wrote:
> According to
> you, if we reflect light energy from Alpha Centauri back to
> Alpha Centauri, no energy movement has occurred.

Cecil, unless you can simply express your views, and let me be the one to express my views, the exchange becomes degraded to ascii mud wrestling. I have no interest in that. Please make your point without speaking on 'my behalf'.

73, Jim AC6XG

2784. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:34:58 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c8tpu4$3jg$1@newshost.mot.com>
Source record: 94643

"Richard Fry" <rfry@adams.net> wrote in message
news:2hcf8gFbg4lrU1@uni-berlin.de...
> RE: Concept below
>
> However this is not an accurate model of a transmitter.
>
> For an example, take an old Heathkit DX-100 generating a measured 180
watts
> of CW RF into a matched 50 ohm load. To do this, it does NOT also
dissipate
> 180 watts of RF into some "virtual" internal RF load in the DX-100. In
> fact, the PAs and power supply in the DX-100 could not produce a total RF
> output power of 360 watts without exceeding their ratings.
>
> The dissipation in the PA is essentially related only the DC to RF
> conversion efficiency of the PA, which in this case probably is about 75%,
> max (Class C). So a PA input power of about 240 watts DC is required to
> produce 180 watts of RF output power. The other 60 watts of plate input
> power is converted to heat by the PA tube anodes.
>
> The entire RF output generated by the PA stage is applied virtually 100%
to
> the output connector. How much of that is absorbed by the load connected
> there is a function of load SWR and system losses.

Finally someone who is getting closer to the flaw in the way many
mis-interpret the maximum power transfer theorm concept.
--
Steve N, K,9;d, c. i My email has no u's.

2785. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:40:44 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c8tq8t$3nm$1@newshost.mot.com>
Source record: 94650

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:zPCdnSVX5K_UoCzdRVn-vw@comcast.com...
>
> "Richard Fry" <rfry@adams.net> wrote in message
> news:2hcf8gFbg4lrU1@uni-berlin.de.....
> .....
> > RE: Concept below
> >
> > However this is not an accurate model of a transmitter.
> >
> > For an example, take an old Heathkit DX-100 generating a measured 180
> watts
> > of CW RF into a matched 50 ohm load. To do this, it does NOT also
> dissipate
> > 180 watts of RF into some "virtual" internal RF load in the DX-100. In
> > fact, the PAs and power supply in the DX-100 could not produce a total
RF
> > output power of 360 watts without exceeding their ratings.
> >
> > The dissipation in the PA is essentially related only the DC to RF
> > conversion efficiency of the PA, which in this case probably is about
75%,
> > max (Class C). So a PA input power of about 240 watts DC is required to
> > produce 180 watts of RF output power. The other 60 watts of plate input
> > power is converted to heat by the PA tube anodes.
> >
> > The entire RF output generated by the PA stage is applied virtually 100%
> to
> > the output connector. How much of that is absorbed by the load
connected
> > there is a function of load SWR and system losses.
> >
> > - RF
> There is a Motorola ap note that agrees with what Richard is saying. To
> paraphrase it, if the the DX100 had an output impedance of 50 Ohms, then
the
> overall efficiency would be 37.5%.

Unfortunately I can't read all the digressions in the thread. I skim by
author...

This is an interesting twist, Tam. I think if this were the case, then
there would be MORE power dissipated in the Tx than Mr. Fry is saying -
making the situation worse. By that, I mean, getting further from what is
going on. I think this goes in the wrong direction. I believe the flaw is

believing that the Rs=RL must exist for the transmitter.
--
Steve N, K,9;d, c. i My email has no u's.

2786. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:43:10 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <O%tsc.108809$536.19212469@attbi_s03>
Source record: 94639

Tdonaly wrote:
>
> Most forms of government can be made to work for awhile if the
> people who are supposed to make them work are serious and honest
> about what they're charged with doing. Conversely, there is no form of
> government that can work for any length of time if it's run by crooks,
> con artists, cheap politicians, and hicks.
> 73,
> Tom Donaly, KA6RUH
>
DEMOCRAPS !!!
>

2787. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:44:29 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <11usc.273$T87.109@newssvr24.news.prodigy.com>
Source record: 94640

There are no stupid questions about reflected power only stupid me asking
and I'm still stupid on the question I assume you're referring to..

--
73
Hank WD5JFR
"Richard Fry" <rfry@adams.net> wrote in message
news:2hf56pFca08bU1@uni-berlin.de...
> To me, the threads about reflected power on this NG over the last few days
> are rather revealing. Some posters quote Terman, Lord Kelvin and others
> with inapplicable/incomplete statements or formulae attempting to prove
(or
> intimidate) NG readers into accepting that poster's particular point of
> view -- even when it has been shown by field experience NOT to fit the
> observed, and measured reality.
>
> Perhaps we should be more willing to further research and modify our
> favourite, personal hypotheses when valid field experiences show them to
be
> inaccurate.
>
> RF
>
> Visit http://rfry.org for FM broadcast RF system papers.
>
>

2788. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:46:11 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <D2usc.110697$iF6.9975401@attbi_s02>
Source record: 94641

Cecil Moore wrote:

snip

> For what it is worth, I believe that the first homo sapien
> originated about a quarter of a million years ago and was
> a female with dominant genes.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>

My wife has me convinced that ALL women have the dominant genes!!!!

Deacon Dave

2789. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:47:33 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c8tqln$3p2$1@newshost.mot.com>
Source record: 94648

"G.Beat" <now9spamgb@no.comcast.spam.net> wrote in message
news:naQrc.24177$zw.4857@attbi_s01...

> > [...snip...] This patina is conductive.

OOPS! Aluminum oxide, or Alumina, is very non- conductive. It is a ceramic used for as a base high Q circuits at 150 Mhz and above (stripline and microstrip). It is also what is grown on the surface of "anodized" aluminum in the anodization process. It is also why aluminum is so hard to solder. The oxide forms immediately on contact with air. Aluminum is the most reactive metal.

--
Steve N, K,9;d, c. i My email has no u's.

2790. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:47:58 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <i4usc.274$od7.144@newssvr24.news.prodigy.com>
Source record: 94642

The first ghost is the most visible and the offspring become less and less visible. Ghosts of ghosts are hard to see. If you're a whiteman you haven't seen any skinwalkers, aka Navajo ghosts..

--
73
Hank WD5JFR
"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:40b23821_4@corp.newsgroups.com...
> Henry Kolesnik wrote:
> > SWR ghosts are usually smear because the transmission line is short and the
> > displacement fo the image is small compared to object reflection shost which
> > have a greater image displacement becasue the reflected signal travels over
> > a greater distance.
>
> If reflected waves don't make a round trip back toward the source
> and get re-reflected, how can there be ghosts? :-)
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2791. Re: Helping a Blind Ham

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:50:34 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c8tqrc$3pk$1@newshost.mot.com>
Source record: 94652
Cross-posted to: alt.binaries.pictures.radio,alt.binaries.schematics.electronic,alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"Bunnydawg" <bunnydawg@hotmail.com> wrote in message
news:eOpsc.14624$tb4.553207@news20.bellglobal.com...
> There was a post not long ago of a ham helping a blind ham looking for an
> audio version of a service manual.
> Anyone remember that one. I have some info that might help them. I can't
> locate the post now.
> Robert
> VE3 something or other

Also search for the HandiHam web
--
Steve N, K,9;d, c. i My email has no u's. site.

2792. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:52:47 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <P8usc.276$Gb7.187@newssvr24.news.prodigy.com>
Source record: 94644

If the anser were at the library I'd already have it and wouldn't be here.

--
73
Hank WD5JFR
"Dave" <noone@nowhere.com> wrote in message
news:m9CdnWSZ5fJyzy_dRVn-ug@crocker.com...
>
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> news:40b244dc$1_2@corp.newsgroups.com...
> > Dave wrote:
> > > of course it is against guidelines. you were starting a new thread
> without
> > > changing the subject. in effect hijacking the thread for your own
> > > discussion.
> >
> > Of course, it is not against the guidelines as the subject was
"Reflected
> > Power". I simply continued to talk about reflected power, the subject of
> > the thread. That's a broad subject. Perhaps the originator erred in
> choosing
> > that broad of a subject but he chose that subject nevertheless. All of
my
> > postings to this thread have been about reflected power, including this
> one,
> > in defense of my postings about reflected power.
>
> then obviously you just struck on the convenient subject line and ignored
> the original question, subverting the whole thread for your own twisted
> use... including the argument that you were not taking over the
discussion.
> this obviously just raises the noise floor and does nothing to help the
> original poster who by now is likely heading for his local library if he
is
> smart.
>
>

2793. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:55:57 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c8tr5f$3ql$1@newshost.mot.com>
Source record: 94649

"*" <*@*.com> wrote in message news:2hcob7Fbe02iU1@uni-berlin.de...
> They make an instrument called a Time Domain Reflectometer,
> you hook it up to transmission lines and it sends out a pulse
> and times how long it takes to get back.
> The time it takes, reflected pulse polarity, and height says a lot about
the
> line.
> Used for finding faults on telco/cable lines.
> Does the same thing with RF lines.
> Matched well, no pulse, but you can even see connectors on some of these
> TDR's
> Googleit, too

Sorry, *, won't work. TDR only good on wide band systems. Too messy
for this kind of antennas.
--
Steve N, K,9;d, c. i My email has no u's.

2794. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 21:57:04 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <He-dnUGewZ8t8i_dRVn-vA@comcast.com>
Source record: 94645

"Richard Fry" <rfry@adams.net> wrote in message
news:2hf56pFca08bU1@uni-berlin.de...
> To me, the threads about reflected power on this NG over the last few days
> are rather revealing. Some posters quote Terman, Lord Kelvin and others
> with inapplicable/incomplete statements or formulae attempting to prove
(or
> intimidate) NG readers into accepting that poster's particular point of
> view -- even when it has been shown by field experience NOT to fit the
> observed, and measured reality.
>
> Perhaps we should be more willing to further research and modify our
> favourite, personal hypotheses when valid field experiences show them to
be
> inaccurate.
>
> RF
>
> Visit http://rfry.org for FM broadcast RF system papers.
>
>
Actually I am encouraged. There is a lot less divergence than during the Dr.
Slick postings. I have learned things, either from actual postings, or from
having to look things up in the literature.

Tam/WB2TT

2795. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 22:01:44 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b271a5$1_2@corp.newsgroups.com>
Source record: 94646

Richard Clark wrote:
> Strange belief for a creation of barely 5000 years old.

Wow, religious dogma in both your fields of religion and electronics?

> What has this to do with Reflected Power?

You asked - I answered.

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2796. Re: Goodness of ground Radials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 22:11:39 UTC
From: jgboyles@aol.com
Message-ID: <20040524181139.17253.00001775@mb-m03.aol.com>
Source record: 94651

>For heights less than 0.3 wavelengths, Radiation resistance can be accurately enough estimated from -
Rrad = Square(24 * Height / Wavelength) ohms. Which is near enough exact when height = 1/4 wavelength.

Hi Reg, I just went outside and measured the impedance of my 8' mobile antenna. It's center loaded with a high Q loading coil and small capacity hat. It is mounted on a full size pick-up truck. At 7.2 MHZ it reads 37+j0 ohms. The antenna analyzer has always been accurate within a few percent. Does this mean that my truck provides an "excellent ground" at 7.2MHZ? If it does, I need to use my truck for an rf ground for the rig inside my house. It may be that the truck does indeed provide a good ground, I get good results on 40M mobile.

73 Gary N4AST

2797. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 22:18:52 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B274CC.A7628032@uci.edu>
Source record: 94657

Cecil Moore wrote:
> Challenges that the steady-state religion has failed to answer:
>
> How can a standing-wave exist without a forward-traveling wave
> superposed with a rearward-traveling wave?
>
> How does reflected wave momentum change directions?
>
> Why does a TDR indicate that reflections actually exist?
>
> What causes TV ghosting in a transmission line if reflections
> don't exist?
>
> How does radar work if reflections don't exist?

That's what puts the straw in the men, and the red in the herrings.
If it's a reflection, then it must be power! Nothing else reflects,
evidently.

73, ac6xg

2798. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 22:19:29 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b275cf$1_2@corp.newsgroups.com>
Source record: 94653

Tam/WB2TT wrote:
> Actually I am encouraged. There is a lot less divergence than during the Dr.
> Slick postings. I have learned things, either from actual postings, or from
> having to look things up in the literature.

Challenges that the steady-state religion has failed to answer:

How can a standing-wave exist without a forward-traveling wave
superposed with a rearward-traveling wave?

How does reflected wave momentum change directions?

Why does a TDR indicate that reflections actually exist?

What causes TV ghosting in a transmission line if reflections
don't exist?

How does radar work if reflections don't exist?
--
73, Cecil http://www.qsl.net/w5dxp

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2799. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 22:25:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b2773a_2@corp.newsgroups.com>
Source record: 94654

Jim Kelley wrote:
> ... the exchange becomes degraded to ascii mud wrestling.

That's exactly why you are in my email kill file. Please find
someone else with which to enjoy that favorite sadistic sport
of yours.
--
73, Cecil http://www.qsl.net/w5dxp

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2800. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 22:27:52 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <IFusc.295$Bu7.115@newssvr24.news.prodigy.com>
Source record: 94655

Thanks, I knew this but what I don't know is why a final doesn't dissipate the reflected wave but just reflects 100% I assume. Transistor and tube finals dissipate a bunch producing the RF but what is the mirror, check valve or diode that keeps it reflecting

--
73
Hank WD5JFR
"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:40B24F55.10CBBDB6@uci.edu...
> Henry Kolesnik wrote:
> >
> > I know that any power not dissipated by an antenna is reflected back to
the
> > transmitter. Then the transmitter "reflects" this reflection back to
> > antenna, ad nauseum until its all gone. I also know that a short or an
open
> > is required to reflect power and I'm searching for which it is, an open
or a
> > short. I'm inclined to think it's a virtual open but I'm at a loss to
> > understand that and I wonder if someone has a good explanation or
analogy
> > and some math wouldn't hurt.
> > tnx
> > Hank WD5JFR
>
> Hi Hank,
>
> Here's a link which talks about (and illustrates) the physics of waves
> at a boundary.
>
> http://www.physicsclassroom.com/Class/waves/U10L3a.html
>
> It shows what happens at the two extremes for transverse waves along a
> string - not unlike electromagnetic waves in a transmission line in some
> ways. In one instance, the string is fastened directly to the boundary
> - a rod in this case. This is analogous to a short across a
> transmission line. It will be seen that a reflection occurs, and that
> the wave becomes inverted upon reflecting.
>
> In the other case, the string is fastened to a ring which can slide
> freely up and down the rod. This case is analogous to an unterminated,
> or open transmission line. It can be seen that this too causes a
> reflection, only this time the wave is reflected back without a phase

> reversal. The amplitude of the reflected wave in both these cases
> equals the amplitude of the incident wave.
>
> Now imagine that some friction between the sliding ring and the rod can
> be added in varying amounts. This friction would be proportional to the
> conductance in an electrical circuit, and would be infinite at one
> extreme and zero at the other. The greater the friction, the greater
> the conductance (and the lower the electrical resistance). As we begin
> to increase the friction (conductance) from zero, the amplitude of the
> inverted, reflected wave begins to decrease. The decrease in amplitude
> continues with increasing friction until the amplitude of the reflected
> wave becomes zero. It could be said that this value is equal to the Z0
> of the transmission line.
>
> As the amount of friction is increased still further, a small reflection
> once again begins to appear. Only now the phase is opposite from what
> it was before. Further increases in friction produce further increases
> in reflection amplitude until the amplitude of the reflected wave once
> again equals the amplitude of the incident wave.
>
> What we noticed in the exercise is that there is some value of friction
> (conductance or resistance) for which no reflection occurs. The exact
> value depends on the medium through which the wave is propagating. All
> other values produced a reflection.
>
> There is no perfect explanation, and this certainly isn't a perfect
> analogy but I hope that it will at least help give you a little more of
> a feel for the idea.
>
> 73, Jim AC6XG

2801. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 22:30:27 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b27861$1_2@corp.newsgroups.com>
Source record: 94656

Henry Kolesnik wrote:
> Thanks, I knew this but what I don't know is why a final doesn't dissipate
> the reflected wave but just reflects 100% I assume. Transistor and tube
> finals dissipate a bunch producing the RF but what is the mirror, check
> valve or diode that keeps it reflecting

There is none! The definition is the problem. It is simply a copout.
Sources can dissipate reflected energy. The amount is unknown.
--
73, Cecil http://www.qsl.net/w5dxp

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2802. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:11:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p205b093prl4hnf6qgcvo9tv8af8pegfoq@4ax.com>
Source record: 94658

On Mon, 24 May 2004 17:01:44 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>> Strange belief for a creation of barely 5000 years old.
>Wow, religious dogma in both your fields of religion and electronics?
Nice to see you accede.
> > What has this to do with Reflected Power?
>You asked - I answered.
Did you? What was the original question? [accredited stock response]

2803. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:12:43 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <c905b0loq3qv5rmv7v6k6galk1l7atbc6b@4ax.com>
Source record: 94660

On Mon, 24 May 2004 16:40:44 -0500, "Steve Nosko"
<suteuve.nosukowicuz@moutouroula.com> wrote:
> This is an interesting twist, Tam. I think if this were the case, then
>there would be MORE power dissipated in the Tx

Hi Steve,

And why would that be?

73's
Richard Clark, KB7QHC

2804. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:14:53 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <SP-dnSM4PIJxHC_dRVn-hg@adelphia.com>
Source record: 94661

Dave Shrader wrote:
> Cecil Moore wrote:
>
> snip
>
>> For what it is worth, I believe that the first homo sapien
>> originated about a quarter of a million years ago and was
>> a female with dominant genes.
>> --
>> 73, Cecil http://www.qsl.net/w5dxp
>>
>
> My wife has me convinced that ALL women have the dominant genes!!!!

I prefer women without jeans, thankyouvermuch!

- Mike KB3EIA -

2805. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:20:08 UTC
From: tdonaly@aol.com
Message-ID: <20040524192008.02695.00001459@mb-m21.aol.com>
Source record: 94662

Cecil wrote,
>Message-id: <40b25fee$1_3@corp.newsgroups.com>
>
>Tdonaly wrote:
>> Conversely, there is no form of
>> government that can work for any length of time if it's run by crooks,
>> con artists, cheap politicians, and hicks.
>
>Thank goodness you are an engineer and not a politician, eh? :-)
>

I'm not an engineer, either. Engineers wouldn't make such bad governors,
however,
because most engineers understand feedback principles.
73,
Tom Donaly, KA6RUH

2806. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:22:44 UTC
From: tdonaly@aol.com
Message-ID: <20040524192244.02695.00001460@mb-m21.aol.com>
Source record: 94663

Dave Shrader wrote,
>
>Tdonaly wrote:
>>
>> Most forms of government can be made to work for awhile if the
>> people who are supposed to make them work are serious and honest
>> about what they're charged with doing. Conversely, there is no form of
>> government that can work for any length of time if it's run by crooks,
>> con artists, cheap politicians, and hicks.
>> 73,
>> Tom Donaly, KA6RUH
>>
>DEMOCRAPS !!!
>>
>
>

Democraps and Repuglicans, take your pick.
73,
Tom Donaly, KA6RUH

2807. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:24:51 UTC
From: fractenna@aol.com
Message-ID: <20040524192451.17672.00001216@mb-m23.aol.com>
Source record: 94664

Hi Jack,

It certainly is relevant to ask whether line/antenna mismatch losses are lower with the ATU across all the bands, compared to the ohmic matching of the T2. In any case, nothing is a substitute for getting the antenna up high--but you know this:-)

73,
Chip N1IR

2808. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:26:30 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <NKSdnSigl-w4GS_d4p2dnA@adelphia.com>
Source record: 94665

Richard Harrison wrote:

> Mike, KB3EIA wrote:
> "But the idea of signals being actually reflected seems hard to
> swallow."
>
> It`s true that antennas are measured in degrees. A 1/4-wave antenna is
> 90-degrees. This is based on how many degrees the signal has changed at
> the antenna input by the time the signal reaches the tip end of the
> antenna.
>
> When signal reaches the end of a 1/4-wave whip, there is an abrupt
> discontinuity. Only displacement current flows without conductors. The
> tip of the whip accepts only a small fraction of the current available
> in the forward power traveling on the whip. The only path for the
> rejected power is back toward the feedpoint. Direction and phase of the
> current reverse in the reflected power, but the voltages of the incident
> and reflected waves have the same phase (see 1955 Terman, page 89).

Thanks Richard. I'm digesting that now. Let's see it any of it sinks in !

- Mike KB3EIA -

2809. Re: How good or bad is the B&W antannas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:30:03 UTC
From: fractenna@aol.com
Message-ID: <20040524193003.17672.00001217@mb-m23.aol.com>
Source record: 94666

>As I have said many times here, The B&W antenna is for those that need
>it not those who can/need/want to use other means of connecting with the
> ether. It is definitely not the most efficient means of wireless
>communications but it is definitely fool proof in operation.
>
>Dave WD9BDZ
>
>

From what I can see, this is basically a military antenna sold to hams, hence the high price. I think it is pretty reliable for what it delivers, and at 65 feet long, that's a pretty good solution many times. Just get it HIGH up.

Incidentally, I am at W3EF's right now and guest op'ing the night. He typically works EU on 40M in mid-afternoon with 150 watts. Of course, the tower IS at 126 feet....:-)

His option was 3 els linear loaded at 126 feet vs 5 els trapped at 50 feet. I don't think he regrets the decision.

Remember the other added bonus: less neighbor RFI with a higher antenna!

73,
Chip N1IR

2810. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:33:13 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <RLGdneCf3b-IGy_dRVn-uw@adelphia.com>
Source record: 94667

Richard Clark wrote:

> On Sun, 23 May 2004 18:31:25 -0400, Mike Coslo <mcoslo@adelphia.net>
> wrote:
>
>
>>I'm a tad confused about this "reflected power" thing.
>>
>> I've heard some statements that reflected power is something like
>>shining a light at a mirror.
>
>
> Hi Mike,
>
> It is more like shining light against a dirty window. Very few,
> natural occurrences of reflection are total (make that zero if you go
> out enough decimal places).
>
>
>> But if the power is truly reflected, would not this be an easily
>>quantifiable thing?
>
>
> The concept is easy, the fulfillment (measuring it) proves to require
> you meet exceptional circumstances.
>
>
>> Let's say a signal goes down a wire, "sees a mismatch" and is reflected
>
>>from the end. IIRC, light travels around a foot in a nanosecond. So if
>
>>you have an 80 meter dipole, and send out a mismatched signal, should
>>not you get the reflection back to the source in a quantifiable time?
>
>
> Yes, I presume you can do the math.
>
>
>>That the signal isn't going quite that fast is only a measurement help.
>>The reflected signal would be delayed significantly, no?
>
>
> Ah, now you get to the nut of the matter. Significant? That is in
> the eye of the measuring device. Would a Simpson 260 catch it? Not

> on your life. Would a 100MHz O'Scope? With a rise time of several
> nS, compare this to your computation from the math I presumed you
> could do. Use a long enough transmission line with enough voltage
> driving it, and probably so. You will still need to do more
> computation to render the reading into a conventionally expressed
> answer.
>
>
>> I can easily visualize the idea that an antenna needs to be matched to
>>a transmitter, either through the antenna's natural impedance, or
>>through a network that makes it look like it is. Deviations on either
>>side of the impedance will cause problems, just as they will with other
>>systems that are expecting a particular load and getting something
>>different. But the idea of signals being actually reflected seems hard
>>to swallow.
>
>
> It is all a matter of experience and the time scale you are typically
> involved with the phenomenon. Nanosecond phenomenon barely registers
> in the HF scale as a time distinctive characteristic (that is, to
> distinguish reflections as such, it is more convenient to think of
> these problems in terms of lumped circuit elements).
>
>
>> I'm a real dilettante in these matters, but why would a signal be
>>reflected if the impedance was incorrect, and not if it was correct?
>
>
> This is more a matter of degree. When you look through a dirty window
> you don't really notice the dirt, or the reflection of your face
> looking through the window if you are looking at something
> interesting. The degree is found in your attention. If you examine
> this closely, you begin to see the dirt (attenuation) and your
> reflection (mismatch) and if you took the window away, you immediately
> appreciate the difference (no attenuation, no mismatch). Tilt the
> window to eliminate the reflection (of your face that is), and wash
> its surface, and you will note no difference between the window being,
> or not being before you and the object you are looking at. This is a
> common trick of department store windows that face lit streets.
>
>
>> Possibly I'm saying some pretty stupid things here.
>
>
> Actually the answers have been quite competitive in that respect.

HAR! Thanks for taking the time to answer my questions, Richard. I'm
wading through it now.

- Mike KB3EIA -

2811. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:35:39 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b287ab_7@corp.newsgroups.com>
Source record: 94668

Jim Kelley wrote:
> That's what puts the straw in the men, and the red in the herrings.
> If it's a reflection, then it must be power! Nothing else reflects,
> evidently.

Please make some sort of a technical assertion instead of your
usual metaphysical cagada. Any energy passing a point *is* power,
by IEEE definition.

When you view your reflection in a mirror, do you ignore the
ExB power involved without which you would see nothing?
--
73, Cecil http://www.qsl.net/w5dxp

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2812. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:37:09 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b28804_7@corp.newsgroups.com>
Source record: 94669

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>You asked - I answered.
>
> Did you? What was the original question?

I don't know. I wasn't around 7 billion years ago.

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2813. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:43:09 UTC
From: tdonaly@aol.com
Message-ID: <20040524194309.02695.00001461@mb-m21.aol.com>
Source record: 94670

Richard Clark wrote,
>
>On Mon, 24 May 2004 15:28:40 -0500, Cecil Moore
><Cecil.A.Moore@ieee.org> wrote:
>>I am sure that our solar system and homo sapiens didn't exist
>>when the original question was asked.
>So the question is which came first, the homo or the solar system?
>

Homos before Helios, or Helios before homos? That's a profound
question which I'll have to think about over my after-dinner port. On
the surface it looks about as meaningful as "turkeys from Turlock,"
but first impressions are sometimes deceiving.
73,
Tom Donaly, KA6RUH

2814. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-24 23:49:23 UTC
From: tdonaly@aol.com
Message-ID: <20040524194923.02695.00001462@mb-m21.aol.com>
Source record: 94521

Cecil wrote,
>
>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>I am sure that our solar system and homo sapiens didn't exist
>>>when the original question was asked.
>>
>> So the question is which came first, the homo or the solar system?
>
>For what it is worth, I believe that the first homo sapien
>originated about a quarter of a million years ago and was
>a female with dominant genes.
>--
>73, Cecil http://www.qsl.net/w5dxp
>
>

Yes, she married Org Orgluk and they had a bunch of halfwit kids who sired the human race.
73,
Tom Donaly, KA6RU

2815. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 00:23:42 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B2920E.C006DA70@uci.edu>
Source record: 94526

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > That's what puts the straw in the men, and the red in the herrings.
> > If it's a reflection, then it must be power! Nothing else reflects,
> > evidently.
>
> Please make some sort of a technical assertion instead of your
> usual metaphysical cagada.

After you, sir. :-)

> Any energy passing a point *is* power,
> by IEEE definition.

That's an equality, not a definition. I suspect you're not completely comfortable with the difference in those two things.

> When you view your reflection in a mirror, do you ignore the
> ExB power involved without which you would see nothing?

I don't notice it until it the resulting chemical reaction takes place on the retina of my eye. Until then, I can only imagine E crossing B, and write the expression for it down on a piece of paper as it has no physical manifestation.

73, Jim AC6XG

2816. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 00:36:14 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b294c0$0$432$5cbedd26@news.real-time.com>
Source record: 94522

Richard Clark wrote:

> On Mon, 24 May 2004 14:06:28 -0500, Cecil Moore
> <Cecil.A.Moore@ieee.org> wrote:
>
>>>What was the original question? [accredited stock response]
>>
>>When totally ignorant, divert the issue as long as possible.
>>Why am I not surprised?
>
> Are you sure this is the original question? [accredited stock
> response]

Richard

Your earlier comment on things was quite accurate. This thread is
hilarious!

tom
K0TAR

2817. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 00:39:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7a55b0phdm7mb0ods5gai1i4792ki8umtn@4ax.com>
Source record: 94523

On Mon, 24 May 2004 18:37:09 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>I don't know. I wasn't around 7 billion years ago.
We were beginning to wonder.

2818. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 00:40:47 UTC
From: "H. Adam Stevens" <hstevens@totalaccessNOSPAM.net>
Message-ID: <10b55qmi4ed8p08@corp.supernews.com>
Source record: 94525

wow

And I thought Maxwell/Heaviside/Gibbs
Gauss/Fourier
Newton.......

-- oh never mind.

This was beaten to death over 100 years ago.

Resonate your antennas, best radiation efficiency.
Match your impedances.

Get on the air.
Meet people who are mostly still stupid at this level.

Join the Spiderwebnet on 14.347 every morning at 8 Eastern.
The 7290 Traffic Net has been around since I was an eighth grade ham.
Every morning at 10 AM local Texas time.
They only skip Sundays.

And the Real "God" who set off the BIG BANG,
You the real deal, so am I.
Bless the Maritime Mobile Service Net.
14.3

I check in as best I can.

H.
NQ5H

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b287ab_7@corp.newsgroups.com...
snip
> by IEEE definition.
deletia

2819. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 00:46:11 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5p55b0lg5op1ipa9im138ihq2o5dl09nqi@4ax.com>
Source record: 94524

On Mon, 24 May 2004 18:35:39 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>When you view your reflection in a mirror, do you ignore the
>ExB power involved without which you would see nothing?
You would if it were a conjugate mirror.

2820. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 01:19:49 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <9IqdnWUSP9WoAi_dRVn-jA@comcast.com>
Source record: 94527

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:c8tq8t$3nm$1@newshost.mot.com...
>
> "Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> news:zPCdnSVX5K_UoCzdRVn-vw@comcast.com...
> >
> > "Richard Fry" <rfry@adams.net> wrote in message
> > news:2hcf8gFbg4lrU1@uni-berlin.de.....................
> > ....
> > > RE: Concept below
> > >
> > > However this is not an accurate model of a transmitter.
> > >
> > > For an example, take an old Heathkit DX-100 generating a measured 180
> > watts
> > > of CW RF into a matched 50 ohm load. To do this, it does NOT also
> > dissipate
> > > 180 watts of RF into some "virtual" internal RF load in the DX-100.
In
> > > fact, the PAs and power supply in the DX-100 could not produce a total
> RF
> > > output power of 360 watts without exceeding their ratings.
> > >
> > > The dissipation in the PA is essentially related only the DC to RF
> > > conversion efficiency of the PA, which in this case probably is about
> 75%,
> > > max (Class C). So a PA input power of about 240 watts DC is required
to
> > > produce 180 watts of RF output power. The other 60 watts of plate
input
> > > power is converted to heat by the PA tube anodes.
> > >
> > > The entire RF output generated by the PA stage is applied virtually
100%
> > to
> > > the output connector. How much of that is absorbed by the load
> connected
> > > there is a function of load SWR and system losses.
> > >
> > > - RF
> > There is a Motorola ap note that agrees with what Richard is saying. To
> > paraphrase it, if the the DX100 had an output impedance of 50 Ohms, then
> the
> > overall efficiency would be 37.5%.

>
> Unfortunately I can't read all the digressions in the thread. I skim
by
> author...
>
> This is an interesting twist, Tam. I think if this were the case,
then
> there would be MORE power dissipated in the Tx than Mr. Fry is saying -
> making the situation worse. By that, I mean, getting further from what is
> going on. I think this goes in the wrong direction. I believe the flaw
is
> believing that the Rs=RL must exist for the transmitter.

That is what I am saying. The efficiency goes from 75% to 37.5%; so, there
is more power dissipated in the TX.

Tam/WB2TT
> --
> Steve N, K,9;d, c. i My email has no u's.
>
>

2821. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 01:33:40 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <Unxsc.19858$af3.1059527@attbi_s51>
Source record: 94528

Tdonaly wrote:

SNIP
>
> Democraps and Repuglicans, take your pick.
> 73,
> Tom Donaly, KA6RUH
>
>

There are opinions that people who can't be effective criminals become
lawyers. Lawyers who can't be successful lawyers become politicians!
Politicians who can't be effective politicians become lobbyists.
Lobbyists who can't be effective lobbyists become millionaires!!!
Millionaires who can't be effective millionaires run for president!!!

How about that?

2822. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 01:41:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <pb85b056an04vp5bi85f0ja3un3cegafl3@4ax.com>
Source record: 94529

On Mon, 24 May 2004 17:23:42 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:
>I don't notice it until it the resulting chemical reaction takes place
>on the retina of my eye.

Hi All,

Sorry to intrude with some actual technical content (well I guess this would be twice, what with the mention of the conjugate mirror that stumped Cecil). The reaction takes all of 8 femtoseconds whereas the translation to an electrical signal at a synapse takes the inordinately long time of 1 millisecond.

My correspondent's characterization is:
"One ms roughly the time constant for the production of the first activated intermediate in the transduction cascade, the other steps in the cascade are still slower (for example, the single photon response peaks in about 150 ms in mammals)."

Quantum efficiency is a remarkably high 0.7, easily twice the best instrumentation which barely compares across bandwidth. The transduction cascade that Dr. Detwiler refers to is much like the amplification of a PMT whereby the single photon gives rise to a current of 1000 electrons.

However, to return this to the conjugate mirror; if you looked into one, not one electron would twitch.

73's
Richard Clark, KB7QHC

2823. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 01:45:19 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <Pyxsc.1826$eT4.1473@attbi_s54>
Source record: 94530

Richard Clark wrote:

> On Sun, 23 May 2004 02:07:13 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
>
>
>>I know that any power not dissipated by an antenna is reflected back to the
>>transmitter. Then the transmitter "reflects" this reflection back to
>>antenna, ad nauseum until its all gone. I also know that a short or an open
>>is required to reflect power and I'm searching for which it is, an open or a
>>short. I'm inclined to think it's a virtual open but I'm at a loss to
>>understand that and I wonder if someone has a good explanation or analogy
>>and some math wouldn't hurt.
>>tnx
>>Hank WD5JFR
>>
>
>
> Hi Hank,

At last count there are 130 responses to this post, this is #131, and
the question still hasn't been answered.

When energy or power is transmitted in any medium where the wavelength
and the length of the transmission medium are significant percentages of
one another some energy/power is reflected at any discontinuity in the
transmission medium. The reflected energy/power may be re-reflected if a
discontinuity exists in the backward path.

The simplest example that we can all understand is the common case of
the echo!! H E L L O ! .... HELLO ! .... hello ! .... etc. The
energy/power is re-reflected many times until we can't hear it. But is
is still re-reflecting at sub-audible levels until 100% dissipation
occurs. As long as the discontinuities exist the echoes exist!

DD, W1MCE

>
> What you describe as reflection and re-reflection occurs between the
> mismatched antenna and the tuner that has been adjusted to minimize
> power returned to the transmitter. The sole function of the tuner is
> to keep this power from being dissipated by the transmitter (common
> experience of arcing, denoting a voltage reflection, or thermal
> runaway, denoting a current reflection). The "virtual" reflection
> (offered by the tuner) is generally know as the complex conjugate of
> the remote load, seen at the near end of the line through which it is

> returning. This means that the line transforms the phase and
> amplitude of the reflection, and the tuner's job is to invert that
> relationship to counteract it, and return it to the antenna.
>
> There are both wave descriptions of this process, and lumped circuit
> equivalents. Both work, and both describe the same process from
> different points of view. One does not negate the other's validity
> (unless, of course, you attempt to mix the points of view and demand
> consistency in terms - a frequent rhetorical trap here).
>
> There will no doubt be a flurry of denials to this simple example with
> contortions of logic to match. As for the math, you will find it by
> the reams, once you've been overwhelmed with the arcana of hyperbolic
> descriptions of a novel physics that have to proceed its proof.
>
> Keep your eye on how your literal points in your question go abandoned
> with these arcane theories.
>
> 73's
> Richard Clark, KB7QHC

2824. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 01:47:04 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b2a564$0$440$5cbedd26@news.real-time.com>
Source record: 94531

Dave Shrader wrote:

> Tdonaly wrote:
>
> SNIP
>
>>
>> Democraps and Repuglicans, take your pick.
>> 73,
>> Tom Donaly, KA6RUH
>>
>>
>
> There are opinions that people who can't be effective criminals become
> lawyers. Lawyers who can't be successful lawyers become politicians!
> Politicians who can't be effective politicians become lobbyists.
> Lobbyists who can't be effective lobbyists become millionaires!!!
> Millionaires who can't be effective millionaires run for president!!!
>
> How about that?
>

Kerry isn't an effective millionare? Hmmmm, I didn't think that one was
running. Curious.

Oh! You mean the husband!

tom
K0TAR

2825. Re: Goodness of ground Radials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 01:50:56 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <4Exsc.19927$af3.1065030@attbi_s51>
Source record: 94532

I expect that the radiation resistance of your antenna is closer to 10
to 15 ohms. That implies that your truck has a 20 +/- ohm ground system
and your antenna has several ohms of resistance loss.

BTW, that's a typical value of Rr. I measure about the same for my
Ranger on 40 meters.

DD, W1MCE

JGBOYLES wrote:

>>For heights less than 0.3 wavelengths, Radiation resistance can be accurately
>
> enough estimated from -
> Rrad = Square(24 * Height / Wavelength) ohms. Which is near enough exact
> when height = 1/4 wavelength.
>
> Hi Reg, I just went outside and measured the impedance of my 8' mobile
> antenna. It's center loaded with a high Q loading coil and small capacity hat.
> It is mounted on a full size pick-up truck. At 7.2 MHZ it reads 37+j0 ohms.
> The antenna analyzer has always been accurate within a few percent. Does this
> mean that my truck provides an "excellent ground" at 7.2MHZ? If it does, I
> need to use my truck for an rf ground for the rig inside my house. It may be
> that the truck does indeed provide a good ground, I get good results on 40M
> mobile.
>
> 73 Gary N4AST

2826. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 01:53:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <si95b01tk3ken9dh804sfnnt1nn7ra8arb@4ax.com>
Source record: 94533

On Tue, 25 May 2004 01:45:19 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:
>At last count there are 130 responses to this post, this is #131, and
>the question still hasn't been answered.

Hi Dave,

Well, actually, it has been answered sufficiently, apparently it
hasn't been understood - quite a gulf between those two positions. As
such, your response doesn't necessarily constitute an answer either,
that is, until the gulf is spanned.

73's
Richard Clark, KB7QHC

2827. ADVICE: Lookng for an economical portable multiband HF Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 01:54:16 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <uHxsc.25341$tb4.788459@news20.bellglobal.com>
Source record: 94536

Here's the scenario:

I'm looking for a portable HF vertical suitable for 'rented cottage' installations. So it must be easily mountable on either the ground, or perhaps bolted to 3 or 4 ten foot sections of chain-link fence rail. (makes a nice temporary guyed mast) It must be easy to put up and take down and put on a roof rack of a minivan.

I would prefer to not need ground radials, although if I use guy wire instead of rope it might work, but not needing ground radials is the preferred solution.

There's usually a heavy canopy of trees overhanging most of the locations, so rotating even the smallest of beams is not an option.

Anyone have experience on this one?

Thanks!
B.

2828. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 01:54:59 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <THxsc.1835$eT4.1221@attbi_s54>
Source record: 94534

Tom Ring wrote:

> Dave Shrader wrote:
>
>> Tdonaly wrote:
>>
>> SNIP
>>
>>>
>>> Democraps and Repuglicans, take your pick.
>>> 73,
>>> Tom Donaly, KA6RUH
>>>
>>>
>>
>> There are opinions that people who can't be effective criminals become
>> lawyers. Lawyers who can't be successful lawyers become politicians!
>> Politicians who can't be effective politicians become lobbyists.
>> Lobbyists who can't be effective lobbyists become millionaires!!!
>> Millionaires who can't be effective millionaires run for president!!!
>>
>> How about that?
>>
>
> Kerry isn't an effective millionare? Hmmmm, I didn't think that one was
> running. Curious.
>
> Oh! You mean the husband!
>
> tom
> K0TAR
>
GWB is ALSO in the $1,000,000 club.

2829. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 02:07:49 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b2aa41$0$440$5cbedd26@news.real-time.com>
Source record: 94535

Dave Shrader wrote:

>>
>> Kerry isn't an effective millionare? Hmmmm, I didn't think that one
>> was running. Curious.
>>
>> Oh! You mean the husband!
>>
>> tom
>> K0TAR
>>
> GWB is ALSO in the $1,000,000 club.
>

But not the same club at all if you look at the money and the houses.
That's like comparing me on the low end and The One Who Is No Longer
Called but Is Yet Again Called Prince.

Kerry's club is billionare level, the Bush's are nice common folk in
comparison.

tom
K0TAR

2830. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 02:11:49 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <4OOdneubD-v-Ni_dRVn-iQ@adelphia.com>
Source record: 94537

Richard Clark wrote:

> On Tue, 25 May 2004 01:45:19 GMT, Dave Shrader
> <david.shrader@comcast.net> wrote:
>
>>At last count there are 130 responses to this post, this is #131, and
>>the question still hasn't been answered.
>
>
> Hi Dave,
>
> Well, actually, it has been answered sufficiently, apparently it
> hasn't been understood - quite a gulf between those two positions. As
> such, your response doesn't necessarily constitute an answer either,
> that is, until the gulf is spanned.

I've gotten some education from it, and had some fun too!

- Mike KB3EIA -

2831. Re: ADVICE: Lookng for an economical portable multiband HF Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 02:16:44 UTC
From: "paulfriedman@comcast.net" <p.paulfriedman@comcast.net>
Message-ID: <g0ysc.18932$hi6.1941750@attbi_s53>
Source record: 94538

"Bob" <nowhere@nospam.org> wrote in message
news:uHxsc.25341$tb4.788459@news20.bellglobal.com...
> Here's the scenario:
>
> I'm looking for a portable HF vertical suitable for 'rented cottage'
> installations. So it must be easily mountable on either the ground,
or
> perhaps bolted to 3 or 4 ten foot sections of chain-link fence rail.
> (makes a nice temporary guyed mast) It must be easy to put up and
take
> down and put on a roof rack of a minivan.
>
> I would prefer to not need ground radials, although if I use guy
wire
> instead of rope it might work, but not needing ground radials is the
> preferred solution.
>
> There's usually a heavy canopy of trees overhanging most of the
> locations, so rotating even the smallest of beams is not an option.
>
> Anyone have experience on this one?
>
> Thanks!
> B.
>

Take a look at the Force 12 portable antennas. 20 -> 10 m. One with a
control cable to switch bands; the otehr you futz manually. I have
tghe version with the control cable. Takes about 15 minutes to put
together nad take down. No radials (it acts as a vertical dipole).

Paul AB0SI

2832. Re: ADVICE: Lookng for an economical portable multiband HF Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 02:26:17 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b2ae95$0$440$5cbedd26@news.real-time.com>
Source record: 94539

Bob wrote:

> Here's the scenario:
>
> I'm looking for a portable HF vertical suitable for 'rented cottage'
> installations. So it must be easily mountable on either the ground, or
> perhaps bolted to 3 or 4 ten foot sections of chain-link fence rail.
> (makes a nice temporary guyed mast) It must be easy to put up and take
> down and put on a roof rack of a minivan.
>
> I would prefer to not need ground radials, although if I use guy wire
> instead of rope it might work, but not needing ground radials is the
> preferred solution.
>
> There's usually a heavy canopy of trees overhanging most of the
> locations, so rotating even the smallest of beams is not an option.
>
> Anyone have experience on this one?
>
> Thanks!
> B.
>

Well the 30 or 40 feet of chain link fence rail is a reasonable start on a low level counterpoise/ground. I guess the question would be, what frequency(ies) are you looking at? Lowwr in frequency, I'd mount at one end. Higher than 30m or so, I would think about putting the vertical in centered on the rail.

And you could place it centered and then hang a few wires off the end to extend coverage as low as needed.

If it's a temporary or portable antenna, you have to work with what you have. BTDT.

tom
K0TAR

2833. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 02:55:41 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <8bd5b0tnben3hh8r29j84bne9k2dgpjsl9@4ax.com>
Source record: 94540

On Mon, 24 May 2004 16:47:33 -0500, "Steve Nosko"
<suteuve.nosukowicuz@moutouroula.com> wrote:

[snip]

| Aluminum is the most reactive metal.

Really?

2834. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 02:59:52 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <IEysc.359$fo1.354@newssvr24.news.prodigy.com>
Source record: 94541

Richard

You say my question has been answered but I haven't seen the answer, too old, too stupid, whatever but I still would like to understand. So, would you be kind enough to give me a better understanding of the "mechanism" in the transmitter final that can dissipate and transform yet it can't dissipate a reflection because there's some kind of one way device that acts like a checkvalve or diode that reflects.
tnx

--
73
Hank WD5JFR
"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:si95b01tk3ken9dh804sfnnt1nn7ra8arb@4ax.com...
> On Tue, 25 May 2004 01:45:19 GMT, Dave Shrader
> <david.shrader@comcast.net> wrote:
> >At last count there are 130 responses to this post, this is #131, and
> >the question still hasn't been answered.
>
> Hi Dave,
>
> Well, actually, it has been answered sufficiently, apparently it
> hasn't been understood - quite a gulf between those two positions. As
> such, your response doesn't necessarily constitute an answer either,
> that is, until the gulf is spanned.
>
> 73's
> Richard Clark, KB7QHC

2835. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 03:11:37 UTC
From: gmz79@aol.comnospam
Message-ID: <20040524231137.17253.00001782@mb-m03.aol.com>
Source record: 94542

> Aluminum is the
>most reactive metal.

Damn, I thought Na was.
Boy ya sure learn a lot on these groups.
WG8Z
Greg Z
to thine own sound be true

2836. Re: ADVICE: Lookng for an economical portable multiband HF Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 03:55:35 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <srg5b0pva5lg2lf3nvrt3bg90506a459i6@4ax.com>
Source record: 94543

On Mon, 24 May 2004 21:54:16 -0400, Bob <nowhere@nospam.org> wrote:

>Here's the scenario:
>
>I'm looking for a portable HF vertical suitable for 'rented cottage'
>installations. So it must be easily mountable on either the ground, or
>perhaps bolted to 3 or 4 ten foot sections of chain-link fence rail.
>(makes a nice temporary guyed mast) It must be easy to put up and take
>down and put on a roof rack of a minivan.

See the w2ik vertical at:

http://www.sanantoniohams.org/antennas/antennas.htm

bob
k5qwg

>
>I would prefer to not need ground radials, although if I use guy wire
>instead of rope it might work, but not needing ground radials is the
>preferred solution.
>
>There's usually a heavy canopy of trees overhanging most of the
>locations, so rotating even the smallest of beams is not an option.
>
>Anyone have experience on this one?
>
>Thanks!
>B.

2837. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 04:07:58 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <t8h5b01b5h2563gimei46j5381rr8pu2l3@4ax.com>
Source record: 94544

On Mon, 24 May 2004 21:07:49 -0500, Tom Ring <tarnews@taring.org>
wrote:

>Dave Shrader wrote:
>
>>>
>>> Kerry isn't an effective millionare? Hmmmm, I didn't think that one
>>> was running. Curious.
>>>
>>> Oh! You mean the husband!
>>>
>>> tom
>>> K0TAR
>>>
>> GWB is ALSO in the $1,000,000 club.
>>
>
>But not the same club at all if you look at the money and the houses.
>That's like comparing me on the low end and The One Who Is No Longer
>Called but Is Yet Again Called Prince.
>
>Kerry's club is billionare level, the Bush's are nice common folk in
>comparison.
>
>tom
>K0TAR

Bush got $15 million when the Texas Rangers bought out his 2% share in
the club. That set him up nicely for his little ranchette near
Crawford. He's all ready to retire come Jan. 20, 2005 :-)

Bob
k5qwg

2838. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 04:25:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <tbf5b0ppstgv878l5qppgqb66nq4giaso3@4ax.com>
Source record: 94545

On Tue, 25 May 2004 02:59:52 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>Richard
>
>You say my question has been answered but I haven't seen the answer, too
>old, too stupid, whatever but I still would like to understand. So, would
>you be kind enough to give me a better understanding of the "mechanism" in
>the transmitter final that can dissipate and transform yet it can't
>dissipate a reflection because there's some kind of one way device that acts
>like a checkvalve or diode that reflects.
>tnx

Hi Hank,

There is no answer as you phrase the question because the transmitter
does dissipate power reflected to it. I can easily imagine you may
find no understanding as I go hyperbolic in the following lines. :-)

It can also reflect (some or all of) what it does not absorb, but only
if it does not match the line connected to it. The degree to which it
absorbs/reflects is determined by the ratio of its Z to the line/load
at the antenna terminal. In this case (bear with me), the source Z is
NOW found at the load's mismatch, transformed through the line. This
means matching works both ways (often the singlemost ignored aspect of
obvious reciprocity in any of these arguments). Such circuit analysis
is called superposition. This is merely an academic way of saying you
look at the problem from both points of view where you reverse roles
(source becomes load, and load becomes source). This is a common
practice learned in first quarter circuit analysis when Kirchhoff's
laws are developed (Thevenin/Norton equivalent circuits also emerge).

For example (a strained one at that), if you had a 500 Ohm Source
characteristic Z, you will never launch much power into a 50 Ohm
system because it would immediately hit a reflective interface at the
antenna connector. This means that a 500 Ohm source, when confronted
by power going towards it from a 50 Ohm system will reflect most of
that power (but how did we get this power into the system in the first
place - Karma?) This, by design, will never happen in any transistor
ham rig built in the last quarter century.

So, this is why you see such a vacuum of response when you (the
general readership "you") ask:
"What is the source Z if it is not 50 Ohms?"
Silence guarantees they either don't know (a fatal admission for egos)
or if they offered a value, we could all balance the checkbook and

that would end the game being played. Hence we are treated to all these suppositions of shorts and opens or magic reflectors hidden beneath the hood. The frequent toss-off comment of "no one knows" is called projection, a psychological salve for the ego meaning if I don't know, then certainly no one else does either - or they are wrong.

The answer is the transmitter source Z is 50 Ohms at rated power. If a watt of power is chooglin' down the line toward it, that 50 Ohms is going to dissipate into a watt worth of calories. This can be argued with wave mechanics, or lumped circuit equivalents - doesn't matter because it's all the same calories. Modern rigs can tolerate this watt through limited feedback and level controlling circuitry - if you paid more than a kilobuck for your rig that is. For the rest of us, it's a spin of the wheel and you take your chance. 1 watt hardly amounts to much, but are you that lucky that it is ONLY 1 watt? Are we to suppose those unfortunate souls who blasted their rig transmitting into a mismatch lost it only because they lacked enough magic pixie dust? I will bet no rig was lost to a cold snap with frosty finals.

I've already answered about where the heat can be found, so we will conserve bandwidth.

=== WARNING to the logic impaired, the following is a supposition ===

Now, lets simply accept those answers that require the magic pixie dust of total reflection from the transmitter. Fine, the mismatched antenna reflects some power, this power returns to the transmitter, the transmitter simple routes it ALL back to the antenna, round-and-round until the antenna finally radiates it. If this were true, what do we need tuners for? Take a survey of everyone who chants this mantra of the rig reflecting, and ask if they have a tuner in the line. Is it a paper weight holding down their license? Is it a line stretcher because they needed another foot extension between the antenna lead and their rig? Dare I point out the utter failure of their faith?

I will pause to allow those answers to emerge and enjoy the thrashing dawn of a new era of metaphysics. Oooooohhhhhhmmmmms Laaaaaaaaaaw!

73's
Richard Clark, KB7QHC

2839. Helping a Blind Ham

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 04:53:37 UTC
From: Bunnydawg <bunnydawg@hotmail.com>
Message-ID: <eOpsc.14624$tb4.553207@news20.bellglobal.com>
Source record: 94691
Cross-posted to: alt.binaries.pictures.radio,alt.binaries.schematics.electronic,alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

There was a post not long ago of a ham helping a blind ham looking for an
audio version of a service manual.
Anyone remember that one. I have some info that might help them. I can't
locate the post now.
Robert
VE3 something or other

2840. 1/4 wave vertical vs. loaded vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 04:53:48 UTC
From: Dave <Devarim@hotmail.com>
Message-ID: <fcc11758cff1495eeaba32353cf1e07f@news.meganetnews.com>
Source record: 94546

Hi all,

I'm considering putting up a 33' vertical - just 3 sections of Rat Shack
mast (solidly bolted for continuity) plus a 3+/- foot 'adjustable' part
on the bottom to 'trim' the length. Then a bunch of in-ground radials.
40m is my only 'serious' band. 15 meters should be a bonus, right?
Or not?

Would this work better than my 4BTV (which I'll keep for 20 and 10)?
Or would the improvement be so insignificant as to not be worth all
the bother of building the new antenna?

Thanks

Dave WB7AWK

2841. Re: Goodness of ground Radials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 05:39:54 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c8um7a$l89$1@sparta.btinternet.com>
Source record: 94547

> Hi Reg, I just went outside and measured the impedance of my 8' mobile
> antenna. It's center loaded with a high Q loading coil and small
capacity hat.
> It is mounted on a full size pick-up truck. At 7.2 MHZ it reads 37+j0
ohms.
> The antenna analyzer has always been accurate within a few percent. Does
this
> mean that my truck provides an "excellent ground" at 7.2MHZ? If it does,
I
> need to use my truck for an rf ground for the rig inside my house. It may
be
> that the truck does indeed provide a good ground, I get good results on
40M
> mobile.
>
> 73 Gary N4AST

==========

Gary, if your coil-loaded 8-feet vertical had been mounted above a ground radial system then the radial system would have to be classified as "poor".

Radiation resistance is about 4 ohms for a height of 8 feet at 7.2 MHz. Coil loss = 3 ohms. Subtract 4+3 from your measured 36 ohms which leaves 29 ohms for the ground loss resistance. Which is a poor value for a radial system. But it may not be poor for your particular vehicle-mounted system because the vehicle itself forms a large physical part of the antenna and so increases radiation resistance.

(The vehicle plus whip behaves as a short, off-centre fed, half-wave resonant vertical, there being fewer ground losses to worry about.)

But the calculating procedure is the same for all vertical ground-mounted antennas. Subtract calculated radiation resistance from measured input resistance to obtain ground loss resistance. If there's a loading coil, subtract its loss resistance too.
Also subtract something for wire-loss of a long wire.

Reg, G4FGQ

2842. Re: A cure for reflected power

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 07:34:17 UTC
From: Helmut Wabnig <wabnig.spam@ssppaamm.aon.at>
Message-ID: <0ht5b0h5d69q3k0v2trfgtt8sr7q8ticrf@4ax.com>
Source record: 94548

On Mon, 24 May 2004 21:22:16 -0700, Wes Stewart <n7ws@_arrl.net>
wrote:

>X-No-archive: yes

(Pffffhh.... won't help you).

So you want to beat ORMAN at http://www.ultra-faster-than-light.com/

Did you consider the color of electrons?
They are green, you know, and they only can see green!!!
Need green arrows then.

w.

>
>Much (too much) has been written in this forum about whether reflected
>power (energy?) does or does not flow (travel past a point), whether
>it does or does not exist, whether reflections are real or virtual and
>so forth.
>
>So much has been discussed that my eyes have glazed over many times.
>It was during one of these periods that a "slap myself in the
>forehead---why didn't I think of that before" revelation occurred.
>
>The answer is so simple. The reflections happen because the electrons
>traveling in the transmission line become confused and don't know in
>which direction to move. Not only that but the higher frequency ones
>want to move faster than the lower frequency ones do and they start
>bumping into each other and chaos reigns and power is wasted.
>
>All that is necessary to correct this are two simple modifications to
>the transmission line. (Of course in addition to using gold-plated
>oxygen-free copper)
>
>1) Print arrows on the insulation indicating the correct direction
>for electron flow.
>
>2) Make the transmission line out of many strands of wire so there
>are multiple paths between generator and load so that all signals and
>frequencies automatically and independently seek the path of least
>resistance.
>
>I was about to begin a paper on this concept and started with a
>literature search and alas, the concept has already been "patented".
>

>You may read all about it here:
>
>http://www.soundstringcable.com/ss_patent.html
>
>ps. This technology does not come cheap. A six-foot, 60 Hz
>transmission line (power cord) sells for $492 at Parts Express. A six
>foot two wire balanced line costs $610, although there are price
>breaks for longer lengths.
>
>Damn, why didn't I think of this first?

2843. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 08:04:05 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b2fed7$1_4@corp.newsgroups.com>
Source record: 94549

Jim Kelley wrote:
> Cecil Moore wrote:
>>Any energy passing a point *is* power,
>>by IEEE definition.
>
> That's an equality, not a definition.

No, it is from the IEEE Dictionary. Therefore, it is a
definition, by definition.

>>When you view your reflection in a mirror, do you ignore the
>>ExB power involved without which you would see nothing?
>
> I don't notice it until it the resulting chemical reaction takes place
> on the retina of my eye. Until then, I can only imagine E crossing B,
> and write the expression for it down on a piece of paper as it has no
> physical manifestation.

Therefore, using your metaphysics, since I live one mile from
where I was born, I can only imagine that I ever worked for
Intel in Arizona.

There is a real world experiment that you can perform to
prove your concepts are incorrect.

TV XMTR--tuner----2 uS long 600 ohm line---75 ohm TV RCVR

The first ghost will occur 4 uS after the primary image.
This can only be explained by part of the energy in the
primary signal changing direction and momentum at the RCVR
and making a round trip to the tuner and back to the RCVR.
In order to make that round trip, the energy in the signal
had to change direction and momentum at the tuner. (There are
no reflections between the XMTR and the tuner.)

Likewise, the second ghost will occur 8 uS after the primary
image, indicating four reversals of direction and momentum
of the energy contained in the second ghost.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2844. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 08:13:42 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b30118$1_4@corp.newsgroups.com>
Source record: 94550

Wes Stewart wrote:

> <suteuve.nosukowicuz@moutouroula.com> wrote:
> | Aluminum is the most reactive metal.
>
> Really?

Not really. When I was at Texas A&M, someone wrapped a
large lump of sodium in a towel and flushed it down the
john. It blew the plumbing apart.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2845. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 08:15:31 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b30185$1_4@corp.newsgroups.com>
Source record: 94551

Henry Kolesnik wrote:
> You say my question has been answered but I haven't seen the answer, too
> old, too stupid, whatever but I still would like to understand. So, would
> you be kind enough to give me a better understanding of the "mechanism" in
> the transmitter final that can dissipate and transform yet it can't
> dissipate a reflection because there's some kind of one way device that acts
> like a checkvalve or diode that reflects.

By definition, reflected energy dissipated in the source was never
generated in the first place.
--
73, Cecil http://www.qsl.net/w5dxp

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2846. Re: 1/4 wave vertical vs. loaded vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 08:22:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b30330_4@corp.newsgroups.com>
Source record: 94552

Dave wrote:
> I'm considering putting up a 33' vertical - just 3 sections of Rat Shack
> mast (solidly bolted for continuity) plus a 3+/- foot 'adjustable' part
> on the bottom to 'trim' the length. Then a bunch of in-ground radials.
> 40m is my only 'serious' band. 15 meters should be a bonus, right?
> Or not?

Not really. 33 ft. is too long for good 15m performance. The take-off-
angle at the highest gain point is 47 degrees. The free version of
EZNEC at eznec.com will show that.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2847. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 08:58:56 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <jVDsc.21296$wa.19612@fed1read07>
Source record: 94553

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b30185$1_4@corp.newsgroups.com...
> Henry Kolesnik wrote:
> > You say my question has been answered but I haven't seen the answer, too
> > old, too stupid, whatever but I still would like to understand. So,
would
> > you be kind enough to give me a better understanding of the "mechanism"
in
> > the transmitter final that can dissipate and transform yet it can't
> > dissipate a reflection because there's some kind of one way device that
acts
> > like a checkvalve or diode that reflects.
>
> By definition, reflected energy dissipated in the source was never
> generated in the first place.
> --
> 73, Cecil http://www.qsl.net/w5dxp

That's not a very good definition.
Would you say that a rock, thrown vertically, never was thrown just because
it returned to hit you on the head?

Ed
wb6wsn

2848. Re: Goodness of ground Radials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 09:54:51 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0405250154.6463120c@posting.google.com>
Source record: 94554

Hi Reg, thanks for your valuable advice.

73 Ivan OK1SIP

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:<c8t92odcl1@hercules.btinternet.com>...
> ============================
> 99.9 percent of amateurs don't know what their ground connection resistance
> is. But it's readily easy to determine.
>
> Just erect a random height vertical antenna above the ground connection,
> tune it, and measure the tuned RESISTANCE between the bottom end and the
> ground connection using a simple, hand-held antenna analyser. In the tuned
> condition the antenna input impedance ia always R + j*Zero.
>
> Calculate the radiation resistance of the vertical wire. Deduct radiation
> resistance plus loading coil loss resistance from the measured value and
> there you have it.
>
> Loading coil loss resistance is estimated from a crude guess of coil Q.
> Crude is quite accurate enough if you havn't got a Q meter.
>
> For heights less than 0.3 wavelengths, Radiation resistance can be
> accurately enough estimated from -
>
> Rrad = Square(24 * Height / Wavelength) ohms
>
> Which is near enough exact when height = 1/4 wavelength.
>
> Measurements need be made at no more than two frequencies, say 3.5 or 7 MHz,
> and 14 or 21 MHz. This is because ground impedance changes fairly slowly
> with frequency. And nobody is interested in ground connection resistance
> above 30 MHz anyway.
>
> What ground REACTANCE may be is neither here nor there because it is not a
> loss component. In practice it is tuned out simultaneously with tuning up a
> vertical antenna and merely affects the tuner settings. Ground reactance
> may be either inductive or capacitative depending on the number and length
> of radials and on soil resistivity and permittivity. At HF it can be of the
> same magnitude as the resistive component. But what does a 10-ohm
> capacitative reactance matter?
>
> By the way, an example of an 'awful' ground connection is a single 4 to 8
> feet rod - unless submerged in salt sea water. Depending on the antenna
> they very often 'work' and, if it's your very first ground electrode,

> inevitably you will place great faith in it.
>
> Thanks Ivan for your comments. I would like a few more views from amateurs
> with experience of known ground connection resistance values. Isolated
> examples, especially with a description of the type of soil, would be
> especially interesting and useful.
>
> But everybody already knows that 120 radials, of any reasonable length, in
> any sort of soil is "Excellent".
> ----
> Yours, Reg, G4FGQ

2849. WTD: Yaesu FT767GX PSU board wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 10:17:37 UTC
From: Smog <james@burrill.co.uk>
Message-ID: <c8v6gkjdu1@news6.svr.pol.co.uk>
Source record: 94555
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Yaesu FT767GX PSU board wanted
Thanks

--

Jim Burrill (Smogthemog)
M1BMW
Kiteaholic

www.jbphonetech.info

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 22/05/2004

2850. Re: Helping a Blind Ham

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 10:54:15 UTC
From: Bunnydawg <bunnydawg@hotmail.com>
Message-ID: <74vsc.24705$tb4.716948@news20.bellglobal.com>
Source record: 94659
Cross-posted to: alt.binaries.pictures.radio,alt.binaries.schematics.electronic,alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Thanks for your help gentleman. I may have found the right one.
I know he/she was looking for a talking manual. The problem is i belong to
way too many groups and i didn't have the information at the time.
Robert
VE3 something or other

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:c8tqrc$3pk$1@newshost.mot.com...
>
> "Bunnydawg" <bunnydawg@hotmail.com> wrote in message
> news:eOpsc.14624$tb4.553207@news20.bellglobal.com...
> > There was a post not long ago of a ham helping a blind ham looking for
an
> > audio version of a service manual.
> > Anyone remember that one. I have some info that might help them. I
can't
> > locate the post now.
> > Robert
> > VE3 something or other
>
>
> Also search for the HandiHam web
> --
> Steve N, K,9;d, c. i My email has no u's. site.
>
>

2851. Re: 1/4 wave vertical vs. loaded vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 11:40:39 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <XgGsc.24750$ZQ.22955@nwrddc03.gnilink.net>
Source record: 94556

"Dave" <Devarim@hotmail.com> wrote in message
news:fcc11758cff1495eeaba32353cf1e07f@news.meganetnews.com...
> Hi all,
>
> I'm considering putting up a 33' vertical - just 3 sections of Rat Shack
> mast (solidly bolted for continuity) plus a 3+/- foot 'adjustable' part
> on the bottom to 'trim' the length. Then a bunch of in-ground radials.
> 40m is my only 'serious' band. 15 meters should be a bonus, right?
> Or not?
>
> Would this work better than my 4BTV (which I'll keep for 20 and 10)?
> Or would the improvement be so insignificant as to not be worth all
> the bother of building the new antenna?
>
> Thanks
>
> Dave WB7AWK
>
> Should be fine on 40M. Although the match might be decent on 15M, the high
takeoff angle will not be good for 15M DX.

Dale W4OP

2852. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 12:27:03 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hgsc9FcqsciU1@uni-berlin.de>
Source record: 94557

RE: Post below

REALITY CHECK: If tx source Z really was 50 ohms, a tx connected to a 50 ohm load would lose 1/2 of the RF power it generates to that internal Z. And if that is true, then the heat produced by the tx, and the AC power consumed by the tx would be proof of that.

However careful measurement of heat production and AC power consumption of broadcast txs (for example) does NOT support the belief that the source Z of a tx designed for 50 ohm loads IS 50 ohms.

Following is the output of an old DOS program I wrote years ago to show operating parameters for a 25kW FM broadcast tx manufactured by my employer, when operating at any RF power and line voltage in its rated range. These values closely track the average of factory test data accumulated over 100s of delivered units.

In this example, if the tx had a 50 ohm source Z it would have to generate 50kW of RF in order to deliver 25kW to a 50 ohm load. In the first place, it doesn't have a big enough power supply or a big enough PA to do that. But even if it could, the input power and heat production would be almost twice the real values shown below.

The same physics applies to ham transmitters, which should be verifiable by an unbiased evaluation of comparable operating parameters.

- RF

* FM TRANSMITTER AC LOAD *

Transmitter name (HT-??FM): ? 25
TPO in kW: ? 25
AC line voltage: ? 220

RESULT:

Total Tx = 103.7 amps/phase, 39.5 kVA total.
H.V. Power Supply Current = 92.7 amps/phase
Total AC/RF Efficiency = 66.5 %

PA Air = 400 cu. feet/min.
Tx Cabinet Flushing Air = 335 cu. feet/min.
Power Supply Air = 250 cu. feet/min.
Total Air = 985 cu. feet/min.

Total Heat = 42810 BTU/Hr.
Heat Rise, total tx system = 39 deg. F.
Air Conditioner Load = 3.6 tons

"Richard Clark" <kb7qhc@comcast.net>
> "What is the source Z if it is not 50 Ohms?"
(clippage)
> The answer is the transmitter source Z is 50 Ohms at rated power.

2853. Re: 1/4 wave vertical vs. loaded vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 13:34:13 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B34B55.339DCFFE@cwis.net>
Source record: 94558

Dave,
Depending on if the 'old' vertical covered 40 meters at
all, the 'new' vertical might be an improvement. But not
really 'much' of one, there may be no practical difference
in performance on 40 meters.
Would 15 meters be a bonus? If you mean an unexpected
improvement over the 'old' vertical, then, no, the 'old'
vertical probably would work better on 15 meters.
If you don't have the "bunch of in-ground radials" already
in the ground, put them in and then put the 'old' vertical over
them! I think you'll see a greater over-all improvement that
way, rather than with just the 'new' vertical (except on
40 meters, maybe).
"Full sized" antennas work 'better' than 'shortened'
antennas,
in general, but sometimes that 'better' is sort'a hard to hear.
'Doc

2854. Re: A cure for reflected power

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 13:40:30 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B34CCE.3623B0D6@cwis.net>
Source record: 94559

Helmut,
Ah Ha! So that greenish color of tarnished copper is really
better than nice shinny golden copper! I knew there was some
reason I still use the stuff. I'm smarter than I thought...
'Doc

PS - Yes, I know I left 'me' wide open. Go ahead, take a free
shot. Enjoy your self...

2855. Re: ADVICE: Lookng for an economical portable multiband HF Vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 13:43:33 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B34D85.A36D3809@cwis.net>
Source record: 94560

Bob,
Simple answer. Buy a cordless screw driver, take a
multiband vertical apart, tie it to the rack. Use the
fence for your radial(s).
'Doc

2856. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 13:48:56 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B34EC8.D08632B4@cwis.net>
Source record: 94561

Cecil,
Instead of, "Translation: My "posting filters" allow me to
deny reality. :-)", how about, "My posting filters allow me to
deny ~opinion~"? That would seem to better 'fit' your prior
post...
'Doc

2857. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 13:50:09 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <lalsc.430$QD3.98@newssvr24.news.prodigy.com>
Source record: 94562

Richard
This is in response to your answer of last night. Before going to bed I got out the book REFLECTIONS II by Walt Maxwell W2DU. I'm typing verbatim from page 2-2 and 23-1 for those who don't have the book.page 2-2 "Contrary to what many believe, it is not true that when a transmitter delivers power into a line with reflections, a returning wave sees an internal generator resistance as a dissipative load. Nor is the reflected wave converted to heat and, while at the same time damaging the final amplifier....the reflected power is entirely conserved...." from page 23-1 "One of the most serious misconceptions concerned reflected power reaching the tubes in the RF amplifier of the transmitter. The prevalent, but erroneous thinking was that the reflected power enters the amplifier, causing tube overheating and destruction. However, I dispelled this misconception in the above mentioned publications, using wave-mechanics treatment, discussed here in greater detail, by showing that when the pi-network tank is tuned to resonance, a virtual short circuit to rearward traveling waves is created at the input of the network. Consequently, instead of the reflected power reaching the tubes of the amplifier, it is totally re-reflected toward the load by the virtual short circuit appearing only to waves at the network input".
I'm guessing it's a virtual short because the pi-network is resonant but what happens if it is a bit off. Also what happens in a transistor final with no pi?

73 Hank WD5JFR

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:tbf5b0ppstgv878l5qppgqb66nq4giaso3@4ax.com...
> On Tue, 25 May 2004 02:59:52 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
>
> >Richard
> >
> >You say my question has been answered but I haven't seen the answer, too
> >old, too stupid, whatever but I still would like to understand. So,
would
> >you be kind enough to give me a better understanding of the "mechanism"
in
> >the transmitter final that can dissipate and transform yet it can't
> >dissipate a reflection because there's some kind of one way device that
acts
> >like a checkvalve or diode that reflects.
> >tnx
>
> Hi Hank,
>

> There is no answer as you phrase the question because the transmitter
> does dissipate power reflected to it. I can easily imagine you may
> find no understanding as I go hyperbolic in the following lines. :-)
>
> It can also reflect (some or all of) what it does not absorb, but only
> if it does not match the line connected to it. The degree to which it
> absorbs/reflects is determined by the ratio of its Z to the line/load
> at the antenna terminal. In this case (bear with me), the source Z is
> NOW found at the load's mismatch, transformed through the line. This
> means matching works both ways (often the singlemost ignored aspect of
> obvious reciprocity in any of these arguments). Such circuit analysis
> is called superposition. This is merely an academic way of saying you
> look at the problem from both points of view where you reverse roles
> (source becomes load, and load becomes source). This is a common
> practice learned in first quarter circuit analysis when Kirchhoff's
> laws are developed (Thevenin/Norton equivalent circuits also emerge).
>
> For example (a strained one at that), if you had a 500 Ohm Source
> characteristic Z, you will never launch much power into a 50 Ohm
> system because it would immediately hit a reflective interface at the
> antenna connector. This means that a 500 Ohm source, when confronted
> by power going towards it from a 50 Ohm system will reflect most of
> that power (but how did we get this power into the system in the first
> place - Karma?) This, by design, will never happen in any transistor
> ham rig built in the last quarter century.
>
> So, this is why you see such a vacuum of response when you (the
> general readership "you") ask:
> "What is the source Z if it is not 50 Ohms?"
> Silence guarantees they either don't know (a fatal admission for egos)
> or if they offered a value, we could all balance the checkbook and
> that would end the game being played. Hence we are treated to all
> these suppositions of shorts and opens or magic reflectors hidden
> beneath the hood. The frequent toss-off comment of "no one knows" is
> called projection, a psychological salve for the ego meaning if I
> don't know, then certainly no one else does either - or they are
> wrong.
>
> The answer is the transmitter source Z is 50 Ohms at rated power. If
> a watt of power is chooglin' down the line toward it, that 50 Ohms is
> going to dissipate into a watt worth of calories. This can be argued
> with wave mechanics, or lumped circuit equivalents - doesn't matter
> because it's all the same calories. Modern rigs can tolerate this
> watt through limited feedback and level controlling circuitry - if you
> paid more than a kilobuck for your rig that is. For the rest of us,
> it's a spin of the wheel and you take your chance. 1 watt hardly
> amounts to much, but are you that lucky that it is ONLY 1 watt? Are
> we to suppose those unfortunate souls who blasted their rig
> transmitting into a mismatch lost it only because they lacked enough
> magic pixie dust? I will bet no rig was lost to a cold snap with

> frosty finals.
>
> I've already answered about where the heat can be found, so we will
> conserve bandwidth.
>
> === WARNING to the logic impaired, the following is a supposition ===
>
> Now, lets simply accept those answers that require the magic pixie
> dust of total reflection from the transmitter. Fine, the mismatched
> antenna reflects some power, this power returns to the transmitter,
> the transmitter simple routes it ALL back to the antenna,
> round-and-round until the antenna finally radiates it. If this were
> true, what do we need tuners for? Take a survey of everyone who
> chants this mantra of the rig reflecting, and ask if they have a tuner
> in the line. Is it a paper weight holding down their license? Is it
> a line stretcher because they needed another foot extension between
> the antenna lead and their rig? Dare I point out the utter failure of
> their faith?
>
> I will pause to allow those answers to emerge and enjoy the thrashing
> dawn of a new era of metaphysics. Ooooohhhhhhmmmmms Laaaaaaaaaaw!
>
> 73's
> Richard Clark, KB7QHC

2858. Reflected power ? new thread, new beginning, kinda ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 13:57:58 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <GhIsc.431$zG3.320@newssvr24.news.prodigy.com>
Source record: 94563

The previous thread got too big and convoluted for me so I started another if for no other reason than my own clarity and convenience. It's still the same question "I know that any power not dissipated by an antenna is reflected back to the
transmitter. Then the transmitter "reflects" this reflection back to antenna, ad nauseum until its all gone. I also know that a short or an open is required to reflect power and I'm searching for which it is, an open or a short. I'm inclined to think it's a virtual open but I'm at a loss to understand that and I wonder if someone has a good explanation or analogy and some math wouldn't hurt".

Before going to bed I got out the book REFLECTIONS II by Walt Maxwell, W2DU. I'm typing verbatim from page 2-2 and 23-1 for those who don't have the book.

Page 2-2 : "Contrary to what many believe, it is not true that when a transmitter delivers power into a line with reflections, a returning wave sees an internal generator resistance as a dissipative load. Nor is the reflected wave converted to heat and, while at the same time damaging the final amplifier....the reflected power is entirely conserved...."

From page 23-1 "One of the most serious misconceptions concerned reflected power reaching the tubes in the RF amplifier of the transmitter. The prevalent, but erroneous thinking was that the reflected power enters the amplifier, causing tube overheating and destruction. However, I dispelled this misconception in the above mentioned publications, using wave-mechanics treatment, discussed here in greater detail, by showing that when the pi-network tank is tuned to resonance, a virtual short circuit to rearward traveling waves is created at the input of the network. Consequently, instead of the reflected power reaching the tubes of the amplifier, it is totally re-reflected toward the load by the virtual short circuit appearing only to waves at the network input".

I'm guessing it's a virtual short because the pi-network is resonant but what happens if it is a bit off. Also what happens in a transistor final with no pi?

73 Hank WD5JFR

2859. Re: Goodness of ground Radials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 14:03:27 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B3522F.84F8AE39@cwis.net>
Source record: 94564

Reg
> But everybody already knows that 120 radials, of any reasonable length, in
> any sort of soil is "Excellent".

Careful! When you get your tongue that far into your cheek,
it's
sometimes hard to get out. Tongue 'cramps' are terrible...
'Doc

2860. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 14:17:43 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <O9qdnQztu9obyC7dRVn-ig@comcast.com>
Source record: 94565

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:laIsc.430$QD3.98@newssvr24.news.prodigy.com...
> Richard
> This is in response to your answer of last night. Before going to bed I
got
> out the book REFLECTIONS II by Walt Maxwell W2DU. I'm typing verbatim
from
> page 2-2 and 23-1 for those who don't have the book.page 2-2 "Contrary to
> what many believe, it is not true that when a transmitter delivers power
> into a line with reflections, a returning wave sees an internal generator
> resistance as a dissipative load. Nor is the reflected wave converted to
> heat and, while at the same time damaging the final amplifier....the
> reflected power is entirely conserved...." from page 23-1 "One of the
most
> serious misconceptions concerned reflected power reaching the tubes in the
> RF amplifier of the transmitter. The prevalent, but erroneous thinking
was
> that the reflected power enters the amplifier, causing tube overheating
and
> destruction. However, I dispelled this misconception in the above
mentioned
> publications, using wave-mechanics treatment, discussed here in greater
> detail, by showing that when the pi-network tank is tuned to resonance, a
> virtual short circuit to rearward traveling waves is created at the input
of
> the network. Consequently, instead of the reflected power reaching the
> tubes of the amplifier, it is totally re-reflected toward the load by the
> virtual short circuit appearing only to waves at the network input".
> I'm guessing it's a virtual short because the pi-network is resonant but
> what happens if it is a bit off. Also what happens in a transistor final
> with no pi?
>
> 73 Hank WD5JFR
Henry,
Here is an example of what you just said. Take a sine wave source, and
connect it to a 1/4 wave section of shorted transmission line through a
series resistor R. The reflected wave will reach this resistor 1/2 cycle
later, and will be in phase with the source. For a lossless transmission
line, there will be *0 Volts across the resistor*. There will be 0 current
through the resistor, and the reflected wave will be re reflected for all
values of R, including R=Z0, because the reflected wave will not "know" what
R is. You can get the same answer from knowing that the impedance looking
into a 1/4 wave section of shorted transmission line is infinite.

Tam/WB2TT

2861. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 14:53:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b35ecf$1_8@corp.newsgroups.com>
Source record: 94566

Ed Price wrote:
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>>By definition, reflected energy dissipated in the source was never
>>generated in the first place.
>
> That's not a very good definition.
> Would you say that a rock, thrown vertically, never was thrown just because
> it returned to hit you on the head?

Nope, I wouldn't. But that seems to be what some people
are saying. I objected to that definition about 15 years
ago. I was asked to prove otherwise and was unable to
do so. The generated power is *defined* as the *net*
steady-state output power of the source.

That's why many of my examples involve signal generators
equipped with a circulator and load, outputting a constant
forward voltage in phase with a constant forward current.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2862. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 15:05:36 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b361a1_8@corp.newsgroups.com>
Source record: 94567

Richard Fry wrote:

> RE: Post below
>
> REALITY CHECK: If tx source Z really was 50 ohms, a tx connected to a 50
> ohm load would lose 1/2 of the RF power it generates to that internal Z.
> And if that is true, then the heat produced by the tx, and the AC power
> consumed by the tx would be proof of that.

That describes a Class-A amplifier.

> However careful measurement of heat production and AC power consumption of
> broadcast txs (for example) does NOT support the belief that the source Z of
> a tx designed for 50 ohm loads IS 50 ohms.

With other classes of amps, the amplifier's individual component signals
are non-linear.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2863. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 15:09:49 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b3629d$1_8@corp.newsgroups.com>
Source record: 94568

'Doc wrote:
> Instead of, "Translation: My "posting filters" allow me to
> deny reality. :-)", how about, "My posting filters allow me to
> deny ~opinion~"? That would seem to better 'fit' your prior
> post...

Quoting something J. C. Slater, a physics prof at MIT, wrote
when I was two years old is not merely my opinion.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2864. Re: Reflected power ? new thread, new beginning, kinda ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 15:27:01 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <baCdnYu-zZVZ-C7d4p2dnA@comcast.com>
Source record: 94570

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:GhIsc.431$zG3.320@newssvr24.news.prodigy.com...
> The previous thread got too big and convoluted for me so I started another
> if for no other reason than my own clarity and convenience. It's still the
> same question "I know that any power not dissipated by an antenna is
> reflected back to the
> transmitter. Then the transmitter "reflects" this reflection back to
> antenna, ad nauseum until its all gone. I also know that a short or an
open
> is required to reflect power and I'm searching for which it is, an open or
a
> short. I'm inclined to think it's a virtual open but I'm at a loss to
> understand that and I wonder if someone has a good explanation or analogy
> and some math wouldn't hurt".
>
> Before going to bed I got out the book REFLECTIONS II by Walt Maxwell,
> W2DU. I'm typing verbatim from page 2-2 and 23-1 for those who don't
have
> the book.
>
> Page 2-2 : "Contrary to what many believe, it is not true that when a
> transmitter delivers power into a line with reflections, a returning wave
> sees an internal generator resistance as a dissipative load. Nor is the
> reflected wave converted to heat and, while at the same time damaging the
> final amplifier....the reflected power is entirely conserved...."
>
> From page 23-1 "One of the most serious misconceptions concerned
reflected
> power reaching the tubes in the RF amplifier of the transmitter. The
> prevalent, but erroneous thinking was that the reflected power enters the
> amplifier, causing tube overheating and destruction. However, I dispelled
> this misconception in the above mentioned publications, using
wave-mechanics
> treatment, discussed here in greater detail, by showing that when the
> pi-network tank is tuned to resonance, a virtual short circuit to rearward
> traveling waves is created at the input of the network. Consequently,
> instead of the reflected power reaching the tubes of the amplifier, it is
> totally re-reflected toward the load by the virtual short circuit
appearing
> only to waves at the network input".
>
> I'm guessing it's a virtual short because the pi-network is resonant but
> what happens if it is a bit off. Also what happens in a transistor final
> with no pi?

>
> 73 Hank WD5JFR
>
>
>
Henry,

I had posted the following on the other thread, about the time you started the new one.

Tam
Here is an example of what you just said. Take a sine wave source, and connect it to a 1/4 wave section of shorted transmission line through a series resistor R. The reflected wave will reach this resistor 1/2 cycle later, and will be in phase with the source. For a lossless transmission line the reflected wave will be the same amplitude as the generator, there will be *0 Volts across the resistor*. There will be 0 current through the resistor, and the reflected wave will be re reflected for all values of R, including R=Z0, because the reflected wave will not "know" what R is. You can get the same answer from knowing that the impedance looking into a 1/4 wave section of shorted transmission line is infinite.

2865. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 15:28:32 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <c8vntn$7po$1@news.service.uci.edu>
Source record: 94569

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b1332d$1_2@corp.newsgroups.com...
> That's a steady-state shortcut which assumes pure sine waves that
> don't exist in reality. Please don't confuse steady-state shortcuts
> with reality. Noise and modulation cause the "steady-state complex
> impedance" not to be steady-state at all. Many will say it's close
> enough, but one cannot understand reflections by assuming an un-
> varying steady-state.
>
> In a TV system with ghosting due to reflections, the unvarying steady-
> state condition doesn't exist. In fact, when you assume steady-state
> conditions, you eliminate ghosting, at least in your own mind. In
> reality, steady-state doesn't really exist because of random noise
> and unpredictable modulation.

The more you talk about 'steady-state-, the more apparent it becomes that
you don't really understand what it means.

73, Jim AC6XG

2866. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 15:28:43 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b3670c$1_8@corp.newsgroups.com>
Source record: 94571

Henry Kolesnik wrote:

> Richard
> This is in response to your answer of last night. Before going to bed I got
> out the book REFLECTIONS II by Walt Maxwell W2DU. I'm typing verbatim from
> page 2-2 and 23-1 for those who don't have the book.page 2-2 "Contrary to
> what many believe, it is not true that when a transmitter delivers power
> into a line with reflections, a returning wave sees an internal generator
> resistance as a dissipative load. Nor is the reflected wave converted to
> heat and, while at the same time damaging the final amplifier....the
> reflected power is entirely conserved...." from page 23-1 "One of the most
> serious misconceptions concerned reflected power reaching the tubes in the
> RF amplifier of the transmitter. The prevalent, but erroneous thinking was
> that the reflected power enters the amplifier, causing tube overheating and
> destruction. However, I dispelled this misconception in the above mentioned
> publications, using wave-mechanics treatment, discussed here in greater
> detail, by showing that when the pi-network tank is tuned to resonance, a
> virtual short circuit to rearward traveling waves is created at the input of
> the network. Consequently, instead of the reflected power reaching the
> tubes of the amplifier, it is totally re-reflected toward the load by the
> virtual short circuit appearing only to waves at the network input".

Please note that when this was written, there were no solid-state transmitters
with fixed 50 ohm outputs. Walt was talking specifically about tube transmitters
with built-in adjustable pi-net antenna tuner circuits, like my old Globe Scout.
The closest present-day transmitters to match the above statements would be
something like my IC-756PRO with a built-in auto-tuner.

> I'm guessing it's a virtual short because the pi-network is resonant but
> what happens if it is a bit off.

If it is a bit off, reflected voltage and current flow into the finals
and superpose with the source voltage and current. Since the reflected
voltage and current are 180 degrees out of phase, the superposition
usually causes the load on the amp to become reactive. Even if the
voltages are in phase or the currents are in phase, the load on the
amp becomes something other than the designed-for load. The result
can be over-voltage or over-current or both. That's not good.

> Also what happens in a transistor final with no pi?

Note: most transistor finals have a fixed pi-network designed to
operate into a fixed 50 ohm load. The results would be the same as
the detuned example above. Such commercial finals are protected
from over-voltage and over-current by decreasing the source power.
--

73, Cecil http://www.qsl.net/w5dxp

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2867. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:02:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uhq6b05mbq8gaa2ep47v1hikm0ddjghdg2@4ax.com>
Source record: 94572

On Tue, 25 May 2004 13:50:09 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>Richard
>This is in response to your answer of last night. Before going to bed I got
>out the book REFLECTIONS II by Walt Maxwell W2DU. I'm typing verbatim from

Very familiar stuff which I have held Walt accountable for. We have
had considerable correspondence to this point and he is holding my
argument in suspension, pending his bench work confirmation of my
simple experiments that I have posted here to this effect.

>I'm guessing it's a virtual short because the pi-network is resonant but
>what happens if it is a bit off. Also what happens in a transistor final
>with no pi?

What you describe is consistent with Walt's language, you deserve
points for following his logic. As for your question about the
transistor final with no pi network. That was handled quite
explicitly by me for the thread "Loop Antenna for Class-E amplifier"
in correspondence with Toni, ea3fya and Marc Battyani. If you will
note, this thread was entirely devoid of ego so puffed up in these
issues, and we had the rare opportunity of a third, independent
observer who also sat at the bench and followed the instructions and
comments I offered with actual construction and testing to POSITIVE
results. You may also note the absolute vacuum of other's comments
imploring that his data was chimerical, illusions of a meter. In fact
it was one of those rare threads with a question much like yours, with
the same simple observations offered by me, confirmed and ending in
very much less than 600 postings of supposition and superstition.

However, back to Walt's treatise and your reading of it. I again
simply ask: "Do you have a tuner in line each day you fire up your
rig? Why, if you have faith in your logic, do you need it?"

As I've pointed out, there's the recent thread, and any number of
simple tests and experiments that I have offered here. These etudï¿½s
are typically ignored in favor of vacuous theory-spinning - NONE of
which answer the simple question: "What is the Source Z if it is not
50 Ohms?"

73's
Richard Clark, KB7QHC

2868. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:05:04 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mgr6b054nvqn95anick6bdt49b69fv8lcf@4ax.com>
Source record: 94573

On Tue, 25 May 2004 07:27:03 -0500, "Richard Fry" <rfry@adams.net>
wrote:
>REALITY CHECK: If tx source Z really was 50 ohms, a tx connected to a 50
>ohm load would lose 1/2 of the RF power it generates to that internal Z.

Dear Richard,

This is the time-honored misreading and misapplication of Thevenin's
theorem posed by Edison to confound investors in Westinghouse's AC
generation plants. Look at the ratio of DC to AC power plants
constructed in the past century to find the poor accuracy of your
reading.

73's
Richard Clark, KB7QHC

2869. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:12:05 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <pfKsc.490$Af4.160@newssvr24.news.prodigy.com>
Source record: 94574

```
Before it came down my 20 meter antenna had a SWR approaching 20:1 and I was
running a Collins 30S-1 and no tuner!. I did that for several years and
would be still doing if the roofers hadn't destroyed ~130 ft. dipole. One
of these days after my back improves I'll put another one up.
```

--
73
Hank WD5JFR
"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:uhq6b05mbq8gaa2ep47v1hikm0ddjghdg2@4ax.com...
> On Tue, 25 May 2004 13:50:09 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
>
> >Richard
> >This is in response to your answer of last night. Before going to bed I
got
> >out the book REFLECTIONS II by Walt Maxwell W2DU. I'm typing verbatim
from
>
> Very familiar stuff which I have held Walt accountable for. We have
> had considerable correspondence to this point and he is holding my
> argument in suspension, pending his bench work confirmation of my
> simple experiments that I have posted here to this effect.
>
> >I'm guessing it's a virtual short because the pi-network is resonant but
> >what happens if it is a bit off. Also what happens in a transistor final
> >with no pi?
>
> What you describe is consistent with Walt's language, you deserve
> points for following his logic. As for your question about the
> transistor final with no pi network. That was handled quite
> explicitly by me for the thread "Loop Antenna for Class-E amplifier"
> in correspondence with Toni, ea3fya and Marc Battyani. If you will
> note, this thread was entirely devoid of ego so puffed up in these
> issues, and we had the rare opportunity of a third, independent
> observer who also sat at the bench and followed the instructions and
> comments I offered with actual construction and testing to POSITIVE
> results. You may also note the absolute vacuum of other's comments
> imploring that his data was chimerical, illusions of a meter. In fact
> it was one of those rare threads with a question much like yours, with
> the same simple observations offered by me, confirmed and ending in
> very much less than 600 postings of supposition and superstition.
>
> However, back to Walt's treatise and your reading of it. I again

> simply ask: "Do you have a tuner in line each day you fire up your
> rig? Why, if you have faith in your logic, do you need it?"
>
> As I've pointed out, there's the recent thread, and any number of
> simple tests and experiments that I have offered here. These etud&#65533;s
> are typically ignored in favor of vacuous theory-spinning - NONE of
> which answer the simple question: "What is the Source Z if it is not
> 50 Ohms?"
>
> 73's
> Richard Clark, KB7QHC

2870. Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:16:42 UTC
From: cva <bn@art.com>
Message-ID: <c8vt9e02ln7@enews3.newsguy.com>
Source record: 94584

.

2871. Re: Reflected power ? new thread, new beginning, kinda ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:18:17 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b372ab_8@corp.newsgroups.com>
Source record: 94576

Henry Kolesnik wrote:

> The previous thread got too big and convoluted for me so I started another
> if for no other reason than my own clarity and convenience. It's still the
> same question "I know that any power not dissipated by an antenna is
> reflected back to the
> transmitter. Then the transmitter "reflects" this reflection back to
> antenna, ad nauseum until its all gone. I also know that a short or an open
> is required to reflect power and I'm searching for which it is, an open or a
> short. I'm inclined to think it's a virtual open but I'm at a loss to
> understand that and I wonder if someone has a good explanation or analogy
> and some math wouldn't hurt".

Hank, Here's what happens at the match point in an amateur radio antenna system. Walter Maxwell himself references J. C. Slater's book.

From _Microwave_Transmission_, by J. C. Slater: "We can get a better understanding of (matching) devices by considering reflections at discontinuities. This method is useful in considering any impedance-matching device, and we shall think of it first in connection with the ordinary quarter-wave transformer. The object of this transformer is to eliminate the reflection that would be present if the impedance Z1 were connected directly to Zt."

The diagram is: Z1----1/4WL Z0----Zt where Z0 is a 1/4WL transformer section that matches Z1 to Zt.

"The method of eliminating reflections is based on the interference between waves. Two waves half a wavelength apart are in opposite phases, and the sum of them, if their amplitudes are numerically equal, is zero. The fundamental principle behind the elimination of reflections is then to have each reflected wave canceled by another wave of equal amplitude and opposite phase. In order that this second wave may have traveled half a wavelength farther than the first, it is obvious that it must have gone a quarter wavelength farther up the line, and correspondingly a quarter of a wavelength back, before it meets the original reflected wave. In other words, two discontinuities in characteristic impedance, of such magnitude as to give equal amplitudes of reflected waves and spaced a quarter of a wavelength apart, will give no net reflection and hence will not introduce reflections into the line."

Here's how to perform an experiment to answer your questions. The source (SGCL) is a Signal Generator equipped with a Circulator and Load. It puts out a constant 100 watts. All reflected power is dissipated in the circulator load.
very short

100W SGCL---50 ohm line---tuner----------450 ohm line------------Load

Initially, the system is tuned for a match so there are no reflections on the 50 ohm line. Then the load is changed to 450 ohms. Assuming the load was not 450 ohms to start with, this will cause reflections to appear on the 50 ohm line. We can use an oscilloscope to measure the magnitude and phase of the voltage across the 50 ohm circulator load resistor. That's the reflected voltage. We can calculate the reflected current through the 50 ohm circulator load resistor. So now we have the component voltage and current reflected from the input to the tuner. We can reference the phase of the reflected voltage and current to the phase of the source voltage. Let's say the source voltage has a reference phase of zero degrees.

Assume we measured a reflected voltage of 30 volts at 10 degrees and calculated a reflected current of 0.6 amps at 190 degrees. (Note that the reflected current is always 180 degrees out of phase with the reflected voltage.)

Now switch the load from 450 ohms back to the original load. What happens at the tuner input to achieve a match is the superposition of two reflected waves. We know what the first one looks like so we deduce what the second one looks like.

The first reflected wave, reflected from match point at the tuner input is:

30 volts at 10 degrees and 0.6 amps at 190 degrees

The second reflected wave, returning from the load and reaching the match point at the tuner input is:

30 volts at 190 degrees and 0.6 amps at 10 degrees

Adding those two voltages yields zero volts. Adding those two currents yields zero amps. Thus the match is accomplished.

What the tuner does is shift the magnitude and phase of the voltage and current reflected from the load to cancel the reflection of the source wave that occurs at the input of the tuner.

The reflected voltage flowing toward the source is canceled to zero through superposition of the two reflected voltage waves.

The reflected current flowing toward the source is canceled to zero through superposition of the two reflected current waves.

That's how all matching devices work according to J. C. Slater.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2872. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:19:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <lur6b05613cemac87tc93onv06ca123ani@4ax.com>
Source record: 94575

On Tue, 25 May 2004 07:27:03 -0500, "Richard Fry" <rfry@adams.net>
wrote:
>However careful measurement of heat production and AC power consumption of
>broadcast txs (for example) does NOT support the belief that the source Z of
>a tx designed for 50 ohm loads IS 50 ohms.

Hi Richard,

This quote above bears directly to one of my observations. You define
by negatives, and that is a shoddy technical discussion worthy of the
creationist argument.

Tell us what it IS instead. A simple complex number is all that is
asked, derived from actual measurement. I've done this numerous
times, and not simply for milliwatt signal generators and have
returned these readings to the client with certificates of
traceability to Primary Standards Labs.

Barring any explicit answer that yields this complex number; then that
answer is simply conjecture and illusion that is commonplace in this
discussion. Draping it with programs and formula doesn't give
substance to the shape of that dream.

73's
Richard Clark, KB7QHC

2873. Results of W4AN Dayton raffle

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:20:50 UTC
From: "Bob W." <bobw@spamless.org>
Message-ID: <2004525-182050-127508@foorum.com>
Source record: 94588

For results of the W4AN Dayton raffle, and ALL of the big winners, please visit:

http://w4an.qth.com/raffle/

73's from Bob

--
Use our news server 'news.foorum.com' from anywhere.
More details at: http://nnrpinfo.go.foorum.com/

2874. Tx Source Impedance & Load Reflections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:23:03 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hha6pFcsms8U1@uni-berlin.de>
Source record: 94577

This topic deserves more attention than it will get from its previous placement deep in some recent threads.

Below is a quote from a paper titled "A Study of RF Intermodulation Between FM Broadcast Transmitters Sharing Filterplexed or Co-located Antenna Systems," by Geoffrey Mendenhall. Mendenhall is a registered professional engineer, and now a VP for Harris Broadcast Division in Mason, OH. He is responsible for the engineering research and design of the entire transmitter product line: AM, FM & TV.

This paper and quote has to be read here with some interpretation, because it is an analysis of what happens when an in-band signal from one transmitter is coupled into another transmitter when their antennas are close together and/or when adequate filtering of the external signal is not provided. But it is strictly applicable also for single tx and antenna systems, where an antenna mismatch produces reflections back toward the transmitter. In this case the "interfering signal" is not external, but a reflection of the incident power of that tx.

QUOTE: Output return loss is a measure of the interfering signal that is coupled into the output circuit versus the amount that is reflected back from the output circuit without interacting with the non-linear device. To understand this concept more clearly, we must remember that although the output circuit of the transmitter is designed to work into a fifty ohm load, the output source impedance of the transmitter is not fifty ohms. If the source impedance were equal to the fifty ohm line impedance, half of the transmitter's output power would be dissipated in its internal output source impedance. The transmitter's output source impedance must be low compared to the load impedance in order to achieve good efficiency. The transmitter therefore looks like a voltage source driving a fifty ohm load. While the transmission line is correctly terminated looking toward the antenna (high return loss), the transmission line is greatly mismatched looking toward the output circuit of the transmitter (low return loss). This means that power coming out of the transmitter is completely absorbed by the load while interfering signals fed into the transmitter are almost completely reflected by the output circuit. END QUOTE

The transmitter topology in this study was a single PA tube operating Class C. For these designs, an on-carrier return loss value of 2dB or less is rather common. At 2dB the reflection coefficient is over 79%.

PAs comprised of multiple devices combined by balanced methods (e.g. 3dB hybrids, Wilkinsons) can provide a source impedance closer to 50 ohms (higher return loss). In these cases, power that is reflected off the load and NOT re-reflected by the tx mostly is dissipated in resistive networks in the PA combiner. However these networks do not provide a load for the

forward power from the tx, only for reflected power from the output termination.

--RF

Visit http://rfry.org for FM broadcast RF system papers.

2875. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:24:12 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b3740d_8@corp.newsgroups.com>
Source record: 94578

Tam/WB2TT wrote:
> You can get the same answer from knowing that the impedance looking
> into a 1/4 wave section of shorted transmission line is infinite.

Ever measure the forward and reflected currents halfway into a
shorted 1/4WL stub? How can currents be flowing unimpeded into
and out of an infinite impedance? Hint: it's the net current
that is zero at the input of a 1/4WL stub. The forward current
and reflected current are equal in magnitude and opposite in
phase. Their individual magnitudes can be very large.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2876. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:35:21 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ois6b0lhf310elipk80o662k1tqsvuvlfe@4ax.com>
Source record: 94579

On Tue, 25 May 2004 16:12:05 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:
>Before it came down my 20 meter antenna had a SWR approaching 20:1 and I was
>running a Collins 30S-1 and no tuner!. I did that for several years and
>would be still doing if the roofers hadn't destroyed ~130 ft. dipole. One
>of these days after my back improves I'll put another one up.
>
Hi Hank,

I used to teach this Collins equipment in the Navy. I presume yours
had a finals tuning circuit still in it? Hard to imagine it
otherwise.

Tubes are different from transistors only by approaching the Source Z
with an inverted ratio of transformation. Ever hear of plate
resistance? It is literal resistance. Ever see a plate glow when
under the stress of hi SWR? It is literal heat. The same heat is
generated irrespective of it being explained by wave mechanics or
lumped equivalent circuits. Choose the model you are comfortable
with, and then tackle the SWR if you care about efficiency.

If anything, tube sets prove the problem of reflected power through
your ability to directly observe the heat generated and experience the
cost of new finals tubes through their degraded life span. This stuff
is all rote teaching; and my students were given practical tests to
troubleshoot, tune, and repair against such scenarios.

I've had hands-on experience with this topic both academically and at
several benches - the sophistries that deny these points are amusing,
but remain amateur scribblings.

73's
Richard Clark, KB7QHC

2877. Re: Tx Source Impedance & Load Reflections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:41:28 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <2vCdndxJMK-q6i7dRVn-sA@comcast.com>
Source record: 94580

"Richard Fry" <rfry@adams.net> wrote in message
news:2hha6pFcsms8U1@uni-berlin.de...
> This topic deserves more attention than it will get from its previous
> placement deep in some recent threads.
>
> Below is a quote from a paper titled "A Study of RF Intermodulation
Between
> FM Broadcast Transmitters Sharing Filterplexed or Co-located Antenna
> Systems," by Geoffrey Mendenhall. Mendenhall is a registered professional
> engineer, and now a VP for Harris Broadcast Division in Mason, OH. He is
> responsible for the engineering research and design of the entire
> transmitter product line: AM, FM & TV.
>
> This paper and quote has to be read here with some interpretation, because
> it is an analysis of what happens when an in-band signal from one
> transmitter is coupled into another transmitter when their antennas are
> close together and/or when adequate filtering of the external signal is
not
> provided. But it is strictly applicable also for single tx and antenna
> systems, where an antenna mismatch produces reflections back toward the
> transmitter. In this case the "interfering signal" is not external, but a
> reflection of the incident power of that tx.
>
> QUOTE: Output return loss is a measure of the interfering signal that is
> coupled into the output circuit versus the amount that is reflected back
> from the output circuit without interacting with the non-linear device.
To
> understand this concept more clearly, we must remember that although the
> output circuit of the transmitter is designed to work into a fifty ohm
load,
> the output source impedance of the transmitter is not fifty ohms. If the
> source impedance were equal to the fifty ohm line impedance, half of the
> transmitter's output power would be dissipated in its internal output
source
> impedance. The transmitter's output source impedance must be low compared
> to the load impedance in order to achieve good efficiency. The
transmitter
> therefore looks like a voltage source driving a fifty ohm load. While the
> transmission line is correctly terminated looking toward the antenna (high
> return loss), the transmission line is greatly mismatched looking toward
the
> output circuit of the transmitter (low return loss). This means that
power
> coming out of the transmitter is completely absorbed by the load while

> interfering signals fed into the transmitter are almost completely
reflected
> by the output circuit. END QUOTE
>
> The transmitter topology in this study was a single PA tube operating
Class
> C. For these designs, an on-carrier return loss value of 2dB or less is
> rather common. At 2dB the reflection coefficient is over 79%.
>
> PAs comprised of multiple devices combined by balanced methods (e.g. 3dB
> hybrids, Wilkinsons) can provide a source impedance closer to 50 ohms
> (higher return loss). In these cases, power that is reflected off the
load
> and NOT re-reflected by the tx mostly is dissipated in resistive networks
in
> the PA combiner. However these networks do not provide a load for the
> forward power from the tx, only for reflected power from the output
> termination.
>
> --RF
>
> Visit http://rfry.org for FM broadcast RF system papers.
>
>
Richard,
Is there a description somewhere that details which losses in an amplifier have an effect on the output impedance? For example, the fairly high parallel equivalent collector resistance would manifest itself as a fairly low value series output resistance. There are other collector and emitter losses that would have an effect on output impedance. What happens to the ~30% loss inherent in a class B amplifier? Is that a DC loss?

Tam/WB2TT

2878. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:42:42 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hhbbjFcv1abU1@uni-berlin.de>
Source record: 94581

The source Z of a typical tx having a single-ended Class C PA is just a few ohms. The exact value depends on circuit design and tuning adjustments. Heavy loading of the output tuning network of the PA reduces the return loss looking back into the tx, and lighter loading improves it.

Please read my post using the new subject line "Tx Source Impedance & Load Reflections" that I started for this a few minutes ago. The paper I refer to and quote there (not mine) is accepted in the broadcast industry as a benchmark on this subject.

- RF

"Richard Clark" <kb7qhc@comcast.net> >
> Hi Richard,
>
> This quote above bears directly to one of my observations. You define
> by negatives, and that is a shoddy technical discussion worthy of the
> creationist argument.
>
> Tell us what it IS instead.

2879. Re: Tx Source Impedance & Load Reflections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 16:46:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2pt6b0lbjo3ru6pn7ae7d6j9mna19pq7ks@4ax.com>
Source record: 94582

On Tue, 25 May 2004 11:23:03 -0500, "Richard Fry" <rfry@adams.net>
wrote:
>This topic deserves more attention than it will get from its previous
>placement deep in some recent threads.
>
>Below is a quote
Which is a creationist-model of negative definition.

This is poor substitute for expressing a simple complex value derived
from actual measurement. The methods for accomplishing this are rote
material practiced by designers every day. The quality of their
product is in proportion to the accuracy of their determination.

73's
Richard Clark, KB7QHC

2880. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 17:00:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <aju6b09unuakuq7t7mlqgu3a8tdubjsv3s@4ax.com>
Source record: 94583

On Tue, 25 May 2004 11:42:42 -0500, "Richard Fry" <rfry@adams.net>
wrote:

>The source Z of a typical tx having a single-ended Class C PA is just a few
>ohms. The exact value depends on circuit design and tuning adjustments.
>Heavy loading of the output tuning network of the PA reduces the return loss
>looking back into the tx, and lighter loading improves it.
>
>Please read my post using the new subject line "Tx Source Impedance & Load
>Reflections" that I started for this a few minutes ago. The paper I refer
>to and quote there (not mine) is accepted in the broadcast industry as a
>benchmark on this subject.
>
>- RF

OK you cannot give us a specific answer derived from actual
measurement.

73's
Richard Clark, KB7QHC

2881. Re: Tx Source Impedance & Load Reflections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 17:13:19 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2hhd51Fd2gklU1@uni-berlin.de>
Source record: 94585

TWIMC:

OK, argue amongst yourselves. I have tried to post some real world data and experience here, using a respectful tone. What I read back is mostly filled with haughtiness, invective and intimidation.

Back to lurk mode (if that).

Richard Fry

2882. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 17:16:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b38041$1_2@corp.newsgroups.com>
Source record: 94586

Henry Kolesnik wrote:
> Before it came down my 20 meter antenna had a SWR approaching 20:1 and I was
> running a Collins 30S-1 and no tuner!.

If the 30S-1 doesn't have a built-in tuner, what are those knobs
and meters for?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2883. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 17:33:15 UTC
From: AB2RC <AB2RC@localhost.localdomain>
Message-ID: <slrncb714v.7er.AB2RC@homer.linux1.lan>
Source record: 94587

On 2004-05-25, cva <bn@art.com> wrote:
> .
absolutely nothing....

but asked the following question in the subject header
"Where can I get a lump of Sodium?"

I don't even want to know why you would want a lump of soduim, but look here

http://www.labdepotinc.com/chemical_details~pid~S1100.aspx

--
Alex / AB2RC
Yaesu FT100 software for Linux http://www.qsl.net/kc2ivl
Why do they call Radio "Wireless", between my shack and antennas
I must have over 1500 feet of wire!

2884. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 17:59:18 UTC
From: WB2JKX <mycall-N0SPAM@arrl.net>
Message-ID: <WPLsc.27187$fF3.698279@bgtnsc05-news.ops.worldnet.att.net>
Source record: 94589

Henry Kolesnik <kolesnik@sbcglobal.net> wrote in message
news:11usc.273$T87.109@newssvr24.news.prodigy.com...
> There are no stupid questions about reflected power only stupid me asking
> and I'm still stupid on the question I assume you're referring to..
>
> --
>
Just to clarify, was your question-what happens when there isn't a tuneable
output circuit that provides a match to what ever impedance actually exists
at the transmitter end of the transmission line?

2885. End effect, velocity propagation question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 18:36:57 UTC
From: tacticalschnapps@lycos.co.uk
Message-ID: <4fa857af.0405251036.4ce4a9cb@posting.google.com>
Source record: 94590

I know free space half wave dipole length in feet is 492/f mhz.
I also know 468/f mhz is for "antenna cross section...stray
capacitance...called end effect because the ends of the antenna are
made farther apart electrically than they are physically..." as laid
out in the "Practical Antenna Handbook 3rd edition p.138".

This is suspiciously close to the 95% velocity propagation of parallel
line.
My question is, for a given coax with 66% velocity propagation, is the
formula 66% of 492 (325/f) or
66% of 468 (309/f)?

Thanks in advance

2886. Re: Reflected power ? new thread, new beginning, kinda ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 19:16:36 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c9066k$ga7$1@newshost.mot.com>
Source record: 94592

I hate this reverse posting, so I'm changing.

First Henry (Thinks for the swell phone conversation) has the idea in basic form:

> Henry Kolesnik wrote:
>
> > [...snip...] "I know that any power not dissipated by an antenna is
> > reflected back to the
> > transmitter. Then the transmitter "reflects" this reflection back to
> > antenna, ad nauseum until its all gone.
> > ....I'm inclined to think it's a virtual open but I'm at a loss to
> > understand that and I wonder if someone has a good explanation or
analogy
> > and some math wouldn't hurt".

Hank uses the term "virtual open" a rather loose term but a good model, however, keep in mind that he is talking about a system with NO "matching device" as we call it, just a transmitter. He is also talking about the REVERSE DIRECTION where all the power gets reflected back to the load and we all live happily after. (the same concept applies for a matching device, as well)

Then in a longer version, Cecil quotes (see below), but he is referring to a matching device. He is also directing his attention to the forward direction, unlike Hank above, and he moves to the matching device's input. What the concept here is, concerns what the forward wave sees at the matching input so that there is no net reflected power. The concept is this:
One wave from the transmitter (call it wave "A") hits the matching device. Some makes it through toward the load and some is reflected back toward the Tx due to the matching device's weird impedance...HOWEVER, the wave coming from the load has some component which makes it through the matching section to the input (call this wave "B"). It is wave "A" abd wave B"B which must be equal in amplitude and 180 degrees out - therefore cencelling for a net wave back toward the Tx of null, naught, zip..all is happy in the world of ham radio

--
Steve N, K,9;d, c. i My email has no u's.

P.S. Get this MPT blockage out of your minds... The "maximum power therom" (ZL=Zs) ONLY applies to ONE special case, NOT all cases. That case is where the source's output power (or if you like current) capability is limited ONLY by the two resistances. That is, the case is when the source can put out all the power needed by these resistors and no other internal limit

dominates. A common circuit can be shown to give maximum power at other
than Zs=ZL (aparently violating the above referred-to therom). There are
things other than these resistances that limit the output power of a
practical source.... (see how long this thread goes.....

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b372ab_8@corp.newsgroups.com...
>
> Hank, Here's what happens at the match point in an amateur radio antenna
> system. Walter Maxwell himself references J. C. Slater's book.
>
> From _Microwave_Transmission_, by J. C. Slater: "We can get a better
> understanding of (matching) devices by considering reflections at
> discontinuities. This method is useful in considering any impedance-
> matching device, and we shall think of it first in connection with the
> ordinary quarter-wave transformer. The object of this transformer is
> to eliminate the reflection that would be present if the impedance
> Z1 were connected directly to Zt."
>
> The diagram is: Z1----1/4WL Z0----Zt where Z0 is a 1/4WL transformer
> section that matches Z1 to Zt.
>
> "The method of eliminating reflections is based on the interference
> between waves. Two waves half a wavelength apart are in opposite
> phases, and the sum of them, if their amplitudes are numerically
> equal, is zero. The fundamental principle behind the elimination of
> reflections is then to have each reflected wave canceled by another
> wave of equal amplitude and opposite phase. In order that this second
> wave may have traveled half a wavelength farther than the first, it is
> obvious that it must have gone a quarter wavelength farther up the line,
> and correspondingly a quarter of a wavelength back, before it meets the
> original reflected wave. In other words, two discontinuities in
characteristic
> impedance, of such magnitude as to give equal amplitudes of reflected
waves
> and spaced a quarter of a wavelength apart, will give no net reflection
> and hence will not introduce reflections into the line."
>
> Here's how to perform an experiment to answer your questions. The source
> (SGCL) is a Signal Generator equipped with a Circulator and Load. It puts
> out a constant 100 watts. All reflected power is dissipated in the
circulator
> load.
> very short
> 100W SGCL---50 ohm line---tuner----------450 ohm line------------Load
>
> Initially, the system is tuned for a match so there are no reflections
> on the 50 ohm line. Then the load is changed to 450 ohms. Assuming the
> load was not 450 ohms to start with, this will cause reflections to
> appear on the 50 ohm line. We can use an oscilloscope to measure the

> magnitude and phase of the voltage across the 50 ohm circulator load
> resistor. That's the reflected voltage. We can calculate the reflected
> current through the 50 ohm circulator load resistor. So now we have the
> component voltage and current reflected from the input to the tuner.
> We can reference the phase of the reflected voltage and current to
> the phase of the source voltage. Let's say the source voltage has a
> reference phase of zero degrees.
>
> Assume we measured a reflected voltage of 30 volts at 10 degrees and
> calculated a reflected current of 0.6 amps at 190 degrees. (Note that
> the reflected current is always 180 degrees out of phase with the
> reflected voltage.)
>
> Now switch the load from 450 ohms back to the original load. What
> happens at the tuner input to achieve a match is the superposition
> of two reflected waves. We know what the first one looks like so
> we deduce what the second one looks like.
>
> The first reflected wave, reflected from match point at the
> tuner input is:
>
> 30 volts at 10 degrees and 0.6 amps at 190 degrees
>
> The second reflected wave, returning from the load and reaching
> the match point at the tuner input is:
>
> 30 volts at 190 degrees and 0.6 amps at 10 degrees
>
> Adding those two voltages yields zero volts. Adding those two
> currents yields zero amps. Thus the match is accomplished.
>
> What the tuner does is shift the magnitude and phase of the voltage
> and current reflected from the load to cancel the reflection of the
> source wave that occurs at the input of the tuner.
>
> The reflected voltage flowing toward the source is canceled to zero
> through superposition of the two reflected voltage waves.
>
> The reflected current flowing toward the source is canceled to zero
> through superposition of the two reflected current waves.
>
> That's how all matching devices work according to J. C. Slater.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----

> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2887. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 19:23:16 UTC
From: tdonaly@aol.com
Message-ID: <20040525152316.17812.00001951@mb-m16.aol.com>
Source record: 94591

Cecil wrote,
>
>Ever measure the forward and reflected currents halfway into a
>shorted 1/4WL stub? How can currents be flowing unimpeded into
>and out of an infinite impedance?
>

In the case of a lossless, 1/4WL stub, (no such thing, except on this newsgroup) in the steady state you can disconnect the transmitter and the currents will still be there. Current doesn't flow, Cecil, charge flows. Current is just the rate of flow of charge, dQ/dt. In a 1/4WL stub, charge, and the fields associated with it, are in a state of oscillation. Over time, their average movement in space is zero. It's too bad you have to think of current
as like the water in a big river that has to flow from one place to another in order to exist. (That's wrong, too. Current in a river is the rate of flow of
water past a point, not the water itself.) Sloppy semantics sure screw up understanding.
73,
Tom Donaly, KA6RUH

2888. Re: Radio Conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 19:37:20 UTC
From: gonetopot@hotmail.com
Message-ID: <c907a2$ia1$1@newsg3.svr.pol.co.uk>
Source record: 94593
Cross-posted to:
rec.radio.cb,rec.radio.amateur.policy,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

you would have to make a special transverter box, and find room for it in
the rig..
To convert UHF to 11 meters and 11 meters to UHF
something like,,,
http://www.tentec.com/Xvertkit.HTM

2889. Re: End effect, velocity propagation question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 19:37:21 UTC
From: Bob Bob <bcnntp@optusnet.com.au>
Message-ID: <hsjco1-fqp.ln1@p400bob.lse.com.au>
Source record: 94597

Gee what are these "feet" things? <grin> (I use 300/f for free space - for metres)

Velocity factor in coax is vs free-space. If you are using these numbers for calculating tuned lengths keep in mind that the manufacturing tolerance for velocity factor is not real accurate and you should cut/tune with a GDO/TDR etc.

From my reading I have seen dipole end effect vary between 90 and 98%. Almost always a function of length/diameter ratio.

Cheers Bob VK2YQA

Tac wrote:
> I know free space half wave dipole length in feet is 492/f mhz.
> I also know 468/f mhz is for "antenna cross section...stray
> capacitance...called end effect because the ends of the antenna are
> made farther apart electrically than they are physically..." as laid
> out in the "Practical Antenna Handbook 3rd edition p.138".
>
> This is suspiciously close to the 95% velocity propagation of parallel
> line.
> My question is, for a given coax with 66% velocity propagation, is the
> formula 66% of 492 (325/f) or
> 66% of 468 (309/f)?
>
> Thanks in advance

2890. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 19:43:42 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <OlNsc.559$Ef5.375@newssvr24.news.prodigy.com>
Source record: 94594

Good points, my 30S-1 has load and tune still in it and the final a
3CX1500B is ceramic and can't be seen but it never lost it's Eimac stencil.
However my Collins 30L-1 was a different story. Once or twice I had 811As
with holes melted in their plate structure. They continued to work well and
I always thought this was from overdriving but now I'm not so sure because
it ran at the same high swr as the 30S-1. I used the 30L-1 in summer
because the air conditioner couldn't keep up with the heat generated by the
30S-1 so it was my winter amp.
I notice that Walt Maxwell's Reflections II was published by World Radio
whereas Reflections was by the ARRL. There is some disagreement on
"conjugate match' and probably other things between ARRL and Walt. So now I
have to wonder if the final tube is dissipative or non-dissipative for
reflections.

Looks like my new thread isn't working but I'm posting this to it just in
case since I don't really know the customary protocol on a long thread that
sometime digresses.

--
73
Hank WD5JFR
"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ois6b0lhf310elipk80o662k1tqsvuvlfe@4ax.com...
> On Tue, 25 May 2004 16:12:05 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
> >Before it came down my 20 meter antenna had a SWR approaching 20:1 and I
was
> >running a Collins 30S-1 and no tuner!. I did that for several years and
> >would be still doing if the roofers hadn't destroyed ~130 ft. dipole.
One
> >of these days after my back improves I'll put another one up.
> >
> Hi Hank,
>
> I used to teach this Collins equipment in the Navy. I presume yours
> had a finals tuning circuit still in it? Hard to imagine it
> otherwise.
>
> Tubes are different from transistors only by approaching the Source Z
> with an inverted ratio of transformation. Ever hear of plate
> resistance? It is literal resistance. Ever see a plate glow when
> under the stress of hi SWR? It is literal heat. The same heat is
> generated irrespective of it being explained by wave mechanics or
> lumped equivalent circuits. Choose the model you are comfortable
> with, and then tackle the SWR if you care about efficiency.

>
> If anything, tube sets prove the problem of reflected power through
> your ability to directly observe the heat generated and experience the
> cost of new finals tubes through their degraded life span. This stuff
> is all rote teaching; and my students were given practical tests to
> troubleshoot, tune, and repair against such scenarios.
>
> I've had hands-on experience with this topic both academically and at
> several benches - the sophistries that deny these points are amusing,
> but remain amateur scribblings.
>
> 73's
> Richard Clark, KB7QHC

2891. Re: Reflected power ? new thread, new beginning, kinda ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 19:43:52 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <XINsc.560$wf5.330@newssvr24.news.prodigy.com>
Source record: 94595

Richard Clark has some good points. My 30S-1 has load and tune still in it and the final a 3CX1500B is ceramic and can't be seen but it never lost it's Eimac stencil. However my Collins 30L-1 was a different story. Once or twice I had 811As with holes melted in their plate structure. They continued to work well and I always thought this was from overdriving but now I'm not so sure because it ran at the same high swr as the 30S-1. I used the 30L-1 in summer because the air conditioner couldn't keep up with the heat generated by the 30S-1 so it was my winter amp. I've seen 3-500Z and 4-1000 plates running red hot but I think it was from overdrive and not SWR but really wan't paying enough attention, I wish I had.
I notice that Walt Maxwell's Reflections II was published by World Radio whereas Reflections was by the ARRL. There is some disagreement on "conjugate match'" and probably other things between ARRL and Walt. So now I have to wonder if the final tube is dissipative or non-dissipative for my reflections and not Walts. Pun unavoidable.

Looks like my new thread isn't working but I'm posting this to it just in case since I don't really know the customary protocol on a long thread that sometime digresses.

--
73
Hank WD5JFR
"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message news:c9066k$ga7$1@newshost.mot.com...
> I hate this reverse posting, so I'm changing.
>
> First Henry (Thinks for the swell phone conversation) has the idea in basic
> form:
>
> > Henry Kolesnik wrote:
> >
> > > [...snip...] "I know that any power not dissipated by an antenna is
> > > reflected back to the
> > > transmitter. Then the transmitter "reflects" this reflection back to
> > > antenna, ad nauseum until its all gone.
> > > ....I'm inclined to think it's a virtual open but I'm at a loss to
> > > understand that and I wonder if someone has a good explanation or
> analogy
> > > and some math wouldn't hurt".
>
> Hank uses the term "virtual open" a rather loose term but a good model,
> however, keep in mind that he is talking about a system with NO "matching
> device" as we call it, just a transmitter. He is also talking about the

> REVERSE DIRECTION where all the power gets reflected back to the load and
we
> all live happily after. (the same concept applies for a matching device,
as
> well)
>
> Then in a longer version, Cecil quotes (see below), but he is referring to
a
> matching device. He is also directing his attention to the forward
> direction, unlike Hank above, and he moves to the matching device's input.
> What the concept here is, concerns what the forward wave sees at the
> matching input so that there is no net reflected power. The concept is
> this:
> One wave from the transmitter (call it wave "A") hits the matching device.
> Some makes it through toward the load and some is reflected back toward
the
> Tx due to the matching device's weird impedance...HOWEVER, the wave coming
> from the load has some component which makes it through the matching
section
> to the input (call this wave "B"). It is wave "A" abd wave B"B which must
> be equal in amplitude and 180 degrees out - therefore cencelling for a net
> wave back toward the Tx of null, naught, zip..all is happy in the world of
> ham radio
>
> --
> Steve N, K,9;d, c. i My email has no u's.
>
> P.S. Get this MPT blockage out of your minds... The "maximum power therom"
> (ZL=Zs) ONLY applies to ONE special case, NOT all cases. That case is
where
> the source's output power (or if you like current) capability is limited
> ONLY by the two resistances. That is, the case is when the source can put
> out all the power needed by these resistors and no other internal limit
> dominates. A common circuit can be shown to give maximum power at other
> than Zs=ZL (aparently violating the above referred-to therom). There are
> things other than these resistances that limit the output power of a
> practical source.... (see how long this thread goes.....
>
>
>
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> news:40b372ab_8@corp.newsgroups.com...
> >
> > Hank, Here's what happens at the match point in an amateur radio antenna
> > system. Walter Maxwell himself references J. C. Slater's book.
> >
> > From _Microwave_Transmission_, by J. C. Slater: "We can get a better
> > understanding of (matching) devices by considering reflections at
> > discontinuities. This method is useful in considering any impedance-
> > matching device, and we shall think of it first in connection with the

> > ordinary quarter-wave transformer. The object of this transformer is
> > to eliminate the reflection that would be present if the impedance
> > Z1 were connected directly to Zt."
> >
> > The diagram is: Z1----1/4WL Z0----Zt where Z0 is a 1/4WL transformer
> > section that matches Z1 to Zt.
> >
> > "The method of eliminating reflections is based on the interference
> > between waves. Two waves half a wavelength apart are in opposite
> > phases, and the sum of them, if their amplitudes are numerically
> > equal, is zero. The fundamental principle behind the elimination of
> > reflections is then to have each reflected wave canceled by another
> > wave of equal amplitude and opposite phase. In order that this second
> > wave may have traveled half a wavelength farther than the first, it is
> > obvious that it must have gone a quarter wavelength farther up the line,
> > and correspondingly a quarter of a wavelength back, before it meets the
> > original reflected wave. In other words, two discontinuities in
> characteristic
> > impedance, of such magnitude as to give equal amplitudes of reflected
> waves
> > and spaced a quarter of a wavelength apart, will give no net reflection
> > and hence will not introduce reflections into the line."
> >
> > Here's how to perform an experiment to answer your questions. The source
> > (SGCL) is a Signal Generator equipped with a Circulator and Load. It
puts
> > out a constant 100 watts. All reflected power is dissipated in the
> circulator
> > load.
> > very short
> > 100W SGCL---50 ohm line---tuner----------450 ohm line------------Load
> >
> > Initially, the system is tuned for a match so there are no reflections
> > on the 50 ohm line. Then the load is changed to 450 ohms. Assuming the
> > load was not 450 ohms to start with, this will cause reflections to
> > appear on the 50 ohm line. We can use an oscilloscope to measure the
> > magnitude and phase of the voltage across the 50 ohm circulator load
> > resistor. That's the reflected voltage. We can calculate the reflected
> > current through the 50 ohm circulator load resistor. So now we have the
> > component voltage and current reflected from the input to the tuner.
> > We can reference the phase of the reflected voltage and current to
> > the phase of the source voltage. Let's say the source voltage has a
> > reference phase of zero degrees.
> >
> > Assume we measured a reflected voltage of 30 volts at 10 degrees and
> > calculated a reflected current of 0.6 amps at 190 degrees. (Note that
> > the reflected current is always 180 degrees out of phase with the
> > reflected voltage.)
> >
> > Now switch the load from 450 ohms back to the original load. What

> > happens at the tuner input to achieve a match is the superposition
> > of two reflected waves. We know what the first one looks like so
> > we deduce what the second one looks like.
> >
> > The first reflected wave, reflected from match point at the
> > tuner input is:
> >
> > 30 volts at 10 degrees and 0.6 amps at 190 degrees
> >
> > The second reflected wave, returning from the load and reaching
> > the match point at the tuner input is:
> >
> > 30 volts at 190 degrees and 0.6 amps at 10 degrees
> >
> > Adding those two voltages yields zero volts. Adding those two
> > currents yields zero amps. Thus the match is accomplished.
> >
> > What the tuner does is shift the magnitude and phase of the voltage
> > and current reflected from the load to cancel the reflection of the
> > source wave that occurs at the input of the tuner.
> >
> > The reflected voltage flowing toward the source is canceled to zero
> > through superposition of the two reflected voltage waves.
> >
> > The reflected current flowing toward the source is canceled to zero
> > through superposition of the two reflected current waves.
> >
> > That's how all matching devices work according to J. C. Slater.
> > --
> > 73, Cecil http://www.qsl.net/w5dxp
> >
> >
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 100,000 Newsgroups - 19 Different Servers! =-----
>
>

2892. Re: Tx Source Impedance & Load Reflections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 19:44:40 UTC
From: tdonaly@aol.com
Message-ID: <20040525154440.17812.00001953@mb-m16.aol.com>
Source record: 94596

Richard Fry wrote,
>
>TWIMC:
>
>OK, argue amongst yourselves. I have tried to post some real world data and
>experience here, using a respectful tone. What I read back is mostly filled
>with haughtiness, invective and intimidation.
>
>Back to lurk mode (if that).
>
>Richard Fry
>
>

That's a valid criticism, Richard. Some of these posts - including my own -
are more noteworthy for their sciolism than for their content and
clarity.
73,
Tom Donaly, KA6RUH

2893. Re: Reflected power ? new thread, new beginning, kinda ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 20:08:29 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b3a89e$1_6@corp.newsgroups.com>
Source record: 94598

Steve Nosko wrote:
> One wave from the transmitter (call it wave "A") hits the matching device.
> Some makes it through toward the load and some is reflected back toward the
> Tx due to the matching device's weird impedance...HOWEVER, the wave coming
> from the load has some component which makes it through the matching section
> to the input (call this wave "B"). It is wave "A" abd wave B"B which must
> be equal in amplitude and 180 degrees out - therefore cencelling for a net
> wave back toward the Tx of null, naught, zip..all is happy in the world of
> ham radio

Yep, you got it! J. C. Slater stated such in _Microwave_Transmissions_
before most present day hams were born. I'm glad you understand.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2894. Re: How does this lightning detector antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 20:21:33 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <hVNsc.568$5i5.189@newssvr24.news.prodigy.com>
Source record: 94599

QST had an article on building a Storm Tracker in the late 50s or early 60s.

--
73
Hank WD5JFR
<sagobog-no-spam@cotse.net> wrote in message
news:c2Fnb2JvZw==.df7dc74f4bf770412c274c3f1a0d5a90@1085498663.nulluser.com...
> Boltek makes a very nice lightning detector system
> http://www.boltek.com/stracker.htm displaying both bearing and distance
> of lightning strikes. I understand how you can do this with a couple of
> nice crossed loops but the antenna for this system is a little plastic
> black box 3" high by 2" by 1-1/2" connected to the main unit with Cat
> 5. Does anyone know, or care to guess, what's in the box?
>
>
>
>

2895. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 20:23:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b3ac0c$1_6@corp.newsgroups.com>
Source record: 94600

Tdonaly wrote:
> In the case of a lossless, 1/4WL stub, (no such thing, except on this
> newsgroup) in the steady state you can disconnect the transmitter and
> the currents will still be there.

Since that configuration doesn't exist in reality, only God
can cause what you are asserting. Why am I not surprised that
you need a supernatural being to prove your arguments?

> Current doesn't flow, Cecil, charge flows.

:-) :-) Having to resort to trivial arguments is the sure sign
of a loser. :-) :-)
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2896. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 20:40:29 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <1bOsc.571$sr5.455@newssvr24.news.prodigy.com>
Source record: 94601

No, a final with a regular pi network.

--
73
Hank WD5JFR
"WB2JKX" <mycall-N0SPAM@arrl.net> wrote in message
news:WPLsc.27187$fF3.698279@bgtnsc05-news.ops.worldnet.att.net...
>
> Henry Kolesnik <kolesnik@sbcglobal.net> wrote in message
> news:11usc.273$T87.109@newssvr24.news.prodigy.com...
> > There are no stupid questions about reflected power only stupid me
asking
> > and I'm still stupid on the question I assume you're referring to..
> >
> > --
> >
> Just to clarify, was your question-what happens when there isn't a
tuneable
> output circuit that provides a match to what ever impedance actually
exists
> at the transmitter end of the transmission line?
>
>
>

2897. Re: End effect, velocity propagation question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 20:42:56 UTC
From: richardharrison@webtv.net
Message-ID: <16810-40B3AFD0-627@storefull-3251.bay.webtv.net>
Source record: 94602

Tac wrote:
"My question is, for a given coax with 66% velocity propagation, is the formula 66% of 492 (325/f) or 66% of 468 (309/f)?"

VF, velocity factor, is % of the free-space velocity of a radio wave which is identical to that of light.

Velocity of light is about 300,000,000 m/sec.

Wavelength in free-space is:

WL= 300,000,000 / f meters

There are about 3.28 feet in a meter.

Polyethylene insulated flexible coax cables usually have a velocity of propagation of about 66% that of free-space. Velocity depends on cable dimensions as well as its insulating material and distribution.

In my ARRL Antenna Book, the length in feet for a 1/2-wave dipole is given as 468/f (MHz).
As 1/2-wave= 150/f (MHz) x 3.28 ft/mtr=492/f (MHz), it is clear the handbook formula has been discounted by 5% for "end effect", which is actually a function of how fat the wire used is, and relates to wave velocity reduction.

Best regards, Richard Harrison, KB5WZI

2898. Re: Yaesu FT767GX PSU board wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 20:55:43 UTC
From: mike <mike@nospam.co.uk>
Message-ID: <rgPsc.355$3s5.354@newsfe4-win>
Source record: 94603
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

is it really that stuffed?

mike

"Smog" <james@burrill.co.uk> wrote in message
news:c8v6gkjdu1@news6.svr.pol.co.uk...
> Yaesu FT767GX PSU board wanted
> Thanks
>
> --
>
> Jim Burrill (Smogthemog)
> M1BMW
> Kiteaholic
>
> www.jbphonetech.info
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.690 / Virus Database: 451 - Release Date: 22/05/2004
>
>

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Version: 6.0.690 / Virus Database: 451 - Release Date: 22/05/2004

2899. Re: End effect, velocity propagation question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 21:00:04 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10b7cuo3m6bi420@corp.supernews.com>
Source record: 94604

A half wavelength in a transmission line with velocity factor of 66% is approximately 0.66 * 492/f(MHz).

Here's why. Wavelength = v / f where v is the velocity of electromagnetic waves and f is the frequency in Hz. v = c * vf where c is the velocity of light in free space and vf is the velocity factor. The velocity of light in free space (c) is approximately 984,000,000 feet/second. So one wavelength, in feet, in any medium is approximately 984,000,000 * vf / f(Hz), or 984 * vf / f(MHz). A half wavelength is then half of this, or about 492 * vf / f(MHz) feet.

A resonant "half wave" antenna is always shorter than a free-space half wavelength for a variety of reasons. Its actual length depends on wire diameter, end insulators, the effect of ground, and so forth. 468/f is a useful approximation that's usually in the ballpark but seldom exactly correct.

Roy Lewallen, W7EL

Tac wrote:
> I know free space half wave dipole length in feet is 492/f mhz.
> I also know 468/f mhz is for "antenna cross section...stray
> capacitance...called end effect because the ends of the antenna are
> made farther apart electrically than they are physically..." as laid
> out in the "Practical Antenna Handbook 3rd edition p.138".
>
> This is suspiciously close to the 95% velocity propagation of parallel
> line.
> My question is, for a given coax with 66% velocity propagation, is the
> formula 66% of 492 (325/f) or
> 66% of 468 (309/f)?
>
> Thanks in advance

2900. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 21:57:03 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <46f7b0dq2vnljendibesklahc8anfgd3um@4ax.com>
Source record: 94605

On Tue, 25 May 2004 19:43:42 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>Good points, my 30S-1 has load and tune still in it and the final a
>3CX1500B is ceramic and can't be seen but it never lost it's Eimac stencil.
>However my Collins 30L-1 was a different story. Once or twice I had 811As
>with holes melted in their plate structure. They continued to work well and
>I always thought this was from overdriving but now I'm not so sure because
>it ran at the same high swr as the 30S-1. I used the 30L-1 in summer
>because the air conditioner couldn't keep up with the heat generated by the
>30S-1 so it was my winter amp.
>I notice that Walt Maxwell's Reflections II was published by World Radio
>whereas Reflections was by the ARRL. There is some disagreement on
>"conjugate match' and probably other things between ARRL and Walt. So now I
>have to wonder if the final tube is dissipative or non-dissipative for
>reflections.
>
>Looks like my new thread isn't working but I'm posting this to it just in
>case since I don't really know the customary protocol on a long thread that
>sometime digresses.
>

Hi Hank,

Those pinholes (or larger) that you found in the plates occurred by a
very fascinating display of plasma. If you are really putting the
hurts to it, you will observe a football shaped plasma between the
plate and the cathode where the point terminates (and penetrates) in
the enlarging ruby glow of the plate. This is visible in some tubes,
not others, depending of course on tube structure. I've had students
point out tubes still operating with the glass envelope completely
melted (or jelled rather) and collapsed, hugging the structure!

Hence you have confirmed the dissipation of return power directly -
all mumbling aside from theorists who describe it as virtual. ;-)

As for Walt's publishing house shift, I don't recall him having any
technical issue, but I let that go as he found another outlet and got
to say what he considered was important. I proofed a number of his
appendices and we corresponded quite often about our differences. To
his credit, although I dispute his stand, he maintains an open mind on
the subject and offers he will look into my experiments that reveal
this. He has already measured the value of 50 Ohms, the point of
departure between us is whether this same value absorbs power.

So, you see, you get numbers from those that sit down to the bench and do it, you get pixie dust from the rest.

And as for new thread or old, this topic has run to 600+ postings in years past; so opening it as a new topic is fine to allow news readers (like mine) from pushing the indentations out to the event horizon. This post is not so deeply nested though.

73's
Richard Clark, KB7QHC

2901. Re: Yaesu FT767GX PSU board wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 22:00:27 UTC
From: Smog <james@burrill.co.uk>
Message-ID: <c90flokgu1@news6.svr.pol.co.uk>
Source record: 94606
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

www.jbphonetech.info
"mike" <mike@nospam.co.uk> wrote in message
news:rgPsc.355$3s5.354@newsfe4-win...
> is it really that stuffed?
>
> mike
>

Its "tripping" Mike ? Ive studied the schematics and its a little beyond me, normally |I can suss most faults out but this one is a right pig. I have totally disconnected the PSU from the rest of the radio and on switch on it will just sit there and produce 13.5 and 24v but you put a load on the 24v output and it seems to trip and you have to disconnect the mains and leave it for a while or discharge the caps until it will work again. In the rig, with it all wired correctly, you wind up the power and again it trips and you have to leave it to "reset" ???
Can anyone shed any light ?
If anyone wishes me to send them a file of the PSU schematic then please let me know.
Thanks.
--

Jim Burrill (Smogthemog)
M1BMW
Kiteaholic

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2902. Re: How does this lightning detector antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 22:02:18 UTC
From: Allen Windhorn <Allen.Windhorn@LSUSA.com>
Message-ID: <uhdu4i2u7.fsf@LSUSA.com>
Source record: 94607

"Henry Kolesnik" <kolesnik@sbcglobal.net> writes:

> QST had an article on building a Storm Tracker in the late 50s or early 60s.

There was one more recently -- last couple years or so -- I think.

Allen
--
Allen Windhorn (507) 345-2782 FAX (507) 345-2805
Kato Engineering (Though I do not speak for Kato)
P.O. Box 8447, N. Mankato, MN 56002
Allen.Windhorn@LSUSA.com

2903. Re: Yaesu FT767GX PSU board wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 22:07:22 UTC
From: mike <mike@nospam.co.uk>
Message-ID: <CjQsc.371$3s5.15@newsfe4-win>
Source record: 94608
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

send it here
mike-g7bnf[at]ntlworld.com
change [at] for @

mike

"Smog" <james@burrill.co.uk> wrote in message
news:c90flokgu1@news6.svr.pol.co.uk...
> www.jbphonetech.info
> "mike" <mike@nospam.co.uk> wrote in message
> news:rgPsc.355$3s5.354@newsfe4-win...
> > is it really that stuffed?
> >
> > mike
> >
>
> Its "tripping" Mike ? Ive studied the schematics and its a little beyond
> me, normally |I can suss most faults out but this one is a right pig. I
> have totally disconnected the PSU from the rest of the radio and on switch
> on it will just sit there and produce 13.5 and 24v but you put a load on
the
> 24v output and it seems to trip and you have to disconnect the mains and
> leave it for a while or discharge the caps until it will work again. In
the
> rig, with it all wired correctly, you wind up the power and again it trips
> and you have to leave it to "reset" ???
> Can anyone shed any light ?
> If anyone wishes me to send them a file of the PSU schematic then please
let
> me know.
> Thanks.
> --
>
> Jim Burrill (Smogthemog)
> M1BMW
> Kiteaholic
>
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>
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>
>

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Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 22/05/2004

2904. Re: How does this lightning detector antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 22:32:40 UTC
From: Dave <noone@nowhere.com>
Message-ID: <udSdnd6P5qkMVC7dRVn-uA@crocker.com>
Source record: 94609

<sagobog-no-spam@cotse.net> wrote in message
news:c2Fnb2JvZw==.df7dc74f4bf770412c274c3f1a0d5a90@1085498663.nulluser.com...
> Boltek makes a very nice lightning detector system
> http://www.boltek.com/stracker.htm displaying both bearing and distance
> of lightning strikes. I understand how you can do this with a couple of
> nice crossed loops but the antenna for this system is a little plastic
> black box 3" high by 2" by 1-1/2" connected to the main unit with Cat
> 5. Does anyone know, or care to guess, what's in the box?

well, the direction could be by a small pair of crossed loops, plus a
polarity sensing element to remove the directional ambiguity. add a small
flux sensing element to determine the orientation of the sensor and there
you can get a magnetic bearing. the polarity sensing element can also
generate a peak amplitude signal which can be used to make a very rough
estimate of distance. add a couple digitizers and a fancy map program and
you have it made.

2905. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 22:32:47 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <jQPsc.806$ja5.72@newssvr22.news.prodigy.com>
Source record: 94610

The30L-1 811A holes were dime size and I wish I knew then what I know now
because I would have made some comparisons. I would have set the drive to
get the tubes red hot on my antenna with SWR <20 and then using same drive
and Ip see what happened loading into a 50 ohm dummy and running. Perhaps
someone has done this and can report the results.
tnx

--
73
Hank WD5JFR
"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:46f7b0dq2vnljendibesklahc8anfgd3um@4ax.com...
> On Tue, 25 May 2004 19:43:42 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
>
> >Good points, my 30S-1 has load and tune still in it and the final a
> >3CX1500B is ceramic and can't be seen but it never lost it's Eimac
stencil.
> >However my Collins 30L-1 was a different story. Once or twice I had
811As
> >with holes melted in their plate structure. They continued to work well
and
> >I always thought this was from overdriving but now I'm not so sure
because
> >it ran at the same high swr as the 30S-1. I used the 30L-1 in summer
> >because the air conditioner couldn't keep up with the heat generated by
the
> >30S-1 so it was my winter amp.
> >I notice that Walt Maxwell's Reflections II was published by World Radio
> >whereas Reflections was by the ARRL. There is some disagreement on
> >"conjugate match' and probably other things between ARRL and Walt. So
now I
> >have to wonder if the final tube is dissipative or non-dissipative for
> >reflections.
> >
> >Looks like my new thread isn't working but I'm posting this to it just in
> >case since I don't really know the customary protocol on a long thread
that
> >sometime digresses.
> >
>
> Hi Hank,
>
> Those pinholes (or larger) that you found in the plates occurred by a

> very fascinating display of plasma. If you are really putting the
> hurts to it, you will observe a football shaped plasma between the
> plate and the cathode where the point terminates (and penetrates) in
> the enlarging ruby glow of the plate. This is visible in some tubes,
> not others, depending of course on tube structure. I've had students
> point out tubes still operating with the glass envelope completely
> melted (or jelled rather) and collapsed, hugging the structure!
>
> Hence you have confirmed the dissipation of return power directly -
> all mumbling aside from theorists who describe it as virtual. ;-)
>
> As for Walt's publishing house shift, I don't recall him having any
> technical issue, but I let that go as he found another outlet and got
> to say what he considered was important. I proofed a number of his
> appendices and we corresponded quite often about our differences. To
> his credit, although I dispute his stand, he maintains an open mind on
> the subject and offers he will look into my experiments that reveal
> this. He has already measured the value of 50 Ohms, the point of
> departure between us is whether this same value absorbs power.
>
> So, you see, you get numbers from those that sit down to the bench and
> do it, you get pixie dust from the rest.
>
> And as for new thread or old, this topic has run to 600+ postings in
> years past; so opening it as a new topic is fine to allow news readers
> (like mine) from pushing the indentations out to the event horizon.
> This post is not so deeply nested though.
>
> 73's
> Richard Clark, KB7QHC

2906. Re: Reflected power ? new thread, new beginning, kinda ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 22:45:12 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c90idp$il6$1@newshost.mot.com>
Source record: 94613

And I didn't read any of the stuff any of you quote from. Just using a solid understanding of fundamentals and applying them correctly.

We'll see whom else (dis)agrees...

Thanks for the stimulating subject. Gets the remainder of the gray matter really warm...
73, Steve

--
Steve N, K,9;d, c. i My email has no u's.

No single raindrop believes it is responsible for the flood.

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:40b3a89e$1_6@corp.newsgroups.com...
> Steve Nosko wrote:
> > One wave from the transmitter (call it wave "A") hits the matching device.
> > Some makes it through toward the load and some is reflected back toward the
> > Tx due to the matching device's weird impedance...HOWEVER, the wave coming
> > from the load has some component which makes it through the matching section
> > to the input (call this wave "B"). It is wave "A" abd wave B"B which must
> > be equal in amplitude and 180 degrees out - therefore cencelling for a net
> > wave back toward the Tx of null, naught, zip..all is happy in the world of
> > ham radio
>
> Yep, you got it! J. C. Slater stated such in _Microwave_Transmissions_
> before most present day hams were born. I'm glad you understand.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2907. Re: How does this lightning detector antenna work?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 22:46:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jrg7b0lbdms2b092se38p3a7to9bha3ggj@4ax.com>
Source record: 94611

On Tue, 25 May 2004 11:24:23 -0400 (EDT), <sagobog-no-spam@cotse.net>
wrote:

>Boltek makes a very nice lightning detector system
>http://www.boltek.com/stracker.htm displaying both bearing and distance
>of lightning strikes. I understand how you can do this with a couple of
>nice crossed loops but the antenna for this system is a little plastic
>black box 3" high by 2" by 1-1/2" connected to the main unit with Cat
>5. Does anyone know, or care to guess, what's in the box?

Hi OM,

A simple design would be to connect each loop into the vertical and
horizontal channels of an O'Scope (one loop replacing the Time Base).

When you do this with signal sources, you get Lissajou patterns. Same
thing, more or less, when you get a lightning strike. The lobe of
excitation (an elongated loop) will point in the relative direction of
the strike (once you calibrate it, and consider you could be off by
180ï¿½). The larger the loop, the closer the strike, so there is an
inverse relationship to consider too.

This was a subject of a Popular Science article in the 60s.

73's
Richard Clark, KB7QHC

2908. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 22:51:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3bj7b0tuch227qmb1rkkh250hgru59kefi@4ax.com>
Source record: 94612

On Tue, 25 May 2004 22:32:47 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>The30L-1 811A holes were dime size and I wish I knew then what I know now
>because I would have made some comparisons. I would have set the drive to
>get the tubes red hot on my antenna with SWR <20 and then using same drive
>and Ip see what happened loading into a 50 ohm dummy and running. Perhaps
>someone has done this and can report the results.
>tnx
>

Hi Hank,

A little follow-on, if you will. I presume you tuned into the load
first before switching to the antenna. How did you determine the SWR?
Were you driving a twin lead transmission line going to your
mismatched antenna, or a coax?

73's
Richard Clark, KB7QHC

2909. Re: Conjugate matching and my funky VSWR meter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 22:59:08 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c90j7uiqb1@newshost.mot.com>
Source record: 94614

Comment imbedded:

"Dave" <noone@nowhere.com> wrote in message
news:-e-dnecv786bGC3dRVn-vA@crocker.com...
> ok, bonzo, i'll bite on the troll bait. ...
>
> "Lord Snooty" <bonzo@dog.com> wrote in message
> news:aFZrc.6955$be.4189@newsread2.news.pas.earthlink.net...
> > ...RF power amp feeding directly into a VSWR meter,
> > ...into a load consisting of a carbon resistor and a variable
> > capacitor rigged in series. The meter connects to the load via about a
> foot of 50 ohm coax. The frequency is between 1 and 10 MHz.
> > Model the source impedance as Zs = R + jX, and the load impedance as Zl
=
> r +
> > jx (or use phasors if you prefer :).
> > The following two statements are true:
> > 1) The power dissipated in the load (r) is maximised when x = -X
> (so-called
> > "conjugate matching"), whatever the value of (r).
>
> wrong. you must transform the R+jX along the transmission line to get
back
> to the load seen by the source. you stipulate a low frequency and short
> line, so you are close anyway.

The "transform along the coax" part is correct, but the "power is
maximised" part can be VERY misleading folks.

P.S. Get this MPT theorm blockage out of your minds... It is a synthetic
restriction.
The "maximum power therom" (ZL=Zs) ONLY applies to ONE special case, NOT
all cases. That case is where the source's output power (or if you like
current) capability is limited ONLY by the two resistances. That is, the
case is when the source can put out all the power needed by these resistors
and no other internal limit dominates. A common circuit can be shown to
give maximum power at other than Zs=ZL (aparently violating the above
referred-to therom). There are things other than these resistances that
limit the output power of a
practical source.... (see how long this thread goes.....

>
> > 2) The classical VSWR is minimised (zero "reflected power") when x = +X,
> > whatever the value of (r).
>

> doubly wrong. vswr is on a cable and is independent of the source.

Without plodding through the rest, it appears Dave has a handle on the
error.

--
Steve N, K,9;d, c. i My email has no u's.

> it
> knows nothing of R+jX only the characteristic impedance of the cable. all
> following calculations are wrong for this reason alone.
>
> >
> > However, my VSWR meter, whch is a conventional 2-diode bridge and short
> > transmission line, indicates that minimum indicated VSWR
> > corresponds to max power dissipated in (r).!! (i.e. at conjugate match,
> and
> > NOT when reflected power is zero).
> >
> > The equation normally used for VSWR is
> > VSWR = ABS((1 + |p|) / (1 - |p|))
> > where
> > p = (Zl - Zs) / (Zl + Zs)
>
> wrong again, the impedance used must be that of the cable not of the
source.
> its not worth commenting further until you understand this.
>
> > and p is a measure of the amount of power reflected back to the source,
> called
> > the "voltage reflection coefficient"
> >
> > I plotted something I call "conjugate VSWR" or VSWR*. which is the same
> > expression as above, but with p defined as
> > p = (Zl - Zs*) / (Zl + Zs)
> > where Zs* indicates the complex conjugate of Zs.
> > and the behaviour of this VSWR* thingie absolutely matches what I see on
> my
> > meter. Aye, there's the rub.
> >
> > Some points to note
> > a) Classical VSWR shows NO minimum for all r, when x has the opposite
sign
> to
> > X
> > b) VSWR* always has a minimum at the same r-value which causes maximum
> power
> > to be dissipated in r, whatever the value of x.
> >
> > Again, I flat don't understand how my VSWR meter can indicate VSWR* when
I

> > know it should indicate VSWR.
> >
> > Here are a couple of links to flesh out the theory.
> >
> > 1. Wade through this at your peril - it's you lot fighting abou this
issue
> and
> > is VERY long
> >
>
http://www.ibiblio.org/pub/academic/agriculture/agronomy/ham/ANTENNAS/20030831.ant
> >
> > 2. This is much more succint - cut to the chase on p47
> >
>
http://my.ece.ucsb.edu/yorklab/Useful%20Stuff/Tutorials/RFPower_Meas%20AN64-1B.pdf
> >
> > Best,
> > Andrew
> >
> >
>
>

2910. Re: 1/4 wave vertical vs. loaded vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 23:26:31 UTC
From: "H. Adam Stevens" <hstevens@totalaccessNOSPAM.net>
Message-ID: <10b7lsrae5nqa59@corp.supernews.com>
Source record: 94615

"Dale Parfitt" <par@parelectronics.com> wrote in message
news:XgGsc.24750$ZQ.22955@nwrddc03.gnilink.net...
>
> "Dave" <Devarim@hotmail.com> wrote in message
> news:fcc11758cff1495eeaba32353cf1e07f@news.meganetnews.com...
> > Hi all,
> >
> > I'm considering putting up a 33' vertical - just 3 sections of Rat Shack
> > mast (solidly bolted for continuity) plus a 3+/- foot 'adjustable' part
> > on the bottom to 'trim' the length. Then a bunch of in-ground radials.
> > 40m is my only 'serious' band. 15 meters should be a bonus, right?
> > Or not?
> >
> > Would this work better than my 4BTV (which I'll keep for 20 and 10)?
> > Or would the improvement be so insignificant as to not be worth all
> > the bother of building the new antenna?
> >
> > Thanks
> >
> > Dave WB7AWK
> >
> > Should be fine on 40M. Although the match might be decent on 15M, the
high
> takeoff angle will not be good for 15M DX.
>
> Dale W4OP
>
I use a Fluidmotion BiggIR vertical on a 3500 ft^2 aluminum roof. The house
is on a hill in the country.
Works great on 40. I really like it. The DX at 3AM (that is just not there
on a dipole) is LOUD.
I can use it as a 3/4 or 1/4 on 15 and can't tell much difference.
Sometimes one is better, sometimes the other. Propagation can be complex.
Nice to be able to push a button and see which is best.
73
H.
NQ5H

2911. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 23:43:37 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B3DA29.9931A7C8@uci.edu>
Source record: 94616

Ed Price wrote:
> > By definition, reflected energy dissipated in the source was never
> > generated in the first place.
> > --
> > 73, Cecil http://www.qsl.net/w5dxp
>
> That's not a very good definition.
> Would you say that a rock, thrown vertically, never was thrown just because
> it returned to hit you on the head?
>
> Ed
> wb6wsn

Electromagnetic waves can cancel, but rocks can't. Could that maybe
make a difference?

73, Jim AC6XG

2912. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 23:52:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7vm7b0lcb4q31crmpk379lhnetbea59str@4ax.com>
Source record: 94617

On Tue, 25 May 2004 16:43:37 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>> Would you say that a rock, thrown vertically, never was thrown just because
>> it returned to hit you on the head?
>>
>> Ed
>> wb6wsn
>
>Electromagnetic waves can cancel, but rocks can't. Could that maybe
>make a difference?

Hi Jim,

This is like mistaking electrons and charge displacement. Sound like
Ed described two rocks hitting with an inelastic collision which
results in power dissipation.

73's
Richard Clark, KB7QHC

2913. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-25 23:57:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B3DD5B.99400254@uci.edu>
Source record: 94618

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > Cecil Moore wrote:
> >>Any energy passing a point *is* power,
> >>by IEEE definition.
> >
> > That's an equality, not a definition.
>
> No, it is from the IEEE Dictionary.

The IEEE Dictionary shows the relationship between energy passing a point and the equivalent in units of power. That is a fact.

> There is a real world experiment that you can perform to
> prove your concepts are incorrect.
>
> TV XMTR--tuner----2 uS long 600 ohm line---75 ohm TV RCVR
>
> The first ghost will occur 4 uS after the primary image.
> This can only be explained by part of the energy in the
> primary signal changing direction and momentum at the RCVR
> and making a round trip to the tuner and back to the RCVR.
> In order to make that round trip, the energy in the signal
> had to change direction and momentum at the tuner. (There are
> no reflections between the XMTR and the tuner.)
>
> Likewise, the second ghost will occur 8 uS after the primary
> image, indicating four reversals of direction and momentum
> of the energy contained in the second ghost.

Proving that reflections actually exist, and that when all you have is a hammer, everything looks like a nail. Are you trying to prove something, or disprove it with your ghost story? You're not generating a clear picture. ;-)

73, Jim AC6XG

2914. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:01:31 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b3de23$0$433$5cbedd26@news.real-time.com>
Source record: 94619

Richard Clark wrote:

> On Tue, 25 May 2004 07:27:03 -0500, "Richard Fry" <rfry@adams.net>
> wrote:
>
>>REALITY CHECK: If tx source Z really was 50 ohms, a tx connected to a 50
>>ohm load would lose 1/2 of the RF power it generates to that internal Z.
>
>
> Dear Richard,
>
> This is the time-honored misreading and misapplication of Thevenin's
> theorem posed by Edison to confound investors in Westinghouse's AC
> generation plants. Look at the ratio of DC to AC power plants
> constructed in the past century to find the poor accuracy of your
> reading.
>
> 73's
> Richard Clark, KB7QHC

Boy, I'm gonna have to try and find my old EE5xx Non-Linear Transistor Design notebook. I doubt I could translate it into words for this section of the thread, but it is incredibly applicable.

I took it not knowing what it really was - RF amplifiers, tank circuits and matching circuits of every flavor, and how much DC power was used and RF delivered at the primary freq and all harmonics. He also covered doublers, triplers, phase locked loops (from scratch), the whole 9 yards. I learned more in that one class than in any other 5 I took. The professor was fantastic and very very tough. It was also the most demanding course I ever took.

tom
K0TAR

2915. Re: Reflected power ? new thread, new beginning, kinda ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:02:41 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <B8Rsc.826$TH5.174@newssvr22.news.prodigy.com>
Source record: 94620

The30L-1 811A holes were dime size and I wish I knew then what I know now
because I would have made some comparisons. I would have set the drive to
get the tubes red hot on my antenna with SWR <20 and then using same drive
and Ip see what happened loading into a 50 ohm dummy and running. Perhaps
someone has done this and can report the results.
tnx

--
73
Hank WD5JFR
"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:c90idp$il6$1@newshost.mot.com...
>
>
> And I didn't read any of the stuff any of you quote from. Just using a
> solid understanding of fundamentals and applying them correctly.
>
> We'll see whom else (dis)agrees...
>
> Thanks for the stimulating subject. Gets the remainder of the gray matter
> really warm...
> 73, Steve
>
> --
> Steve N, K,9;d, c. i My email has no u's.
>
> No single raindrop believes it is responsible for the flood.
>
>
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> news:40b3a89e$1_6@corp.newsgroups.com...
> > Steve Nosko wrote:
> > > One wave from the transmitter (call it wave "A") hits the matching
> device.
> > > Some makes it through toward the load and some is reflected back
toward
> the
> > > Tx due to the matching device's weird impedance...HOWEVER, the wave
> coming
> > > from the load has some component which makes it through the matching
> section
> > > to the input (call this wave "B"). It is wave "A" abd wave B"B which
> must
> > > be equal in amplitude and 180 degrees out - therefore cencelling for a

> net
> > > wave back toward the Tx of null, naught, zip..all is happy in the
world
> of
> > > ham radio
> >
> > Yep, you got it! J. C. Slater stated such in _Microwave_Transmissions_
> > before most present day hams were born. I'm glad you understand.
> > --
> > 73, Cecil http://www.qsl.net/w5dxp
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 100,000 Newsgroups - 19 Different Servers! =-----
>
>

2916. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:05:40 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <obRsc.827$nJ5.90@newssvr22.news.prodigy.com>
Source record: 94471

I used 450 ohm ladder line and a balun along with a cheap SWR meter.

--
73
Hank WD5JFR
"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:3bj7b0tuch227qmb1rkkh250hgru59kefi@4ax.com...
> On Tue, 25 May 2004 22:32:47 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
>
> >The30L-1 811A holes were dime size and I wish I knew then what I know
now
> >because I would have made some comparisons. I would have set the drive
to
> >get the tubes red hot on my antenna with SWR <20 and then using same
drive
> >and Ip see what happened loading into a 50 ohm dummy and running.
Perhaps
> >someone has done this and can report the results.
> >tnx
> >
>
> Hi Hank,
>
> A little follow-on, if you will. I presume you tuned into the load
> first before switching to the antenna. How did you determine the SWR?
> Were you driving a twin lead transmission line going to your
> mismatched antenna, or a coax?
>
> 73's
> Richard Clark, KB7QHC

2917. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:18:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gho7b0h9hkg7u66gu20i76775de9e6gbbh@4ax.com>
Source record: 94472

On Wed, 26 May 2004 00:05:40 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:
>I used 450 ohm ladder line and a balun along with a cheap SWR meter.

Hi Hank,

Classic! Thanx.

73's
Richard Clark, KB7QHC

2918. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:24:08 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <10b7ot9m9ldt5e6@corp.supernews.com>
Source record: 94473

Cant immagine what he wants it for either-- Just add to water, and becomes a nice fire (and also reacts if you hold it in your hand-- Perspiration)! Jim

"AB2RC" <AB2RC@localhost.localdomain> wrote in message news:slrncb714v.7er.AB2RC@homer.linux1.lan...
> On 2004-05-25, cva <bn@art.com> wrote:
> > .
> absolutely nothing....
>
> but asked the following question in the subject header
> "Where can I get a lump of Sodium?"
>
> I don't even want to know why you would want a lump of soduim, but look here
>
> http://www.labdepotinc.com/chemical_details~pid~S1100.aspx
>
>
> --
> Alex / AB2RC
> Yaesu FT100 software for Linux http://www.qsl.net/kc2ivl
> Why do they call Radio "Wireless", between my shack and antennas
> I must have over 1500 feet of wire!

2919. Re: 1/4 wave vertical vs. loaded vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:24:34 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405251624.50a57fcd@posting.google.com>
Source record: 94474

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40b30330_4@corp.newsgroups.com>...
> Dave wrote:
> > I'm considering putting up a 33' vertical - just 3 sections of Rat Shack
> > mast (solidly bolted for continuity) plus a 3+/- foot 'adjustable' part
> > on the bottom to 'trim' the length. Then a bunch of in-ground radials.
> > 40m is my only 'serious' band. 15 meters should be a bonus, right?
> > Or not?
>
> Not really. 33 ft. is too long for good 15m performance. The take-off-
> angle at the highest gain point is 47 degrees. The free version of
> EZNEC at eznec.com will show that.

It will still be quite usable for "average" use. Maybe not as good as
a shorter vertical at low angles, but he wouldn't have trouble making
contacts with it. My 40/17 GP worked pretty well on 15m, despite the
increased average angle of radiation. It was lame as heck on 12 and 10
though...No doubt about it...MK

2920. Re: 1/4 wave vertical vs. loaded vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:28:28 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0405251628.718825fb@posting.google.com>
Source record: 94475

"Dave" <Devarim@hotmail.com> wrote in message
news:<fcc11758cff1495eeaba32353cf1e07f@news.meganetnews.com>...
> Hi all,
>
> I'm considering putting up a 33' vertical - just 3 sections of Rat Shack
> mast (solidly bolted for continuity) plus a 3+/- foot 'adjustable' part
> on the bottom to 'trim' the length. Then a bunch of in-ground radials.
> 40m is my only 'serious' band. 15 meters should be a bonus, right?
> Or not?
>
> Would this work better than my 4BTV (which I'll keep for 20 and 10)?
> Or would the improvement be so insignificant as to not be worth all
> the bother of building the new antenna?
>
> Thanks
>
> Dave WB7AWK

It'll be better on 40m. No doubt. Hard to say on 15, but you might be
surprised. I don't think it would be quite as bad as some forecast.
For average use anyway.
You might consider 17m as a 5/8 wave. Easily matched with a series
loading coil at the base. Of course, you would want to take it out for
40m, unless you want to be tuned at 6.9 mhz...:/ I used a 24 volt
relay to switch on one antenna I used. MK

2921. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:29:48 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2oo7b0dris83dbfmddj2s38s9pqqaivn20@4ax.com>
Source record: 94476

On Tue, 25 May 2004 19:01:31 -0500, Tom Ring <tarnews@taring.org>
wrote:

>Boy, I'm gonna have to try and find my old EE5xx Non-Linear Transistor
>Design notebook. I doubt I could translate it into words for this
>section of the thread, but it is incredibly applicable.

Hi Tom,

It's not that difficult. Edison corrupted the Thevenin model
demanding that there be a RESISTANCE equal to the load to accomplish
this equivalency (a case of being overly literal for a market
advantage). The Thevenin model only requires an IMPEDANCE, hence
these allusions to 50% maximum efficiency (an imposed condition much
like debate here) were an invention by Edison to detract investment
away from AC power transmission and attract it back to his DC dynamos.
The real pro's new how to dance with numbers and concepts too.

This resolves how the common Ham rig can present 50 Ohms Impedance and
still offer more than 50% efficiency - although, a simple examination
of the power in vs. the power out reveals it isn't nearly as good as
50% for ANY mode. Such is the gulf between reality and theory - some
folk's mileage may vary. ;-)

73's
Richard Clark, KB7QHC

2922. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:40:42 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <eIRsc.113456$536.20815483@attbi_s03>
Source record: 94477

You could also try Aldrich chemical http://www.sigmaaldrich.com search by Molecular Formula for "Na" and you'll find an assortment of offerings of the metal. Download an MSDS for it first! It can be nasty to deal with. A bucket of Class D (Metal Fires) extinguishing agent or a Class D fire extinguisher can come in handy too, check Ansul http://www.ansul.com for MET-L-X or NA-X extinguising agent!

"cva" <bn@art.com> wrote in message news:c8vt9e02ln7@enews3.newsguy.com...
> .

2923. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 00:51:34 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <qSRsc.115980$xw3.6851325@attbi_s04>
Source record: 94478

Must have never worked w/ Sodium, NaK (sodium- potassium alloys, usually liquid phase at room temperature) or Lithium-Aluminum alloys. Never had the pleasure to work w/ pure Li but I'd guess it is entertaining to say the least.

Aluminum is quite reactive, fortunately aluminum oxide is quite stable, and usually forms quickly, quietly and uneventfully.

Scotchbrite pads would be better than steel wool to clean it up.

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:8bd5b0tnben3hh8r29j84bne9k2dgpjsl9@4ax.com...
> On Mon, 24 May 2004 16:47:33 -0500, "Steve Nosko"
> <suteuve.nosukowicuz@moutouroula.com> wrote:
>
> [snip]
>
> | Aluminum is the most reactive metal.
>
> Really?
>

2924. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 01:05:38 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b3ed29$0$430$5cbedd26@news.real-time.com>
Source record: 94479

Richard Clark wrote:

> Hi Tom,
>
> It's not that difficult. Edison corrupted the Thevenin model
> demanding that there be a RESISTANCE equal to the load to accomplish
> this equivalency (a case of being overly literal for a market
> advantage). The Thevenin model only requires an IMPEDANCE, hence
> these allusions to 50% maximum efficiency (an imposed condition much
> like debate here) were an invention by Edison to detract investment
> away from AC power transmission and attract it back to his DC dynamos.
> The real pro's new how to dance with numbers and concepts too.
>
> This resolves how the common Ham rig can present 50 Ohms Impedance and
> still offer more than 50% efficiency - although, a simple examination
> of the power in vs. the power out reveals it isn't nearly as good as
> 50% for ANY mode. Such is the gulf between reality and theory - some
> folk's mileage may vary. ;-)
>
> 73's
> Richard Clark, KB7QHC

Understood. I still want to find it. Been about 30 years since I wrote
it all down in 4 colors. I took serious notes.

tom
K0TAR

2925. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 01:51:51 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b3f919$1_3@corp.newsgroups.com>
Source record: 94480

Jim Kelley wrote:
> Electromagnetic waves can cancel, but rocks can't.

However, two EM waves have to exist before they can cancel.
If they exist, they posses both energy and momentum.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2926. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 01:54:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b3f99e_3@corp.newsgroups.com>
Source record: 94481

Jim Kelley wrote:
> Proving that reflections actually exist, and that when all you have is a
> hammer, everything looks like a nail. Are you trying to prove
> something, or disprove it with your ghost story? You're not generating
> a clear picture. ;-)

Translation: You have just proven my concepts wrong so
I need a not-clear-picture diversion.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2927. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 02:07:50 UTC
From: Lord Snooty <bonzo@dog.com>
Message-ID: <WZSsc.10622$be.7937@newsread2.news.pas.earthlink.net>
Source record: 94482

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:eb43b0lrpdra1gdub1tviavrs217ebf5pg@4ax.com...
> On Mon, 24 May 2004 05:46:01 GMT, "Lord Snooty" <bonzo@dog.com> wrote:
>
> >At 8.000 Mhz and a load consisting of 50 ohms carbon 10W 10% in series
with a
> >capacitance trimmer bank, at an output power level of about 2W, a load
> >capacitor value of 250 +/- 10pF (-j80 ohms @ 8 MHz) was found to produce a
> >minimum in the total voltage across the load. Also, as capacitance was
> >increased over the range 100-700pF, the voltage across the load resistor
> >increased monotonically.
> >
> >The latter is easy to explain (it means the source reactance is positive,
and
> >smaller than +j28.4 ohms), but the former is beyond my ken.
> >
> >Best,
> >Andrew
>
> Hi Andrew,
>
> You got me confused too.
>
> Is the "load" the resistor, or the resistor-cap combination when you
> measure these voltages?
>
> You describe a voltage minimum across the load for a cap setting of
> 250pF; but you also maintain that the voltage across the load
> increases for the variation in capacitance from 100 to 700pF which
> contradicts the first measurement.
>
> Further, the construction of a high power semiconductor does not lend
> itself to supporting inductive reactances (the junctions are quite
> manifestly capacitive in structure). By specification the device is
> characterized as exhibiting 27pF @ 1 MHz (for 28Vdc although there is
> not much variation until below 10Vdc). There are a world of other
> variables to consider, but none portray inductance within the device.
> This alone should provoke you to re-examine your premise.
>
> 73's
> Richard Clark, KB7QHC

To clarify
a) "Load" in my context means "load resistor (r) and load capacitor (reactance

jx) in series"
b) The output transistor feeds to the output port through an inductor. One would therefore expect X, the source reactance, to be positive.

Andrew

2928. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 02:35:57 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0405251835.38cfef6f@posting.google.com>
Source record: 94483

This is absolutely the best thread I've seen in years. It's educational, thought provoking, entertaining, and revealing about the human psyche.

The thread reminds of some of those that I monitor from time to time regarding aeronautics and fluid dynamics on the topic of how an airplane wing generates lift. Believe or not, there is still no consensus after 100+ years. It's interesting in that it parallels this thread in many ways -- attempting to interpret various abstract mathmatical definitions of a physical process in a way that it "makes sense." We're fortunate in that such things don't actually have to make sense to work.

Al

2929. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 02:38:54 UTC
From: k9opo@comteck.qlfit.com
Message-ID: <40b403b7.29798012@news.ind.sbcglobal.net>
Source record: 94484

"Jim" <NN7K@Reno.Rmci.Net> wrote:

>Cant immagine what he wants it for either-- Just add to water, and becomes a
>nice fire (and also reacts if you hold it in your hand-- Perspiration)! Jim

My recollection from my high school chemistry days is that sodium
doesn't catch fire in water, just bounces around and fizzes
vigorously. Potassium metal, OTOH, does catch fire as it fizzes and
bouces around even more vigorously.

I had such fun in the chemistry lab.

Roger Grady k9opo@comteck.qlfit.com
To reply by email, remove "qlfit." from address

2930. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 02:50:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b406c2$1_3@corp.newsgroups.com>
Source record: 94485

Jim Kelley wrote:
> The IEEE Dictionary shows the relationship between energy passing a
> point and the equivalent in units of power.

Feel free to look up "dictionary" in the dictionary.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2931. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 02:55:43 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405251855.38236482@posting.google.com>
Source record: 94486

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40b30118$1_4@corp.newsgroups.com>...
> Wes Stewart wrote:
>
> > <suteuve.nosukowicuz@moutouroula.com> wrote:
> > | Aluminum is the most reactive metal.
> >
> > Really?
>
> Not really. When I was at Texas A&M, someone wrapped a
> large lump of sodium in a towel and flushed it down the
> john. It blew the plumbing apart.

A couple of us Juniors in chem lab did the deed in high school in
1954. Didn't take out any hardware but it took the janitors a week to
clean the ceilings. Fortunately there was nobody "Smokin' In The Boy's
Room" . .

2932. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 02:58:12 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c91144grl1@mail.specsol.com>
Source record: 94487

Roger Grady <k9opo@comteck.qlfit.com> wrote:
> "Jim" <NN7K@Reno.Rmci.Net> wrote:

> >Cant immagine what he wants it for either-- Just add to water, and becomes a
> >nice fire (and also reacts if you hold it in your hand-- Perspiration)! Jim

> My recollection from my high school chemistry days is that sodium
> doesn't catch fire in water, just bounces around and fizzes
> vigorously. Potassium metal, OTOH, does catch fire as it fizzes and
> bouces around even more vigorously.

> I had such fun in the chemistry lab.

> Roger Grady k9opo@comteck.qlfit.com
> To reply by email, remove "qlfit." from address

Its the liberated hydrogen from the water that burns; explodes if you
get the right concentration.

--
Jim Pennino

Remove -spam-sux to reply.

2933. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 06:42:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8re8b0dht09ipoclhvqs12tjkdkbgs21dl@4ax.com>
Source record: 94488

On Tue, 25 May 2004 19:43:42 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

> They continued to work well and
>I always thought this was from overdriving but now I'm not so sure because
>it ran at the same high swr as the 30S-1.

Hi Hank,

I gave this some more thought from my Collins period. If I recall,
overdriving an amplifier brings damage to the grid, which has its own
dissipation limit. The usual failure mode is that it melts or sags
and causes a grid-cathode short. This is especially true in
lighthouse style tubes.

73's
Richard Clark, KB7QHC

2934. Re: Yaesu FT767GX PSU board wanted

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 08:15:03 UTC
From: Geoff <geoff@nospam.demon.co.uk>
Message-ID: <Xns94F55E1CAA53Ageoffmailnews@158.152.254.254>
Source record: 94489
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

"mike" <mike@nospam.co.uk> wrote in news:CjQsc.371$3s5.15@newsfe4-win:

> send it here
> mike-g7bnf[at]ntlworld.com
> change [at] for @

Likewise send a copy to | geoff at palaemon dot co dot uk | and I'll have a look.

Geoff

2935. Power Factor

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 10:35:16 UTC
From: David J Windisch <davidw@copper.net>
Message-ID: <40b4732e_5@newsfeed.slurp.net>
Source record: 94492

Hi, all concerned:

If the analogy holds:

R-f transmission-line swr reduction by what ever means is, I think, akin to what the local power company accomplishes by hanging lumps of reactance across its a-c transmission lines, ie, reducing volt-amps-reactive, in its system.

Picture an alternator delivering rated current into a reactance:
I-squared-R is, I think, dissipated in the resistance of the alternator windings.

No wonder an anode glows *in some cases* due to "mismatch".

If the analogy holds.

So, one fine day, I'll test this hypothesis: I'll fire up a 4-400 (no ceramic jugs allowed!), on some h-f band, driving it to (metered) d-c input levels just below its rated dissipation, into a mismatch built like a battleship in its plate circuit.

(How) Is it possible with metrology (that I can afford, much less obtain use thereof), for me to know without a reasonable doubt what the proportions of plate-glow due to little-r-sub-little-p and "reflected power from the mismatch" are?

Are there other sources of plate glow?

73, Dave, N3HE

2936. PCB Antenne for GSM (900/1800)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 14:03:38 UTC
From: sagau@web.de
Message-ID: <db35272e.0405260603.31a4cb58@posting.google.com>
Source record: 94490

Hello !

I am looking for a reliable design of an antenna for the GSM band.
My GSM transmitter with controller device is mounted on a PCB and so
the antenna should also be designed on this PCB.

Are there any websites/links where I can find pcb-layouts for GSM
antennas ?

Thanks in advance.

Greets
Peter

2937. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 14:05:30 UTC
From: richardharrison@webtv.net
Message-ID: <17918-40B4A42A-61@storefull-3257.bay.webtv.net>
Source record: 94493

Richard Clark wrote:
"The Thevenin model only requires an IMPEDANCE."

Yes, but "To secure maximum power output from a generator whose emf and whose internal impedance are constant, the load must have an impedance equal to the conjugate of the generator`s internal impedance." (page 43, "Transmission Lines, Antennas, and Wave Guides", King, Mimno, and Wing)

Best regards, Richard Harrison, KB5WZI

2938. near vs far field ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 14:10:01 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <Zy1tc.696$Ej2.399@newssvr24.news.prodigy.com>
Source record: 94491

Is there a homebrew instrument that I can make that will let me know when
I'm out of the near field and in the far field? I'd like it to work with
mobile whips as well as dipoles on HF. The ARRL Ant HBK formula for the
boundary D between the two fields is an approximation where D = 2L^2/w where
L is ant length in same units as w, the wavelength.
tnx

--
73
Hank WD5JFR

2939. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 14:20:01 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c9296i$r4r$1@newshost.mot.com>
Source record: 94465

"AB2RC" <AB2RC@localhost.localdomain> wrote in message
news:slrncb714v.7er.AB2RC@homer.linux1.lan...
> On 2004-05-25, cva <bn@art.com> wrote:
> > .
>
> but asked the following question in the subject header
> "Where can I get a lump of Sodium?"
>
> I don't even want to know why you would want a lump of soduim, but look
here

If you are afraid to imagine what it will be used for, why are you
helping find it??

--
Steve N, K,9;d, c. i My email has no u's.

2940. When to use one of them : Vigants, Lenkurt, ITU-R Rec.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 14:25:32 UTC
From: kuna_visoko@yahoo.com
Message-ID: <2aace028.0405260625.2b806de3@posting.google.com>
Source record: 94494

Hello!

My question is:

When should I use Vigants or Lenkurr or ITU-R Rec. models in my RR
Budget calculations. Who of those models is best for planning and how?

Best regards, and thank's for replys!

AK.

2941. Re: Tx Source Impedance & Load Reflections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 14:51:03 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92b0o$re8$1@newshost.mot.com>
Source record: 94464

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:2pt6b0lbjo3ru6pn7ae7d6j9mna19pq7ks@4ax.com...
> On Tue, 25 May 2004 11:23:03 -0500, "Richard Fry" <rfry@adams.net>
> wrote:
> >This topic deserves more attention than it will get from its previous
> >placement deep in some recent threads.
> >Below is a quote
> Which is a creationist-model of negative definition.
>
> This is poor substitute for expressing a simple complex value derived
> from actual measurement. The methods for accomplishing this are rote
> material practiced by designers every day. The quality of their
> product is in proportion to the accuracy of their determination.
> 73's
> Richard Clark, KB7QHC

Side Comment:

Unfortunately, Richard Clark, the essence of your comment is completely lost on me. I haven't the faintest idea what you mean. Are you criticizing the quote or supporting it? Whatever...

Real content:

The quote posted by Richard Fry certainly explains well what we call "Transmitter IM'" (the PA is a mixer and Tx frequencies mix producing other signals). In the cellular telephone base station transmitter we have up to 20 transmitters on one antenna. In this case the IM is much more serious because the power of the undesirable transmitter is not from a near antenna, but a transmitter directly connected to the same antenna. Circulators in each transmitter output are required to reduce the IM to acceptable levels by diverting the unwanted TX signals to a load instead of the PA device..

I believe his intent (I'm guessing) is to show an authoritative report that the output Z of a power amplifier is not equal to the load or transmission line impedance, right?

As I stated before (with spelling corrected):

Get this MPT theorem blockage out of your minds... It is a synthetic restriction.
The "maximum power theorem" (ZL=Zs) ONLY applies to ONE special case, NOT all cases. That case is where the source's output power (or if you like current) capability is limited ONLY by the two resistances (source and load). That is, the
case is when the source can put out all the power needed by these resistors

and no other internal limit dominates. A common circuit can be shown to give maximum power at other than Zs=ZL (apparently violating the above referred-to theorem). There are things other than these resistances that limit the output power of a practical source.

I add... In fact, in that quote, he comments that a low source impedance is what makes for higher (>50%) efficiency.

--
Steve N, K,9;d, c. i My email has no u's.

2942. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 14:58:43 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92bf4rio1@newshost.mot.com>
Source record: 94461

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:40B2920E.C006DA70@uci.edu...
> Cecil Moore wrote:
[snip]
> > When you view your reflection in a mirror, do you ignore the
> > ExB power involved without which you would see nothing?
>
> I don't notice it until it the resulting chemical reaction takes place
> on the retina of my eye. Until then, I can only imagine E crossing B,
> and write the expression for it down on a piece of paper as it has no
> physical manifestation.
>
> 73, Jim AC6XG

Yikes!. Do I read this as being equivalent to saying that there is no
vibration in the air when a tree falls as long as no person is there to have
these vibrations intercept the ear drum??

--
Steve N, K,9;d, c. i My email has no u's.

2943. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 15:03:37 UTC
From: richardharrison@webtv.net
Message-ID: <28941-40B4B1C9-6@storefull-3251.bay.webtv.net>
Source record: 94495

Richard Fry wrote:
"To me, the threads about reflected power in this NG over the last few days are rather revealing. Some posters quote Terman, Lord Kelvin and others with inapplicable/incomplete statements---."

You are affgorded ample opportunity to specify the inapplicability or omissions. The only mistake I know of in Terman`s 1955 edition is a typo in one instance only where KHz is substituted for MHz or vice versa, and I can`t find that one right now.

Best regards, Richard Harrison, KB5WZI

2944. Re: Power Factor

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 15:26:42 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b4b817_1@corp.newsgroups.com>
Source record: 94496

David J Windisch wrote:
> R-f transmission-line swr reduction by what ever means is, I think, akin to
> what the local power company accomplishes by hanging lumps of reactance
> across its a-c transmission lines, ie, reducing volt-amps-reactive, in its
> system.

The sum of the loads on a power line is virtually always inductive
so the power company adds capacitors where they are needed. That is
akin to stubs on an RF transmission line. Guess how long a 1/8WL stub
would be at 60 Hz. :-)
--
73, Cecil http://www.qsl.net/w5dxp

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2945. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 15:32:15 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92de1rrt1@newshost.mot.com>
Source record: 94462

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:gsg4b0lt2hh167d97qpt9eqik361cu5uom@4ax.com...
> On Mon, 24 May 2004 13:19:41 -0500, Cecil Moore
> <Cecil.A.Moore@ieee.org> wrote:
> >Well Richard, here's your chance. Please enlighten us on J.C.
> What was the original question? [accredited stock response]

It's clear that R.C. loves tweeking Cecil.
Steve

2946. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 15:33:51 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92dh1$rs5$1@newshost.mot.com>
Source record: 94463

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:D2usc.110697$iF6.9975401@attbi_s02...
> Cecil Moore wrote:
>
> snip
>
> > For what it is worth, I believe that the first homo sapien
> > originated about a quarter of a million years ago and was
> > a female with dominant genes.
> > --
> > 73, Cecil http://www.qsl.net/w5dxp
> >
>
> My wife has me convinced that ALL women have the dominant genes!!!!
>
> Deacon Dave

There's a guy claiming that the male gene (is it the X?) will dissapear in
several hundred years because it is on the decline now...
Steve

2947. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 15:34:57 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92dj3rsa1@newshost.mot.com>
Source record: 94466

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20040524194309.02695.00001461@mb-m21.aol.com...
> Richard Clark wrote,
> >
> >On Mon, 24 May 2004 15:28:40 -0500, Cecil Moore
> ><Cecil.A.Moore@ieee.org> wrote:
> >>I am sure that our solar system and homo sapiens didn't exist
> >>when the original question was asked.
> >So the question is which came first, the homo or the solar system?
> >
>
> Homos before Helios, or Helios before homos? That's a profound
> question which I'll have to think about over my after-dinner port. On
> the surface it looks about as meaningful as "turkeys from Turlock,"
> but first impressions are sometimes deceiving.
> 73,
> Tom Donaly, KA6RUH

Hey! I know it HAD to be a PREGNANT Chicken that came first...

2948. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 15:35:41 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b4ba32_1@corp.newsgroups.com>
Source record: 94497

Richard Harrison wrote:

> Richard Clark wrote:
> "The Thevenin model only requires an IMPEDANCE."
>
> Yes, but "To secure maximum power output from a generator whose emf and
> whose internal impedance are constant, the load must have an impedance
> equal to the conjugate of the generator`s internal impedance." (page 43,
> "Transmission Lines, Antennas, and Wave Guides", King, Mimno, and Wing)

Anything about dissipationless resistances or negative resistances?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2949. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 15:39:49 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92ds7$s0u$1@newshost.mot.com>
Source record: 94467

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:c905b0loq3qv5rmv7v6k6galk1l7atbc6b@4ax.com...
> On Mon, 24 May 2004 16:40:44 -0500, "Steve Nosko"
> <suteuve.nosukowicuz@moutouroula.com> wrote:
> > This is an interesting twist, Tam. I think if this were the case,
then
> >there would be MORE power dissipated in the Tx
>
> Hi Steve,
>
> And why would that be?
>
> 73's
> Richard Clark, KB7QHC

Reconstructing the long ago comment not having the original comment, Steve
comments further:

I think he had the power returning to the PA device and being dissipated
there.
Steve

2950. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 15:41:41 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92dvn$s1c$1@newshost.mot.com>
Source record: 94372

Yea! See. That's what I inferred and I said he was implying.

Man! This he said...he said...he said gets confusing who said what...
Steve

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:9IqdnWUSP9WoAi_dRVn-jA@comcast.com...
>
> "Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
> news:c8tq8t$3nm$1@newshost.mot.com...
> >
> > "Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> > news:zPCdnSVX5K_UoCzdRVn-vw@comcast.com...
> > >
> > > "Richard Fry" <rfry@adams.net> wrote in message
> > > news:2hcf8gFbg4lrU1@uni-berlin.de.....................
> > > ....
> > > > RE: Concept below
> > > >
> > > > However this is not an accurate model of a transmitter.
> > > >
> > > > For an example, take an old Heathkit DX-100 generating a measured
180
> > > watts
> > > > of CW RF into a matched 50 ohm load. To do this, it does NOT also
> > > dissipate
> > > > 180 watts of RF into some "virtual" internal RF load in the DX-100.
> In
> > > > fact, the PAs and power supply in the DX-100 could not produce a
total
> > RF
> > > > output power of 360 watts without exceeding their ratings.
> > > >
> > > > The dissipation in the PA is essentially related only the DC to RF
> > > > conversion efficiency of the PA, which in this case probably is
about
> > 75%,
> > > > max (Class C). So a PA input power of about 240 watts DC is
required
> to
> > > > produce 180 watts of RF output power. The other 60 watts of plate
> input
> > > > power is converted to heat by the PA tube anodes.
> > > >
> > > > The entire RF output generated by the PA stage is applied virtually

> 100%
> > > to
> > > > the output connector. How much of that is absorbed by the load
> > connected
> > > > > there is a function of load SWR and system losses.
> > > > >
> > > > > - RF
> > > There is a Motorola ap note that agrees with what Richard is saying.
To
> > > paraphrase it, if the the DX100 had an output impedance of 50 Ohms,
then
> > the
> > > overall efficiency would be 37.5%.
> >
> > Unfortunately I can't read all the digressions in the thread. I
skim
> by
> > author...
> >
> > This is an interesting twist, Tam. I think if this were the case,
> then
> > there would be MORE power dissipated in the Tx than Mr. Fry is saying -
> > making the situation worse. By that, I mean, getting further from what
is
> > going on. I think this goes in the wrong direction. I believe the flaw
> is
> > believing that the Rs=RL must exist for the transmitter.
>
> That is what I am saying. The efficiency goes from 75% to 37.5%; so,
there
> is more power dissipated in the TX.
>
> Tam/WB2TT
> > --
> > Steve N, K,9;d, c. i My email has no u's.
> >
> >
>
>

2951. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 15:45:54 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92e7k$s2v$1@newshost.mot.com>
Source record: 94469

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:Pyxsc.1826$eT4.1473@attbi_s54...
> Richard Clark wrote:
>
> > On Sun, 23 May 2004 02:07:13 GMT, "Henry Kolesnik"
> > <kolesnik@sbcglobal.net> wrote:
> >
> >
> > >I know that any power not dissipated by an antenna is reflected back to
the
> > >transmitter. Then the transmitter "reflects" this reflection back to
> > >antenna, ad nauseum until its all gone. I also know that a short or an
open
> > >is required to reflect power and I'm searching for which it is, an open
or a
> > >short. I'm inclined to think it's a virtual open but I'm at a loss to
> > >understand that and I wonder if someone has a good explanation or
analogy
> > >and some math wouldn't hurt.
> > >tnx
> > >Hank WD5JFR
> > >
> >
> >
> > Hi Hank,
>
> At last count there are 130 responses to this post, this is #131, and
> the question still hasn't been answered.
>
> When energy or power is transmitted in any medium where the wavelength
> and the length of the transmission medium are significant percentages of
> one another some energy/power is reflected at any discontinuity in the
> transmission medium. The reflected energy/power may be re-reflected if a
> discontinuity exists in the backward path.
>
> The simplest example that we can all understand is the common case of
> the echo!! H E L L O ! .... HELLO ! .... hello ! .... etc. The
> energy/power is re-reflected many times until we can't hear it. But is
> is still re-reflecting at sub-audible levels until 100% dissipation
> occurs. As long as the discontinuities exist the echoes exist!
>
> DD, W1MCE

Nice attempt at an analogy (and capitalization), but this is not what happens in the t-line case. If it were, (or is it 'was') the power would all be heating the coax and it is not. Each time it gets to the load, some more makes it to the load until it all gets there.
Steve

2952. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 16:17:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7kg9b0tuheuit587okknrg5h7jdsqsmf8p@4ax.com>
Source record: 94498

On Wed, 26 May 2004 09:05:30 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Richard Clark wrote:
>"The Thevenin model only requires an IMPEDANCE."
>
>Yes, but "To secure maximum power output from a generator whose emf and
>whose internal impedance are constant, the load must have an impedance
>equal to the conjugate of the generator`s internal impedance." (page 43,
>"Transmission Lines, Antennas, and Wave Guides", King, Mimno, and Wing)
>

Hi Richard,

Not if it is strictly resistive. This is the rhetorical dance of conditions. Too many arguments turn on a resistive load, and then demand efficiency in terms of a resistive Thevenin model. That just doesn't pass.

73's
Richard Clark, KB7QHC

2953. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 16:22:09 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b4c515$1_1@corp.newsgroups.com>
Source record: 94500

Richard Clark wrote:

> richardharrison@webtv.net (Richard Harrison) wrote:
>>Yes, but "To secure maximum power output from a generator whose emf and
>>whose internal impedance are constant, the load must have an impedance
>>equal to the conjugate of the generator`s internal impedance." (page 43,
>>"Transmission Lines, Antennas, and Wave Guides", King, Mimno, and Wing)
>>
> Not if it is strictly resistive.

Of course, it works for the purely resistive.
R+j0 is the conjugate of R-j0
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2954. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 16:24:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4ug9b0lok0gjmasb87iobalvs501puhpd1@4ax.com>
Source record: 94499

On 26 May 2004 06:29:27 -0700, k4wge@arrl.net (k4wge) wrote:

>D.L.Jaggard's webpage: http://www.seas.upenn.edu/~jaggard/
Too bad he doesn't have a patent pending or he would be the father of
fractal antennas. ;-)

Dare we wonder that these fractal children are legitimate? They sure
are bastards to build and they work like a dead-beat brother-in-law.

73's
Richard Clark, KB7QHC

2955. Re: near vs far field ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 16:36:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ldh9b05n4q754sfq7luka600tueta0ud4b@4ax.com>
Source record: 94501

On Wed, 26 May 2004 14:10:01 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>Is there a homebrew instrument that I can make that will let me know when
>I'm out of the near field and in the far field? I'd like it to work with
>mobile whips as well as dipoles on HF. The ARRL Ant HBK formula for the
>boundary D between the two fields is an approximation where D = 2L^2/w where
>L is ant length in same units as w, the wavelength.
>tnx

Hi Hank,

That is an interesting question. So right off the top I will admit I
know of no such beast. However, the formula looks particularly
liberal. Normalized it appears to suggest for a common dipole that
distance would be 1 wavelength, but I would think it from the
literature that this distance would be closer to 5. It is all a
matter of degree in how thin you want to cut it.

At:
http://home.comcast.net/~kb7qhc/antennas/Fields/index.htm
I have done a suite of 6 antennas and have illustrations of the near
field in terms of its Z expressed as SWR to free space. If nothing
else this will give you a picture (for what it's worth). In returning
to the delineation between near and far, my illustrations show only
the first quarterwave out and things have pretty well settle out in
this scale.

73's
Richard Clark, KB7QHC

2956. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 16:44:00 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92hkjsnt1@newshost.mot.com>
Source record: 94373

Ahhh! Finally some meat... SORRY,... LONG POST WITH MUCH techincal MEAT IN IT...

"Richard Clark" <kb7qhc@comcast.net> wrote in message news:tbf5b0ppstgv878l5qppgqb66nq4giaso3@4ax.com...
> On Tue, 25 May 2004 02:59:52 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
>
> >Richard
> >...(what is) the "mechanism" in
> >the transmitter (such that) it can't
> >dissipate a reflection because there's some kind of one way
...checkvalve...reflects.
> >tnx
>
> Hi Hank,
> ...
> It can also reflect (some or all of) what it does not absorb, ...
> is determined by the ratio of its Z to the line/load
> at the antenna terminal. (Of the transmitter, I believe you mean)

Fine point: I think it must reflect ALL it does not absorb.
Important point: However, I believe the case is that it absorbs little of this energy.

> In this case (bear with me), the source Z is
> NOW found at the load's mismatch, transformed through the line. This
> means matching works both ways (often the singlemost ignored aspect of
> obvious reciprocity in any of these arguments). Such circuit analysis
> is called superposition.

Yes, no argument. Matching does, er um, CAN work both ways on the line, is true. And the TX is, indeed, a "load" for the reflected energy (or wave if you prefer).
I say CAN because the match does work both ways, but that is not to imply that the impedances which exist on the line are matched - nor that one way IS matched while the other is NOT. If there is a mis-match in one direction, there will be another mismatch going the other way. This may be a difficult to understand considering the "this situation must be matched" mind-set we are in at this point, but I do not believe it is pixie dust, however choose to skip it for now. See my conclusion at the end....
I think "superposition" is ther wrong term for this. If I could spell reciprocity, I'd say that it is a better word.
Digression, though minor: Superposition refers typically, to the application of two signals to a circuit and the resulting response being the

sum of the individual responses. no?

Now some meat I'd like to pursue...
>
> ...a 500 Ohm Source...you will never launch much power into a 50 Ohm
> system because it would immediately hit a reflective interface at the
> antenna connector.

There's a question I see here as to wheather the power was "launched" in
the first place and this may be part of the assumption (or set thereof)
which (my gut feel says) leads the logic astray.

> This means that a 500 Ohm source, when confronted
> by power going towards it from a 50 Ohm system will reflect most of
> that power (but how did we get this power into the system in the first
> place - Karma?) This, by design, will never happen in any transistor
> ham rig built in the last quarter century.

I think this is true...BUT let's ask this same question of a 5.0 ohm
source?? How would you carry this through Richard C? I submit that THIS
source CAN launch significant power down the line.

>
> ...snip non technical stuff
>
> The answer is the transmitter source Z is 50 Ohms at rated power.

OK, so now I see you are of the "Zs=50 ohms" camp.

> If
> a watt of power is chooglin' down the line toward it, that 50 Ohms is
> going to dissipate into a watt worth of calories. This can be argued
> with wave mechanics, or lumped circuit equivalents - doesn't matter
> because it's all the same calories.

All ok with me _IF_ Zs=50. I'm not convinced however. I have to think
more about the modern broad-band transistor PA to have an strongly arguable
opinion on this concept.

> Modern rigs can tolerate this...snip...
>
> === WARNING to the logic impaired, the following is a supposition ===
>
> Now, lets simply accept those answers that require the magic pixie
> dust

Uncalled for... I can make it work (so far though I am open) with the
electrical/electronic principles I think are true and work everywhere else.

> of total reflection from the transmitter. Fine, the mismatched
> antenna reflects some power, this power returns to the transmitter,
> the transmitter simple routes it ALL back to the antenna,
> round-and-round until the antenna finally radiates it. If this were
> true, what do we need tuners for?

I think the answer here is that if the transmitter can take the strange impedance it sees, then it isn't needed. Like Hanks 30L1 that, however, couldn't take it very well.
Furthermore, there is an implicit assumption here in your reasoning which I believe is key and leading to some error. There is an unspoken assumption that the power which makes it to the antenna after all the " round-and-round until the antenna finally radiates it" is the FULL output and I believe it AIN'T. It is that little dribble that made it into the line in the first place. a.k.a. the Tx is not generating the full output. I think this assumption is causing much trouble.

Unless, of course, I have been smoking the wrong brand.

Comments R.C. ?

Steve

2957. Re: Power Factor

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 16:55:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <01i9b0hm7qinub8djn7oik1h80nr0jo6tf@4ax.com>
Source record: 94502

On Wed, 26 May 2004 06:35:16 -0400, "David J Windisch"
<davidw@copper.net> wrote:
>(How) Is it possible with metrology (that I can afford, much less obtain use
>thereof), for me to know without a reasonable doubt what the proportions of
>plate-glow due to little-r-sub-little-p and "reflected power from the
>mismatch" are?
>
>Are there other sources of plate glow?

Hi David,

Two methods come to mind: Calorimetry and Optical Thermometry.

Both are ancient methods, which means with patience and care you can
achieve very good precision and decent accuracy.

For the Calorimetric approach, simply enclose the tube inside an air
plenum with a good steady stream of air whose temperature is measured
going in, and coming out. To increase efficiency and accuracy, you
would want to build a diffuser into the stream to reduce turbulence (a
4 in diameter honey comb of straws cut 3 or 4 inches long would do
nicely). It would also be nice to draw the air from a relatively
stable temperature source and vent it away (no mixing).

You would then need to research the formulas to convert the heat gain
into watts. I won't go into that at this time.

As for the Optical Pyrometer (the actual term), this consists of a
binocular where one eye looks at the plate surface, and the other eye
is looking at a heated wire. An alternative is a monocular where the
eye looks at both at the same time (more accurate) where the wire
overlays the target image. You adjust the heated wire to luminescence
and when its temperature is equal to the temperature of the target,
the monocular view will offer the wire disappearing! In other words,
you have a bridge circuit and when both heated elements are balanced
the eye registers a null.

You would need a stable source of repeatable current settings so that
you can make differential measurements (the most precision) and
perhaps another target that you can directly measure heat and power
applied (the most accurate). For a wire, go to a junk store and buy
an old toaster. Each element is roughly 50 Ohms (not suitable for
precision RF however). Such a method can with care map temperatures
to within degrees.

I commend your desire to sit down to the bench and sweep away the
cobwebs of musty philosophies traded here.

73's
Richard Clark, KB7QHC

2958. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 17:06:21 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B4CE8D.E72019D0@uci.edu>
Source record: 94503

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > Electromagnetic waves can cancel, but rocks can't.
>
> However, two EM waves have to exist before they can cancel.

And that makes rocks like waves?

> If they exist, they posses both energy and momentum.

Bet ya can't prove it without first transfering it to something.

73, Jim AC6XG

2959. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 17:16:33 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B4D0F1.2D0A3E30@uci.edu>
Source record: 94504

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > Proving that reflections actually exist, and that when all you have is a
> > hammer, everything looks like a nail. Are you trying to prove
> > something, or disprove it with your ghost story? You're not generating
> > a clear picture. ;-)
>
> Translation: You have just proven my concepts wrong so
> I need a not-clear-picture diversion.

Cecil, my "concepts" about ghosting predict exactly the same thing as
your "concepts" about ghosting. That's why I asked you whether you were
trying to prove, or to disprove something. The 'clear picture' thing
was just a little pun - intended to inject some levity into this rather
dour exchange.

73, Jim AC6XG

2960. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 17:20:26 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c92jkq$pn5$1@sparta.btinternet.com>
Source record: 94505

Cec and Co., I keep telling you it's a waste of bandwidth talking about 'conjugate matches'. In the transmitter/transmission line context conjugate matches do not exist because nobody knows what the internal impedance of the transmitter actually is.

There's never any need to know. Of what possible use would it be if you knew it.?

Except provide a topic of conversation for this newsgroup. ;o)

2961. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 17:28:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b4d49d_1@corp.newsgroups.com>
Source record: 94506

Jim Kelley wrote:
>
> Cecil Moore wrote:
>>However, two EM waves have to exist before they can cancel.
>
> And that makes rocks like waves?

That makes real waves tangible like real rocks. The wave particles
are just smaller. OTOH, "People who live in glass houses shouldn't
throw stones." is an intangible.

>>If they exist, they posses both energy and momentum.
>
> Bet ya can't prove it without first transfering it to something.

Optics, by Hecht is good enough for me. "It is possible
to compute the resulting (momentum) force via Electromagnetic
Theory, whereupon Newton's Second Law suggests that the *wave
itself carries momentum*. (all emphasis his, not mine) ... As
Maxwell showed, the *radiation pressure* equals the energy density
of the EM wave. ... When the surface under illumination is perfectly
reflecting, the beam that entered with a velocity of +c will emerge
with a velocity of -c. This corresponds to twice the change in
momentum that occurs on absorption, ..."

It's obvious that the energy in the TV ghosting wave makes a round-
trip to the match-point and back to the RCVR. That's obviously a
change in the direction of momentum of the reflected wave. It is
twice the change in momentum than if it encountered a circulator/
load and was dissipated.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2962. Re: Power Factor

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 17:32:06 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0405260932.4d0d900e@posting.google.com>
Source record: 94507

"David J Windisch" <davidw@copper.net> wrote in message
news:<40b4732e_5@newsfeed.slurp.net>...
> Hi, all concerned:
>
> *If the analogy holds*:
>
> R-f transmission-line swr reduction by what ever means is, I think, akin to
> what the local power company accomplishes by hanging lumps of reactance
> across its a-c transmission lines, ie, reducing volt-amps-reactive, in its
> system.

So far so good.

>
> Picture an alternator delivering rated current into a reactance:
> I-squared-R is, I think, dissipated in the resistance of the alternator
> windings.

That's why transformers are rated in VA not W.

>
> No wonder an anode glows *in some cases* due to "mismatch".

Nope. That's not why. Reactive power is not the cause of plate dissipation.

>
> *If the analogy holds*.

It doesn't.

>
> So, one fine day, I'll test this hypothesis: I'll fire up a 4-400 (no
> ceramic jugs allowed!), on some h-f band, driving it to (metered) d-c input
> levels just below its rated dissipation, into a mismatch built like a
> battleship in its plate circuit.

How?

>
> (How) Is it possible with metrology (that I can afford, much less obtain use
> thereof), for me to know without a reasonable doubt what the proportions of
> plate-glow due to little-r-sub-little-p and "reflected power from the
> mismatch" are?

No, because plates don't glow because of reactive power.

>
> Are there other sources of plate glow?
>
Yes. Reactive power isn't one of them. Sorry.

73 de Jim, N2EY

2963. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 17:50:49 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B4D8F9.FA9C1CB1@uci.edu>
Source record: 94508

Cecil Moore wrote:
>
> Tam/WB2TT wrote:
> > You can get the same answer from knowing that the impedance looking
> > into a 1/4 wave section of shorted transmission line is infinite.
>
> Ever measure the forward and reflected currents halfway into a
> shorted 1/4WL stub? How can currents be flowing unimpeded into
> and out of an infinite impedance?

The question is a little misleading because the direction of the flow of current changes every half cycle and is transverse, or orthogonal to the direction of wave propagation. In a transmission line, the current flows through Z0, ostensibly, which is essentially the impedance from one conductor to the other at every point along the transmission line. Other than that, superposed forward and reflected waves behave just as you described, naturally.

73, Jim AC6XG

2964. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 17:55:33 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B4DA15.BF5BDC23@uci.edu>
Source record: 94509

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > Electromagnetic waves can cancel, but rocks can't.
>
> However, two EM waves have to exist before they can cancel.

Yes, but what about the rock? :-)

> If they exist, they posses both energy and momentum.

So if I "possess" an American Express card, do I "possess" money? No.
I simply "possess" the potential to purchase something with it at a
point of sale.

73, Jim AC6XG

2965. Polarization conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 18:03:44 UTC
From: dariolq@yahoo.com
Message-ID: <c92ca4d3.0405261003.7ff0c26e@posting.google.com>
Source record: 94510

Hi everyone,
I've seen some very informative posts here and I'm hoping this
question will generate some more.

Does anyone out there know how to convert antenna field measurements
to linearly polarized components as well as circularly polarized
components?

I have a file with complex field data (E theta & E phi : real and
imaginary) and have been searching for a method to do the conversions
barring using poincare sphere concepts (they are non-intuitive as far
as I'm concerned. The linear conversion is pretty straight forward:

E_theta = sqrt(Re_E_theta^2 + Im_E_Theta^2)
E_theta_phase = atan(Im_E_Theta/Re_E_Theta)ï¿½correction factor for
quadrant placement

Same goes for E_Phi.

Does anyone know how to do it for circluar polarization?

Regards

Dario

2966. Re: Polarization conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 18:16:34 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c92mu2$4k$1@hercules.btinternet.com>
Source record: 94511

> I've seen some very informative posts here

Thanks. But how do you recognise an informative post ?

2967. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 18:19:36 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B4DFB8.AFA5FBD4@uci.edu>
Source record: 94513

Cecil Moore wrote:
>
> Jim Kelley wrote:
> >
> > Cecil Moore wrote:
> >>However, two EM waves have to exist before they can cancel.
> >
> > And that makes rocks like waves?
>
> That makes real waves tangible like real rocks. The wave particles
> are just smaller. OTOH, "People who live in glass houses shouldn't
> throw stones." is an intangible.
>
> >>If they exist, they posses both energy and momentum.
> >
> > Bet ya can't prove it without first transfering it to something.
>
> _Optics_, by Hecht is good enough for me. "It is possible
> to compute the resulting (momentum) force via Electromagnetic
> Theory, whereupon Newton's Second Law suggests that the *wave
> itself carries momentum*. (all emphasis his, not mine) ... As

Excellent, now try and understand what is intended by _ALL_ of the words
in the sentence.

> Maxwell showed, the *radiation pressure* equals the energy density
> of the EM wave. ... When the surface under illumination is perfectly
> reflecting, the beam that entered with a velocity of +c will emerge
> with a velocity of -c. This corresponds to twice the change in
> momentum that occurs on absorption, ..."

Yes, I'm familiar with the subject. I've been familiar with it for a
long time.
However it is incorrect to infer that interactions between waves would
be the same as interactions between waves and matter!

> It's obvious that the energy in the TV ghosting wave makes a round-
> trip to the match-point and back to the RCVR.

It's obvious that the signal has taken multiple paths, at least.

> That's obviously a
> change in the direction of momentum of the reflected wave.

Perhaps. You're describing back scattering, which should exhibit a
Compton effect wavelength shift if true. But again, you're describing

an interaction with matter. Photons don't interact with each other in the same way they interact with matter.

73, Jim AC6XG

2968. Re: near vs far field ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 18:23:59 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <3h5tc.77018$pJ1.23979@lakeread02>
Source record: 94512

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:ldh9b05n4q754sfq7luka600tueta0ud4b@4ax.com...
> On Wed, 26 May 2004 14:10:01 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
>
> >Is there a homebrew instrument that I can make that will let me know
when
> >I'm out of the near field and in the far field? I'd like it to work with
> >mobile whips as well as dipoles on HF. The ARRL Ant HBK formula for the
> >boundary D between the two fields is an approximation where D = 2L^2/w
where
> >L is ant length in same units as w, the wavelength.
> >tnx
>
> Hi Hank,
>
> That is an interesting question. So right off the top I will admit I
> know of no such beast. However, the formula looks particularly
> liberal. Normalized it appears to suggest for a common dipole that
> distance would be 1 wavelength, but I would think it from the
> literature that this distance would be closer to 5. It is all a
> matter of degree in how thin you want to cut it.
>
> At:
> http://home.comcast.net/~kb7qhc/antennas/Fields/index.htm
> I have done a suite of 6 antennas and have illustrations of the near
> field in terms of its Z expressed as SWR to free space. If nothing
> else this will give you a picture (for what it's worth). In returning
> to the delineation between near and far, my illustrations show only
> the first quarterwave out and things have pretty well settle out in
> this scale.
>
> 73's
> Richard Clark, KB7QHC

Very interesting Richard. What did you use as a "ground screen" and how much
ground coverage did you provide in the dipole experiment?

Best regards,

Jack Painter
Virginia Beach, VA

2969. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 18:53:26 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92p76ot1@newshost.mot.com>
Source record: 94468

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b246c7$1_2@corp.newsgroups.com...
> Tam/WB2TT wrote:
>
> > "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
> >>Richard, you know you are going against the conventional wisdom on
> >>this newsgroup. Ghosting cannot exist during steady-state so if
> >>ghosting exists it simply means that you are still in the transient
> >>state and the steady-state doesn't exist (yet).
>
> > Looking for the smiley face.
>
> Is there a smiley face that means, "sad but true"? Many otherwise
> intelligent, knowledgeable, educated engineers have attempted to force
> their metaphysical "steady-state" agenda on uninitiated and unsuspecting
> victims. One is saddened by such an event and one wonders why. Does
> a steady-state religion or creed exist within amateur radio? If so,
> what are its purpose and goals?
> --
> 73, Cecil http://www.qsl.net/w5dxp

From this I infer that Cecil believes that once the transient portion of the response has concluded you are in the steady state and no more reflections are occurring. Is this a correct re-statement of your belief, Cecil?
Steve N.

2970. R-7000 in the rain

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 19:21:38 UTC
From: Daniel_FY1FV <mycall@wanadoo.fr>
Message-ID: <c92qp8ucd1@news-reader3.wanadoo.fr>
Source record: 94514

Hi,
When it rains the ROS of my Cushcraft R7000 rises (>10:1) on all bands. It
is about 1.5:1 when dry.
Has anyone an idea?
TNX in advance.
73's
Daniel, FY1FV

2971. R-7000 in the rain

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 19:31:28 UTC
From: Daniel_FY1FV <mycall@wanadoo.fr>
Message-ID: <c92rahnr1@news-reader3.wanadoo.fr>
Source record: 94515

Hi,
When it rains the VSWR of my Cushcraft R7000 rises (>10:1) on all bands. It
is about 1.5:1 when dry.
Has anyone an idea?
TNX in advance.
73's
Daniel, FY1FV

2972. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 19:33:07 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92rhj$17k$1@newshost.mot.com>
Source record: 94470

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:O9qdnQztu9obyC7dRVn-ig@comcast.com...
>
> "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> news:laIsc.430$QD3.98@newssvr24.news.prodigy.com...
> > Richard
> > ...I got
> > out the book REFLECTIONS II by Walt Maxwell W2DU. I'm typing verbatim
> from
> > page 2-2 and 23-1

I paraphrase / quote the quote:
Power reflected from a mismatch back into the PA is not absorbed there.
He writes:
"when the pi-network tank is tuned to resonance, a virtual
short circuit to rearward traveling waves is created at the input
of the network. Consequently, instead of the reflected power
reaching the tubes of the amplifier, it is totally re-reflected
toward the load by the virtual short "

Hank, I'm sorry, but I believe this is not correct as stated. The word
"totally", I believe is misleading and contrary to what I think all will
agree. Namely that there MUST be SOME real part (although the true amount
is disputed here) to the Zout of the PA and therefore SOME power MUST be
absorbed there. I believe the point of contention truely is just how much
is absorbed and how much is reflected...

>> ...Also what happens in a transistor final with no pi?

AGAIN. Be careful that you DO NOT keep assuming that the full power is the
incident power. Incident meaning forward power or that which the
transmitter is sending toward the load. I have a real corker below. Be
careful. Do not try this at home, I am a professional. (yea, I know this'll
spawn all kinds of grief)

Tam sez:
> Henry,
> Here is an example of what you just said. Take a sine wave source, and
> connect it to a 1/4 wave section of shorted transmission line through a
> series resistor R. The reflected wave will reach this resistor 1/2 cycle
> later, and will be in phase with the source. For a lossless transmission
> line, there will be *0 Volts across the resistor*. There will be 0 current
> through the resistor, and the reflected wave will be re reflected for all
> values of R, including R=Z0, because the reflected wave will not "know"
what
> R is. You can get the same answer from knowing that the impedance looking

> into a 1/4 wave section of shorted transmission line is infinite.
> Tam/WB2TT

Tam,
Although I believe you have digressed somewhat, I will follow this path since it contains a closely related concept. You obviously have a pretty good handle on much of this (as others do, up to a point, and struggle to make their mental models fit the reality - or to make other's mental models fit theirs)...However, there is a paradox here which appears to be the root of this disagreement and your example hit it right on the head. You have some implicit assumptions here.

1) Zero volts across the resistor = (not said, but implied) the t-line acts like an open at the input end, therefore there is no current into the line which results in the zero V across R. V=I^2 * R. I think everybody will agree with this. (shorted 1/4 wave acts like an open and an open 1/4 wave looks like a short - mantra of all, no?).

2) Resistor current = zero therefore reverse traveling wave gets reflected toward the load end. The implication clearly is that with zero resistor current, no energy can be flowing out that way, so it must be reflected.

HOWEVER...
Been a while since I went to this depth and interesting to do so, though unnecessary, I will anyway...

If the input to this stub acts like an open, there can be NO current, thus no power entering, therefore there can be no forward wave, no reflected wave and no summation of waves to make the open in the first place and no need to re-reflect the reflected wave from the resistor who (or is it whom) has no current. This appears to be the root cause of this problem.
Now, we can say that (and I think it has been said) that it makes no difference how large these two waves (which cancel each other to form the open circuit at the stub input) can be any absolute magnitude. 1 amp 10 amps 100 amps doesn't matter - they cancel. So what are they really?
There are two things to consider as you work out how you will resolve this paradox in your mental model.
1) I believe the most important -- If the Z looking in to the stub is high, how can you send a large amount of power down the line. If you say it is an infinite Z then you have a really big problem explaining how it got there in the first place.
2) There is a tendency to assume that the forward power is the same power as when the load is not a short, but Zo.

Interesting puzzle, but I don;t need to go further. At some point you must 'believe' something and I can comfortably stop there...for now.

Oh well...
--
Steve N, K,9;d, c. i My email has no u's.

2973. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 19:35:59 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92rn0$185$1@newshost.mot.com>
Source record: 94371

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:pfKsc.490$Af4.160@newssvr24.news.prodigy.com...
> Before it came down my 20 meter antenna had a SWR approaching 20:1 and I
was
> running a Collins 30S-1 and no tuner!. I did that for several years and
> would be still doing if the roofers hadn't destroyed ~130 ft. dipole. One
> of these days after my back improves I'll put another one up.

Henry,
I don't have a problem with the 20:1, obviously you were matching enough
to get out, but I keep coming back to: Why did you keep doing it if it
burned up your tubes?
Steve N.

2974. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 19:37:08 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92rp5$18h$1@newshost.mot.com>
Source record: 94374

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:obRsc.827$nJ5.90@newssvr22.news.prodigy.com...

> ...a cheap SWR meter.

OOPS!
Steve

2975. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 19:37:37 UTC
From: richardharrison@webtv.net
Message-ID: <12106-40B4F201-82@storefull-3253.bay.webtv.net>
Source record: 94516

Cecil, W5DXP wrote:
"Anything about dissipationless resistances or negative resistances (in "Transmission Lines, Antennas, and Wave Guides")?"

On page 73, the characteristic resistance of free-space is defined as the sq rt of the permeability of space devided by the dielectric constant of space. The units are henries/m and farads/m. The solution is a voltage to current ratio of 376.7 ohms, or 120 pi ohms.

As free-space is a perfect (lossless) medium for radio waves, it is a dissipationless resistance.

On page 13, the characteristic resistance (Ro) of a transmission line is given in formula (14.3) as the sq rt of L/C, but this is an approximation for low-loss lines as there are no perfect lines.

Negative resistance is a gain instead of a loss. The authors of "Transmission Lines, Antennas, and Wave Guides" were writing for WW-2 officers being trained at Harvard University in radio and radar. The phone system was then using some "negative resistance repeaters" but neither these nor "active antennas" were big at that time. You can only make up the loss in a two-wire phone loop with amplification. Any more gain and the loop "sings" (breaks into oscillation).

Best regards, Richard Harrison, KB5WZI

2976. Re: Another reflected power question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 19:40:36 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92rvl$1cg$1@newshost.mot.com>
Source record: 94375

"Richard Fry" <rfry@adams.net> wrote in message
news:2hej9kFbpqkeU1@uni-berlin.de...
> RE: Quote below.
>
> The on-channel TDR pulse performance of a narrowband antenna can be seen
by
> controlling the RF bandwidth and spectrum span of the test process to fit
> the application. The pulse (ping) itself is modulated onto an RF carrier
> set at the operating frequency.
> - RF

Duh! I should have known. Pulse it within the BW of the load.
Steve N.

2977. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 19:45:21 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92s8i$1dc$1@newshost.mot.com>
Source record: 94376

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b28804_7@corp.newsgroups.com...
> Richard Clark wrote:
>
> > <Cecil.A.Moore@ieee.org> wrote:
> >>You asked - I answered.
> >
> > Did you? What was the original question?
>
> I don't know. I wasn't around 7 billion years ago.

Chuckle, chuckle. CUTE!
Steve N.

2978. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 20:11:11 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c92tov$1kv$1@newshost.mot.com>
Source record: 94377

OH! NO! Vortex vs. Bernoulli
Steve N.

--
Steve N, K,9;d, c. i My email has no u's.
"alhearn" <alhearn@earthlink.net> wrote in message
news:361741e8.0405251835.38cfef6f@posting.google.com...
> This is absolutely the best thread I've seen in years. It's
> educational, thought provoking, entertaining, and revealing about the
> human psyche.
>
> The thread reminds of some of those that I monitor from time to time
> regarding aeronautics and fluid dynamics on the topic of how an
> airplane wing generates lift. Believe or not, there is still no
> consensus after 100+ years. It's interesting in that it parallels this
> thread in many ways -- attempting to interpret various abstract
> mathmatical definitions of a physical process in a way that it "makes
> sense." We're fortunate in that such things don't actually have to
> make sense to work.
>
> Al

2979. Re: R-7000 in the rain

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 20:18:22 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c92u2e$6eu$1@titan.btinternet.com>
Source record: 94517

"Daniel_FY1FV" wrote
> When it rains the VSWR of my Cushcraft R7000 rises (>10:1) on all bands.
It
> is about 1.5:1 when dry.
> Has anyone an idea?

==========

Yes. I'm reluctant to state the obvious. Dunno what an R7000 is, but if
you have a balun or loading coils or traps, is rain water getting into one
or other of them ? Looks like you'll have to find a ladder.

Reg.

2980. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 20:24:06 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <dMadnZpJSZl4YSndRVn-gw@comcast.com>
Source record: 94518

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:40B4D8F9.FA9C1CB1@uci.edu...
> Cecil Moore wrote:
> >
> > Tam/WB2TT wrote:
> > > You can get the same answer from knowing that the impedance looking
> > > into a 1/4 wave section of shorted transmission line is infinite.
> >
> > Ever measure the forward and reflected currents halfway into a
> > shorted 1/4WL stub? How can currents be flowing unimpeded into
> > and out of an infinite impedance?
>
> The question is a little misleading because the direction of the flow of
> current changes every half cycle and is transverse, or orthogonal to the
> direction of wave propagation. In a transmission line, the current
> flows through Z0, ostensibly, which is essentially the impedance from
> one conductor to the other at every point along the transmission line.
> Other than that, superposed forward and reflected waves behave just as
> you described, naturally.
>
> 73, Jim AC6XG
There is no current in the steady state. The steady state voltage is
independent of source impedance, which affect only how long it takes to
reach that. I ran a simulation on this, and you can see that as the voltage
builds up, the current decreases

Tam

2981. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 20:34:07 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B4FF3F.76CCC02C@uci.edu>
Source record: 94519

Tam/WB2TT wrote:
>
> "Jim Kelley" <jwkelley@uci.edu> wrote in message
> news:40B4D8F9.FA9C1CB1@uci.edu...
> > Cecil Moore wrote:
> > >
> > > Tam/WB2TT wrote:
> > > > You can get the same answer from knowing that the impedance looking
> > > > into a 1/4 wave section of shorted transmission line is infinite.
> > >
> > > Ever measure the forward and reflected currents halfway into a
> > > shorted 1/4WL stub? How can currents be flowing unimpeded into
> > > and out of an infinite impedance?
> >
> > The question is a little misleading because the direction of the flow of
> > current changes every half cycle and is transverse, or orthogonal to the
> > direction of wave propagation. In a transmission line, the current
> > flows through Z0, ostensibly, which is essentially the impedance from
> > one conductor to the other at every point along the transmission line.
> > Other than that, superposed forward and reflected waves behave just as
> > you described, naturally.
> >
> > 73, Jim AC6XG
> There is no current in the steady state. The steady state voltage is
> independent of source impedance, which affect only how long it takes to
> reach that. I ran a simulation on this, and you can see that as the voltage
> builds up, the current decreases
>
> Tam

Hi Tam,

The simulation would be fun to play with. What do you use?

73 de jk

2982. Re: near vs far field ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 20:38:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10ba01ot57c33ed@corp.supernews.com>
Source record: 94520

I don't know of any such instrument.

One problem is the very definition of far field. It's a region in which the properties of the radiated wave approach their final values. Some of the characteristics of these final values (that is, the values the wave approaches at very great distances) are (for propagation in air):

-- The field strength decreases inversely with distance
-- The ratio of E/H = the Z of free space (about 377 ohms, purely real)
-- The field has no component in the direction of travel

All these characteristics are approached as a limit, and the distance at which one or more are "close enough" is strictly a matter of definition and the particular application. It's at that somewhat arbitrary point that you're said to be in the far field.

You can devise instruments to measure any or all of these properties, although I'd think doing it with any sort of accuracy would be beyond the reach of most amateurs. But if you did, you'd still have to decide, on the basis of the measurements and your own criteria, where you'll draw your own particular line.

Roy Lewallen, W7EL

Henry Kolesnik wrote:

> Is there a homebrew instrument that I can make that will let me know when
> I'm out of the near field and in the far field? I'd like it to work with
> mobile whips as well as dipoles on HF. The ARRL Ant HBK formula for the
> boundary D between the two fields is an approximation where D = 2L^2/w where
> L is ant length in same units as w, the wavelength.
> tnx
>

2983. Re: Painting the antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 20:41:02 UTC
From: j999w@aol.com
Message-ID: <20040526164102.07231.00002286@mb-m02.aol.com>
Source record: 94421

Maybe this post was the inspiration for the one on rec.radio.misc from a guy looking for a lump of sodium !

jw
K9RZZ

2984. fm antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 20:42:28 UTC
From: Bob <noSpam@noSpam.com>
Message-ID: <40b50134$1@news.microsoft.com>
Source record: 94422

Hello. How can I improve the reception of a small handheld AM/FM antenna? What length antenna should I use and how would I attach it? Can I attach a t-type to a monopole telescoping antenna?

Thans

2985. Re: near vs far field ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:00:10 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <uz7tc.659$6L7.529@newssvr23.news.prodigy.com>
Source record: 94423

I had a couple of reasons for asking. One was to find out more which I
have. I use a field strength meter in the shack which is in the near fied as
a tuning aid for tuning my linear and wonder if I would see any difference
it I placed it in the far field and remoted the reading to the shack?
tnx

--
73
Hank WD5JFR
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:10ba01ot57c33ed@corp.supernews.com...
> I don't know of any such instrument.
>
> One problem is the very definition of far field. It's a region in which
> the properties of the radiated wave approach their final values. Some of
> the characteristics of these final values (that is, the values the wave
> approaches at very great distances) are (for propagation in air):
>
> -- The field strength decreases inversely with distance
> -- The ratio of E/H = the Z of free space (about 377 ohms, purely real)
> -- The field has no component in the direction of travel
>
> All these characteristics are approached as a limit, and the distance at
> which one or more are "close enough" is strictly a matter of definition
> and the particular application. It's at that somewhat arbitrary point
> that you're said to be in the far field.
>
> You can devise instruments to measure any or all of these properties,
> although I'd think doing it with any sort of accuracy would be beyond
> the reach of most amateurs. But if you did, you'd still have to decide,
> on the basis of the measurements and your own criteria, where you'll
> draw your own particular line.
>
> Roy Lewallen, W7EL
>
> Henry Kolesnik wrote:
>
> > Is there a homebrew instrument that I can make that will let me know
when
> > I'm out of the near field and in the far field? I'd like it to work
with
> > mobile whips as well as dipoles on HF. The ARRL Ant HBK formula for the
> > boundary D between the two fields is an approximation where D = 2L^2/w
where

> > L is ant length in same units as w, the wavelength.
> > tnx
> >

2986. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:18:28 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c931j4$i8i$1@hercules.btinternet.com>
Source record: 94424

> On page 73, the characteristic resistance of free-space is defined as
> the sq rt of the permeability of space devided by the dielectric
======================

Why must engineere resort to quoting from their worshipped Guru's who are hardly more likely to be correct than they are themslves.

In all probability the recipient of the advice does't have a copy of the sacred text. If he did he wouldn't be asking the question anyway. And it must be extremely rare for anybody to spend weeks attempting to find a copy. He knows he will have lost interest long before he finds one.

Do engineers these days, in their daily work, depend entirely on the 'gospel truths' to be found in text books on their extensive book shelves without much understanding of what its all about? It's a recipe for time-wasting errors!

Or are they content to obtain money under false pretences?

Sorry about the diversion. I'm in that sort of mood tonight. I'm on Pinot Noir 2001, red - a product of Romania, bottled before Romania became a EU member. But it's no worse than the Italian, Spanish, French, or even the Californian plonk!

Never sampled a 6-shooter, John Wayne, Texan vintage.

Reg.

2987. rock mite 20 qrp random wire ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:18:30 UTC
From: nightowls627@aol.comnojunk
Message-ID: <20040526171830.17730.00002167@mb-m16.aol.com>
Source record: 94425

Hello to all. I continue to return here as antenna's are the hardest thing to figure out. We can end the cw argument by testing antenna knowledge hi hi! Anyways, I have a rock mite 20m qrp that I built and am giving it a go with a random wire hooked to an mfj 901b tuner. I am using 22 gauge stranded at about 16 feet. The tuner has a ground wire as well. Here is the trick . . . I have a buzz in the headphones only at certain times. I can move the headphone wire around and it changes the tone and amplitude of the buzz. In fact it sometimes goes away all together. However, when I put my hand on the final in the altoids can, it also lessons it as well as when I put my hand on the can. It sounds like a ground problem but not sure how to fix it. I tried different grounds but to no avail. Another problem I am having is the swr meter I have will not do less than 5 watts(RS) so I am trying to wing it with the tuner and try to get the highest noise level. Once again though, if I turn the inductance past d/e I get the hum again. Also if I turn up the antenna adjustment, the buzz gets worse. I know this is a long one, but I am hoping someone can help me out.

73
73
Greg
ki4bbl@arrl.net

2988. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:36:51 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b50ed6$1_5@corp.newsgroups.com>
Source record: 94426

Jim Kelley wrote:
> Cecil, my "concepts" about ghosting predict exactly the same thing as
> your "concepts" about ghosting.

Jim, you remind me of my 94 year old aunt. She forgets
what she said yesterday but I love her anyway.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2989. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:38:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b50f3e$1_5@corp.newsgroups.com>
Source record: 94427

Reg Edwards wrote:
> Cec and Co., I keep telling you it's a waste of bandwidth talking about
> 'conjugate matches'. In the transmitter/transmission line context conjugate
> matches do not exist because nobody knows what the internal impedance of the
> transmitter actually is.

If nobody knows what the internal impedance of a transmitter
actually is, how do you know it's not conjugate matched? :-)
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2990. Re: near vs far field ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:45:45 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c93369ktu1@hercules.btinternet.com>
Source record: 94428

So far as using a field strength meter for tuning up the transmitter is concerned, you will not notice the slightest difference between near and far field. There is none. They are both produced by the same transmitter.

2991. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:46:12 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b51108$1_5@corp.newsgroups.com>
Source record: 94430

Jim Kelley wrote:
> So if I "possess" an American Express card, do I "possess" money? No.

"money - 4. any article ... used as a means of payment."

So the answer is yes, credit cards are a form of money. Sorry.
--
73, Cecil http://www.qsl.net/w5dxp

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------== Over 100,000 Newsgroups - 19 Different Servers! =-----

2992. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:47:44 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B51080.CF24B7AD@uci.edu>
Source record: 94431

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > Cecil, my "concepts" about ghosting predict exactly the same thing as
> > your "concepts" about ghosting.
>
> Jim, you remind me of my 94 year old aunt. She forgets
> what she said yesterday but I love her anyway.

Dunno. I did try to forget what _you_ said the other day though. Call
it a fault if you like.

73, Jim AC6XG

2993. Re: near vs far field ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:47:51 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10ba44a54ldvt6a@corp.supernews.com>
Source record: 94429

You'll get different strength readings at different distances from the antenna, and in the near and far fields. But they'll all stay in proportion as you tune your linear, so it doesn't matter where you put your meter. The only exception is that you need to put the meter far enough away from the linear that it won't be responding to radiation leakage from the linear itself, which could be coming from the tank components or parts of the circuit ahead of it. You could check this by seeing what your field strength meter indicates when the linear is feeding a good dummy load. If it's a significant part of your reading when driving an antenna, you need to move the meter.

Roy Lewallen, W7EL

Henry Kolesnik wrote:
> I had a couple of reasons for asking. One was to find out more which I
> have. I use a field strength meter in the shack which is in the near fied as
> a tuning aid for tuning my linear and wonder if I would see any difference
> it I placed it in the far field and remoted the reading to the shack?
> tnx
>

2994. Re: rock mite 20 qrp random wire ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:51:01 UTC
From: jgboyles@aol.com
Message-ID: <20040526175101.09877.00000629@mb-m03.aol.com>
Source record: 94432

>I have a rock mite 20m qrp. I have
>a buzz in the headphones only at certain times. I can move the headphone
>wire around and it changes the tone and amplitude of the buzz.
Hi Greg, First of all I have never used a rock mite, but I will just give
some thoughts. If the receiver is a direct conversion type, they are bad about
picking up 60 hz hum. Does the buzz sound like 60 or 120 hz hum? The finger
touching the final increasing the hum should be a clue.
The antenna may or not be a problem. QRP swr and watt meters are not common,
you may have to look at building one.
Consider using a 20m coax fed dipole, only 33' feet long, and will work ok
20' high. This is balanced, to a degree, and will not require a tuner
Get an antenna analyzer (MFJ 259B ect.) and make sure the impedance at the
tuner input is 50 ohms, assuming that is what the rock mite wants to see.

73 Gary N4AST

2995. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:51:01 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b5122a_5@corp.newsgroups.com>
Source record: 94433

Jim Kelley wrote:
> Excellent, now try and understand what is intended by _ALL_ of the words
> in the sentence.

I know, you have told me before, ad infinitum. All of the words intend
exactly what Jim Kelly wants them to intend and absolutely nothing else.
You are the only person in the entire universe capable of ascertaining
the intent of words. So tell me something I don't already know.
--
73, Cecil http://www.qsl.net/w5dxp

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2996. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:52:46 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b51292$1_5@corp.newsgroups.com>
Source record: 94434

Richard Harrison wrote:
> Negative resistance is a gain instead of a loss.

Therefore, doesn't an amplifier have negative resistance?
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

2997. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:55:06 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b5131e_5@corp.newsgroups.com>
Source record: 94436

Tam/WB2TT wrote:
> There is no current in the steady state.

There is no *net* current in the steady state at the input of a
shorted 1/4WL stub. What do you think the current at the short
is? How did that large amount of current get there without flowing?
--
73, Cecil http://www.qsl.net/w5dxp

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2998. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 21:56:04 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c933pk$fo8$1@titan.btinternet.com>
Source record: 94435

> If nobody knows what the internal impedance of a transmitter
> actually is, how do you know it's not conjugate matched? :-)

Because nobody knows. And it wouldn't make slightest difference to anything
if anyone did.

And nobody knows why I keep answering your questions either. ;o)

Yours, Reggie.

2999. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 22:07:35 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B51527.BACFB72B@uci.edu>
Source record: 94437

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > So if I "possess" an American Express card, do I "possess" money? No.
>
> "money - 4. any article ... used as a means of payment."
>
> So the answer is yes, credit cards are a form of money. Sorry.

A distinction is commonly drawn between plastic and cash, Cecil. I
expected you wouldn't be too stubborn to acknowledge that. My mistake.

73, Jim AC6XG

3000. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 22:15:55 UTC
From: "H. Adam Stevens" <mayaone@earthlink.net>
Message-ID: <vG8tc.12537$be.5548@newsread2.news.pas.earthlink.net>
Source record: 94438

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c931j4$i8i$1@hercules.btinternet.com...
> > On page 73, the characteristic resistance of free-space is defined as
snip-
> Sorry about the diversion. I'm in that sort of mood tonight. I'm on Pinot
> Noir 2001, red - a product of Romania, bottled before Romania became a EU
> member. But it's no worse than the Italian, Spanish, French, or even the
> Californian plonk!
>
> Never sampled a 6-shooter, John Wayne, Texan vintage.
> ----
> Reg.
>
>
Reg
I shot a big rattlesnake just the other day with a 6-shooter. He was in the
ham shack. Threatened my life.
I used a Smith and Wesson model 19 in blued steel with a 4" barrel. It was
loaded with rat shot.
You're always welcome at my QTH and I'll give you a choice of 6-shooters,
from a .32 S&W to a .44 magnum.
Spirits are consumed only AFTER shooting, however.
Tonight I'm looking forward to a Chateau St Michele merlot with my rare
filet.
73
H.
NQ5H

3001. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 22:23:20 UTC
From: jgboyles@aol.com
Message-ID: <20040526182320.09877.00000630@mb-m03.aol.com>
Source record: 94439

>Why must engineere resort to quoting from their worshipped Guru's who are
>hardly more likely to be correct than they are themslves.

That's easy, because most of the time we have no other choice. When designing circuits, antennas, troubleshooting, or talking to newsgroups, we have to rely on other's research. There is no way we can experimentally verify all the data sheets. charts, graphs, computer programs ect. that are available.
Quoting the last 100 years of antenna research, from worshipped Guru's should not be a bad thing, because most of us will never have the opportunity to prove them incorrect. I assume many of the Guru's did the research.
Reg, I am sure you have found numerous errors in Guru's texts, and have tried to point them out to us. But you cant't just go out in the back yard and burn all those books:-) Who would we then quote?
73 Gary N4AST

3002. Re: near vs far field ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 22:30:32 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <cU8tc.1225$lo3.996@newssvr22.news.prodigy.com>
Source record: 94440

Thanks for the answers. I even got a personal reply from someone with some Pinot across the pond confirming the above.
No clear boundary, no differnce and it's OK to have the FS meter in the shack. Now why can't I find out this quick and easy if the final in a Tx is dissipative or non-dissipative to reflections?

--
73
Hank WD5JFR

"Roy Lewallen" <w7el@eznec.com> wrote in message news:10ba44a54ldvt6a@corp.supernews.com...
> You'll get different strength readings at different distances from the
> antenna, and in the near and far fields. But they'll all stay in
> proportion as you tune your linear, so it doesn't matter where you put
> your meter. The only exception is that you need to put the meter far
> enough away from the linear that it won't be responding to radiation
> leakage from the linear itself, which could be coming from the tank
> components or parts of the circuit ahead of it. You could check this by
> seeing what your field strength meter indicates when the linear is
> feeding a good dummy load. If it's a significant part of your reading
> when driving an antenna, you need to move the meter.
>
> Roy Lewallen, W7EL
>
> Henry Kolesnik wrote:
> > I had a couple of reasons for asking. One was to find out more which I
> > have. I use a field strength meter in the shack which is in the near fied as
> > a tuning aid for tuning my linear and wonder if I would see any difference
> > it I placed it in the far field and remoted the reading to the shack?
> > tnx
> >

3003. Re: rock mite 20 qrp random wire ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 22:35:28 UTC
From: dplatt@radagast.org
Message-ID: <10ba6tgo289vqfe@corp.supernews.com>
Source record: 94441

In article <20040526171830.17730.00002167@mb-m16.aol.com>,
Greg Doughty <nightowls627@aol.comnojunk> wrote:

>Hello to all. I continue to return here as antenna's are the hardest thing to
>figure out. We can end the cw argument by testing antenna knowledge hi hi!
>Anyways, I have a rock mite 20m qrp that I built and am giving it a go with a
>random wire hooked to an mfj 901b tuner. I am using 22 gauge stranded at about
>16 feet. The tuner has a ground wire as well. Here is the trick . . . I have
>a buzz in the headphones only at certain times. I can move the headphone wire
>around and it changes the tone and amplitude of the buzz. In fact it sometimes
>goes away all together. However, when I put my hand on the final in the
>altoids can, it also lessons it as well as when I put my hand on the can. It
>sounds like a ground problem but not sure how to fix it. I tried different
>grounds but to no avail.

Direct-conversion receivers are rather notorious for being subject to
a phenomenon called "tunable hum".

According to what I've read in "Experimental Methods in RF Design",
the root cause of this problem is local-oscillator radiation and
modulation. The D-C receiver has an oscillator running at all times,
which is being fed into the mixer. Mixers have a finite amount of
isolation between the L/O port and the RF-in port, and some amount of
the L/O power is coupled back out through the RF-in port. In a simple
D-C receiver, this L/O power can be coupled right out to the antenna,
and radiated. This can cause two effects:

- It's audible on other receivers in the area, as a "birdie" at the
receiver's LO frequency.

- It can be coupled into nearby power wiring, and mixed (in the RF
sense) with the 60-cycle powerline waveform and the waveform's
harmonics by nonlinear devices hooked to the power line - i.e.
power supply rectifiers. This mixing (which is in effect a
modulation) can create RF sidebands, located 60 and 120 and 180 and
240 etc. Hz on either side of the local-oscillator frequency.
These sidebands radiate out through the power wiring, are picked up
by the antenna, and are demodulated by the D-C receiver's mixer.
In sum, then, you end up hearing powerline hum and harmonics in
your 'phones, even if the D-C receiver is powered by batteries and
has no connection at all to the power mains.

The best fix for this is to include an RF preamp or buffer between the
receiver's antenna and mixer. The benefit doesn't come from the
preamp gain - it comes from the additional isolation that the preamp
adds to the circuit, thus blocking the L/O leakage from the mixer

before it can reach the antenna and be radiated. As best as I can recall (I don't have the schematic handy) the Rockmite does not include such a preamp.

If your Rockmite isn't battery powered, try that. Also, try using a balanced antenna, located further away from your listening area (and from power wiring, etc.) - this may reduce the degree to which the L/O leakage couples into the power lines and creates sidebands.

I do hear some small amount of buzz/hum on my Rockmite, even when battery powered and even when hooked to an outdoor inverted-V dipole located some distance from the building and from any power wires.

Simple D-C receivers can also be subject to strong-signal overload and intermodulation. It's not uncommon to hear AM broadcast-band signals on a Rockmite or Pixey or similar, due to strong-signal overload of the mixer. There's a simple modification available for the Rockmite which greatly reduces this problem... if I recall correctly it's a single resistor, placed in parallel with the diodes located just before the mixer. It's possible that your hum/buzz is coming from intermodulation from a strong local RF source of some sort - if so, this mod might help matters.

> Another problem I am having is the swr meter I have
>will not do less than 5 watts(RS) so I am trying to wing it with the tuner and
>try to get the highest noise level. Once again though, if I turn the
>inductance past d/e I get the hum again. Also if I turn up the antenna
>adjustment, the buzz gets worse. I know this is a long one, but I am hoping
>someone can help me out.

Unfortunately, the increase in buzz may indicate that you're establishing a better match with the antenna... you'll transmit more effectively, receive more effectively, but also leak the local-oscillator power more effectively.

If you want a tuner better suited to QRP operation, I can recommend the Norcal QRP (now AMQRP) BLT kit. It's a simple Z-match tuner, good for up to about 5 watts, capable of feeding balanced antennas or (with one additional jack and a switch) coax-fed antennas, and including a simple resistive-bridge SWR meter which provides a useful tuning indication with only a few milliwatts of power. It's a nice match for the Rockmite.

http://www.amqrp.org/kits/blt/ for the kit. If you've got a well-stocked junk box you might already have everything you need to build a similar design. Least-common component is probably the little plastic varicaps - you could certainly substitute broadcast-band air variable caps if you have a couple handy.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will

boycott any company which has the gall to send me such ads!

3004. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 22:36:12 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9364s$ql4$1@sparta.btinternet.com>
Source record: 94442

> Richard Harrison wrote:
> > Negative resistance is a gain instead of a loss.
>
> Therefore, doesn't an amplifier have negative resistance?
> --
> 73, Cecil

==========

Cecil, for once, you are not far from the truth. The problem lies in producing the equivalent circuit diagram.

Reg.

3005. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 23:13:13 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <B8GdnY_F4oAUuSjdRVn-sA@comcast.com>
Source record: 94443

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c9364s$ql4$1@sparta.btinternet.com...
> > Richard Harrison wrote:
> > > Negative resistance is a gain instead of a loss.
> >
> > Therefore, doesn't an amplifier have negative resistance?
> > --
> > 73, Cecil
>
> ==========
>
> Cecil, for once, you are not far from the truth. The problem lies in
> producing the equivalent circuit diagram.
> ----
> Reg.
>
>
Hey guys,
Jog my memory; but don't some power tubes have a high value negative plate resistance under some bias conditions and will oscillate under no load conditions if external losses are low.
The 4CX250 family comes to mind.

Tam/WB2TT

3006. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 23:16:50 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <-JCdnXie3_z8uCjdRVn-uQ@comcast.com>
Source record: 94444

SWCAD from Linear. I also built up a model of an ideal SWR meter.

Tam

3007. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 23:19:30 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <7qidnShC29-cuyjdRVn-gg@comcast.com>
Source record: 94445

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b5131e_5@corp.newsgroups.com...
> Tam/WB2TT wrote:
> > There is no current in the steady state.
>
> There is no *net* current in the steady state at the input of a
> shorted 1/4WL stub. What do you think the current at the short
> is? How did that large amount of current get there without flowing?
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
Cecil,
I think it is more instructive to turn on a DC voltage at t=0, rather than a sine wave. In either case, the voltage builds up step wise, with smaller and smaller steps until you don't see them.

Tam
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3008. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 23:37:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ndaab0p9e8cmndj28v2etdtfh4brg9lu0l@4ax.com>
Source record: 94446

On Wed, 26 May 2004 21:56:04 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:

>> If nobody knows what the internal impedance of a transmitter
>> actually is, how do you know it's not conjugate matched? :-)
>--------------------------------
>
>Because nobody knows. And it wouldn't make slightest difference to anything
>if anyone did.

Lord Kelvinator is mighty proud of you, bucko.
>
>And nobody knows why I keep answering your questions either. ;o)

You didn't answer any question, you responded - big difference.

We at least get the varietal name of the grape you are knocking back.

73's
Richard Clark, KB7QHC

3009. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 23:38:56 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <IqGdnV0xM6AStyjdRVn-gg@comcast.com>
Source record: 94447

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:mgr6b054nvqn95anick6bdt49b69fv8lcf@4ax.com...
> On Tue, 25 May 2004 07:27:03 -0500, "Richard Fry" <rfry@adams.net>
> wrote:
> >REALITY CHECK: If tx source Z really was 50 ohms, a tx connected to a 50
> >ohm load would lose 1/2 of the RF power it generates to that internal Z.
>
> Dear Richard,
>
> This is the time-honored misreading and misapplication of Thevenin's
> theorem posed by Edison to confound investors in Westinghouse's AC
> generation plants. Look at the ratio of DC to AC power plants
> constructed in the past century to find the poor accuracy of your
> reading.
>
> 73's
> Richard Clark, KB7QHC
Richard,
I believe Edison was talking about the Synchronous Impedance of an
alternator. That measurement is based on the short circuit current of the
machine, and limited by the leakage inductance; purposely made large for
self protection. As for pertinent numbers, a 2300V 1000A alternator has an
effective series resistance of about .05 Ohm. That is feeding a load of 2.3
Ohms.

Tam/WB2TT

3010. Re: near vs far field ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 23:42:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gkaab0dacfglvhqqaq5pvtpd6hunk2cqap@4ax.com>
Source record: 94448

On Wed, 26 May 2004 14:23:59 -0400, "Jack Painter" <223bthp@cox.net>
wrote:
>Very interesting Richard. What did you use as a "ground screen" and how much
>ground coverage did you provide in the dipole experiment?

Hi Jack,

The EZNEC files are available at the page. It looks like a fan of 64
radials, each a quarter wave long. Check the file if necessary.

73's
Richard Clark, KB7QHC

3011. Re: R-7000 in the rain

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-26 23:55:20 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <I7atc.119796$xw3.7196739@attbi_s04>
Source record: 94449

Also, are the traps installed upside down?/

DD, W1MCE

Daniel_FY1FV wrote:

> Hi,
> When it rains the VSWR of my Cushcraft R7000 rises (>10:1) on all bands. It
> is about 1.5:1 when dry.
> Has anyone an idea?
> TNX in advance.
> 73's
> Daniel, FY1FV
>
>

3012. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 00:55:45 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c93eah$1t5$1@titan.btinternet.com>
Source record: 94450

> There is no way we can experimentally verify all the data
> sheets. charts, graphs, computer programs ect. that are available.

==========

There's no need to. Inevitably, 99.9 percent of data to be found in books does not match up to the exact problem in hand. And what is in hand is VERY exact. Very early in one's career one realises this and soon discovers it is largely a waste of time 'researching' the literature for details. There's too much of it. It is more expeditious to have confidence in one's ability, to go back to first principles and THEN concentrate on the details in and - which are NEVER to be found in the books.

The best engineers don't have time to write books - except perhaps for short, simple ones which educate by concentrating on first principles. A relatively few number of such books or papers are needed. Nearly all of them have already been written. Such as Shannon's beautifully concise paper on Ball-packing.

==========

> Quoting the last 100 years of antenna research, from worshipped Guru's
should
> not be a bad thing, because most of us will never have the opportunity to
prove
> them incorrect.

==========

But good engineers accidentally find them incorrect all the time. It forms part of their normal wasted time. Anybody who worships a book has only ever read it (e.g. not built the circuit) - he has never used it in anger. It has to be admitted that finding more than two errors in a book (not counting obvious printing errors) is enough to destroy its sacred properties.

==========

> Reg, I am sure you have found numerous errors in Guru's texts, and have
tried
> to point them out to us. But you cant't just go out in the back yard and
burn
> all those books:-) Who would we then quote?

==========

I once quoted (second hand) from a text book on this newsgroup. But it was in an ironical context. Probably nobody noticed.

I possess remarkably few books on radio enginering. One of then is a treasured 1937 copy of Terman's Radio Engineering. I may refer to it once every few years because of its comprehensiveness. I have a poor memory. But I wouldn't dream of using numbers from it in anger without checking from first principles they are in the right ball park. I remember first principles. They are so simple and can be expressed in plain English.

But I could not bear to see books of any sort burned! Carry on quoting Kraus who I am a little familiar with via this newsgroup.

The bottle is finished. Good Night.

Reg, G4FGQ

3013. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 01:18:48 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b542dd$1_2@corp.newsgroups.com>
Source record: 94451

Jim Kelley wrote:
>
> Cecil Moore wrote:
>>So the answer is yes, credit cards are a form of money. Sorry.
>
> A distinction is commonly drawn between plastic and cash, Cecil. I
> expected you wouldn't be too stubborn to acknowledge that. My mistake.

Do you happen to have a special dictionary where words don't
mean what words mean? Money can be plastic or cash or gold or
silver or worthless coins or sea shells or virtually any other
medium of exchange.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3014. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 01:32:15 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b54605_2@corp.newsgroups.com>
Source record: 94452

Tam/WB2TT wrote:

> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>>There is no *net* current in the steady state at the input of a
>>shorted 1/4WL stub. What do you think the current at the short
>>is? How did that large amount of current get there without flowing?
>>--
> I think it is more instructive to turn on a DC voltage at t=0, rather than a
> sine wave. In either case, the voltage builds up step wise, with smaller and
> smaller steps until you don't see them.

DC doesn't tell us anything about a 1/4WL shorted stub which is a
network problem, not a circuit problem. The net current at the mouth
of the stub is close to zero while the voltage is at a maximum. At
the short at the other end of the stub, transmission line theory holds.
The voltage is close to zero while the current is at a maximum. Now
exactly how can maximum current be flowing through that short if
no current is flowing into and out of the stub. Hint: it can't!

The forward current and reflected current cancel at the mouth of
the shorted 1/4WL stub. However, they add in-phase 1/4WL away at
the short, maybe to many amps of RF current at the shorted end.
Since there is no physical impedance at the mouth of a stub, nothing
except superposition of forward and reflected waves happens there
and nothing except a virtual impedance exists there. All of the action
is at the shorted end of the stub where there exists 100% reflection.
--
73, Cecil http://www.qsl.net/w5dxp

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3015. Re: Zagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 01:33:36 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b54654$1_2@corp.newsgroups.com>
Source record: 94453

william ewald wrote:
> "Zagi antenna construction and measurements
> A zagi antenna is made from serrated wire or plate. It has reduced
> dimension because of the slow wave characteristics of the periodic
> structure. The student is asked to construct and measure a Zagi for
> the 225MHz digital broadcast band in the UK. "

Stand by - I am inventing a zig-zagi.

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3016. Re: rock mite 20 qrp random wire ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 01:41:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10bahr8g7bm368f@corp.supernews.com>
Source record: 94454

Dave gave some good suggestions, but let me add one more. You might be hearing detected video from a strong TV station. Years ago when I was testing audio amplifiers for the little "Optimized" transceiver, I was driven nearly to distraction by that until I finally figured out what it was. In my case, the headphone wire was the main antenna for the video, and a good bypass with very short leads right at the headphone jack cured it. But in your case it could be getting in via the antenna or power supply leads as well. You can bypass the power supply leads, but it takes a little knowledge and care to let HF through the antenna lead while effectively stopping VHF or UHF TV.

Winding the power supply and headphone leads a few turns on ferrite toroids close to the rig can also be very effective. A good type of ferrite to use is type 43, which is common, although most other kinds will work fairly well. You'll probably want to use separate toroids for power supply and headphone, for convenience. Keep the two conductors together as you pass them through the core.

Here's how to identify detected video. Hold perfectly still, and see if the buzz changes. The sound of video will change with the transmitted picture. If you can correlate the changing sound with the picture from a local channel, you have the smoking gun. But even if you can't, a buzz that changes rougness and loudness while you hold still is pretty good evidence. If you have a 'scope, you can identify video by using line triggering. Video will look like a pattern that slowly scrolls by, taking about 20 seconds to drift a full "cycle".

Roy Lewallen, W7EL

Greg Doughty wrote:

> Hello to all. I continue to return here as antenna's are the hardest thing to
> figure out. We can end the cw argument by testing antenna knowledge hi hi!
> Anyways, I have a rock mite 20m qrp that I built and am giving it a go with a
> random wire hooked to an mfj 901b tuner. I am using 22 gauge stranded at about
> 16 feet. The tuner has a ground wire as well. Here is the trick . . . I have
> a buzz in the headphones only at certain times. I can move the headphone wire
> around and it changes the tone and amplitude of the buzz. In fact it sometimes
> goes away all together. However, when I put my hand on the final in the
> altoids can, it also lessons it as well as when I put my hand on the can. It
> sounds like a ground problem but not sure how to fix it. I tried different
> grounds but to no avail. Another problem I am having is the swr meter I have
> will not do less than 5 watts(RS) so I am trying to wing it with the tuner and
> try to get the highest noise level. Once again though, if I turn the
> inductance past d/e I get the hum again. Also if I turn up the antenna
> adjustment, the buzz gets worse. I know this is a long one, but I am hoping

> someone can help me out.
>
> 73
> 73
> Greg
> ki4bbl@arrl.net

3017. Re: R-7000 in the rain

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 02:15:16 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0405261815.2dfb066d@posting.google.com>
Source record: 94455

I don't own a R7000 but there are many user reviews of this particular antenna on www.eham.com. It appears from the reviews that the traps may be the problem. Possibly, water is getting into one or more of the traps.

Al

"Daniel_FY1FV" <mycall@wanadoo.fr> wrote in message news:<c92qp8ucd1@news-reader3.wanadoo.fr>...
> Hi,
> When it rains the ROS of my Cushcraft R7000 rises (>10:1) on all bands. It
> is about 1.5:1 when dry.
> Has anyone an idea?
> TNX in advance.
> 73's
> Daniel, FY1FV

3018. Re: Tx Source Impedance & Load Reflections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 02:55:38 UTC
From: The other John Smith <jocjo-john@yooha.com>
Message-ID: <KMctc.12958$be.5144@newsread2.news.pas.earthlink.net>
Source record: 94456

"Richard Fry" <rfry@adams.net> wrote in message
news:2hhd51Fd2gklU1@uni-berlin.de...
> TWIMC:
>
> OK, argue amongst yourselves. I have tried to post some real world data
and
> experience here, using a respectful tone. What I read back is mostly
filled
> with haughtiness, invective and intimidation.
>
> Back to lurk mode (if that).
>
> Richard Fry
>

Hi, Richard -

It's refreshing to read something that "feels" familiar. I must say it is easy to understand since that has been my thinking for many years. Thanks for the quotation.

John

3019. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 04:00:46 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <2M6dnZcmSOpw-ijd4p2dnA@comcast.com>
Source record: 94457

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40b54605_2@corp.newsgroups.com...
> The forward current and reflected current cancel at the mouth of
> the shorted 1/4WL stub. However, they add in-phase 1/4WL away at
> the short, maybe to many amps of RF current at the shorted end.
> Since there is no physical impedance at the mouth of a stub, nothing
> except superposition of forward and reflected waves happens there
> and nothing except a virtual impedance exists there. All of the action
> is at the shorted end of the stub where there exists 100% reflection.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
I just did the simulation again, and you are right. For a 1V signal feeding
a 50 Ohm line through a 450 Ohm series resistor, there is 20 ma of
current flowing through the short. Don't understand why I didn't see it the
other time. There is 0 current through the 450 Ohm
resistor.

Tam/WB2TT

3020. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 04:01:31 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c93p6rldd1@sparta.btinternet.com>
Source record: 94458

If rattle-snake meat is fit for human consumption I assume you don't pepper
it with rat shot. Probably best washed down with a delicate dry white.

Reg.

3021. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 04:05:03 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <DYWdnfFZ1rlz9SjdRVn-sw@comcast.com>
Source record: 94459

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:dMadnZpJSZl4YSndRVn-gw@comcast.com...
> There is no current in the steady state. The steady state voltage is
> independent of source impedance, which affect only how long it takes to
> reach that. I ran a simulation on this, and you can see that as the
voltage
> builds up, the current decreases
>
> Tam
>
>
Whoops, ERROR. There is no current flowing from the source, but there is
current flowing through the short in steady state.

Tam

3022. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 05:10:49 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c93t8pkmh1@titan.btinternet.com>
Source record: 94460

For Gawd sake, don't tell Cecil he's right. There'll be no stopping him!

3023. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 07:31:22 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <eu4bb0t2u9al33oro4hqtgl648uqn3a3oi@4ax.com>
Source record: 94378

On Wed, 26 May 2004 02:07:50 GMT, "Lord Snooty" <bonzo@dog.com> wrote:

>To clarify
>a) "Load" in my context means "load resistor (r) and load capacitor (reactance
>jx) in series"
>b) The output transistor feeds to the output port through an inductor. One
>would therefore expect X, the source reactance, to be positive.

Hi Andrew,

>>a load capacitor value of 250 +/- 10pF (-j80 ohms @ 8 MHz) was found to produce a
>>minimum in the total voltage across the load.
What was the voltage?
>>Also, as capacitance was increased over the range 100-700pF, the voltage across the load
resistor
>>increased monotonically.
What were the voltages?
>>The latter is easy to explain (it means the source reactance is positive, and
>>smaller than +j28.4 ohms), but the former is beyond my ken.
as the capacitive reactance falls, you note the voltage climbs, this
hardly requires an inductance to explain this. Simple divider action
serves quite well. You have since revealed the inductor buffered
output, but the data is still pretty skimpy to bless it as the major
contributor to source Z.

What are you using to measure this voltage?

73's
Richard Clark, KB7QHC

3024. Re: Polarization conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 08:25:33 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <YBhtc.34332$wa.21386@fed1read07>
Source record: 94379

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c92mu2$4k$1@hercules.btinternet.com...
> > I've seen some very informative posts here
>
> Thanks. But how do you recognise an informative post ?
>
>

Any post with an equation that you agree with.

Ed
wb6wsn

3025. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 08:57:18 UTC
From: Jan Van Belle <Jan.Van_Belle@advalvas.be>
Message-ID: <2hloreFegkn1U1@uni-berlin.de>
Source record: 94380

k4wge wrote:

>
> An 18 page paper entitled
>
> FRACTAL ANTENNAS
> Introduction to fractal technology and presentation of a fractal
> antenna adaptable to anytransmitting frequency - The "FRACTENT"
> By Werner Hï¿½dlmayr, DL6NDJ
> January 2004
>
> Can be downloaded at www.antenneX.com

in fact, that was the article that raised all the questions ;-)
I found it interesting, but wanted to know if hams are really using it!

Kind regards,

Jan, ON5DOA

3026. Re: Polarization conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 09:59:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10bbf105d7ulje7@corp.supernews.com>
Source record: 94381

Left Circ E = 0.5 * (Eh + j Ev)
Right Circ E = 0.5 * (Eh - j Ev)

where Eh and Ev are complex horizontal (phi) and vertical (theta) linearly polarized E field components respectively. Left Circ E and Right Circ E are of course also complex.

You can find this in just about any antenna text. A text would probably be a good investment if you're going to be digging into theory at this level.

Roy Lewallen, W7EL

Dario Lopez wrote:

> Hi everyone,
> I've seen some very informative posts here and I'm hoping this
> question will generate some more.
>
> Does anyone out there know how to convert antenna field measurements
> to linearly polarized components as well as circularly polarized
> components?
>
> I have a file with complex field data (E theta & E phi : real and
> imaginary) and have been searching for a method to do the conversions
> barring using poincare sphere concepts (they are non-intuitive as far
> as I'm concerned. The linear conversion is pretty straight forward:
>
> E_theta = sqrt(Re_E_theta^2 + Im_E_Theta^2)
> E_theta_phase = atan(Im_E_Theta/Re_E_Theta)ï¿½correction factor for
> quadrant placement
>
> Same goes for E_Phi.
>
> Does anyone know how to do it for circluar polarization?
>
> Regards
>
> Dario

3027. Re: Power Factor

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 10:24:44 UTC
From: David J Windisch <davidw@copper.net>
Message-ID: <40b5c235$1_5@newsfeed.slurp.net>
Source record: 94382

Hi, Cec:
I don't have to guess ;o)
73, Dave, N3HE

SNIP
> akin to stubs on an RF transmission line. Guess how long a 1/8WL stub
> would be at 60 Hz. :-)
> --
> 73, Cecil http://www.qsl.net/w5dxp
>

3028. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 12:23:10 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <10bbnj5pgaevk45@corp.supernews.com>
Source record: 94383

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c93p6rldd1@sparta.btinternet.com...
> If rattle-snake meat is fit for human consumption I assume you don't
pepper
> it with rat shot. Probably best washed down with a delicate dry white.
> ----
> Reg.
>
>
Tastes just like chicken.
It was a head shot. No spoiled meat. I have JPEGs.
I gave the tail to one of my grad students.
Riesling or Pinot Noir?
H.

3029. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 15:21:28 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b60861_8@corp.newsgroups.com>
Source record: 94384

Tam/WB2TT wrote:
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>
>>The forward current and reflected current cancel at the mouth of
>>the shorted 1/4WL stub. However, they add in-phase 1/4WL away at
>>the short, maybe to many amps of RF current at the shorted end.
>>Since there is no physical impedance at the mouth of a stub, nothing
>>except superposition of forward and reflected waves happens there
>>and nothing except a virtual impedance exists there. All of the action
>>is at the shorted end of the stub where there exists 100% reflection.
>
> I just did the simulation again, and you are right. For a 1V signal feeding
> a 50 Ohm line through a 450 Ohm series resistor, there is 20 ma of
> current flowing through the short. Don't understand why I didn't see it the
> other time. There is 0 current through the 450 Ohm resistor.

Install a Bird wattmeter at the 450 ohm resistor and you will read
forward power and reflected power. The *net* current through the 450
ohm resistor is zero. The forward current is not zero. The reflected
current is not zero. Their magnitudes (10 ma?) are equal and their phases
are 180 degrees from each other so they cancel to net zero current.

If we take the forward current at the 450 ohm resistor as a reference of
10 ma at zero degrees, the reflected current will be 10 ma at 180 degrees.
Those two current signals add up (superpose) to zero at the resistor.
--
73, Cecil http://www.qsl.net/w5dxp

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3030. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 15:30:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b60a7a_8@corp.newsgroups.com>
Source record: 94385

Tam/WB2TT wrote:
> Whoops, ERROR. There is no current flowing from the source, but there is
> current flowing through the short in steady state.

There is no net current flowing from the source, but there is net current flowing through the short during steady-state. Where does that current come from? It comes from the in-phase addition of forward and reflected current. The voltage goes to zero and the current doubles at a short. The zero net current from the source comes from the out-of-phase addition (subtraction) of forward and reflected current.

This is where that darned definition comes into play. By definition, the reflected current is being 100% re-reflected and the source is delivering zero current or, in a system with losses, is delivering only the amount of current needed to offset the losses.

We can argue whether the reflected current makes it back into the source or not. But there is no argument that reflected current is originating at the short in the 1/4WL stub because it can be easily measured. Forward current and reflected current are very close to equal magnitudes all up and down an efficient stub.
--
73, Cecil http://www.qsl.net/w5dxp

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3031. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 15:31:00 UTC
From: richardharrison@webtv.net
Message-ID: <28940-40B609B4-259@storefull-3251.bay.webtv.net>
Source record: 94389

Cecil, W5DXP wrote:
"The forward ciurrent and reflected current cancel at the mouth of the shorted 1/4 WL stub. However, they add in-phase 1/4-WL away at the short, maybe to many amps of RF current at the shorted end. Since----."

Very clear and concise. I am persuaded that once circulating current is established, only the current required to supply losses is drawn at the mouth of the shorted 1/4-WL stub.

Best regards, Richard Harrison, KB5WZI

3032. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 15:31:33 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b60abd$1_8@corp.newsgroups.com>
Source record: 94387

Reg Edwards wrote:
> For Gawd sake, don't tell Cecil he's right.

You wouldn't expect a Texan to be left, would you, Reg?

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3033. Re: Power Factor

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 15:33:34 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0405270733.4a63d86c@posting.google.com>
Source record: 94386

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40b4b817_1@corp.newsgroups.com>...
> David J Windisch wrote:
> > R-f transmission-line swr reduction by what ever means is, I think, akin to
> > what the local power company accomplishes by hanging lumps of reactance
> > across its a-c transmission lines, ie, reducing volt-amps-reactive, in its
> > system.
>
> The sum of the loads on a power line is virtually always inductive
> so the power company adds capacitors where they are needed. That is
> akin to stubs on an RF transmission line. Guess how long a 1/8WL stub
> would be at 60 Hz. :-)

Depends on the velocity factor of the line used to make the stub...

Then there's the old trick of the synchronous condenser for power factor correction.

73 de Jim, N2EY

3034. Re: TROLL ALARM!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 15:37:01 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b60c05$1_8@corp.newsgroups.com>
Source record: 94388

Tdonaly wrote:
> I'm not an engineer, either. Engineers wouldn't make such bad governors,
> however, because most engineers understand feedback principles.

The two engineering US presidents that I know of were pretty terrible.

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3035. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 15:46:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b60e31_8@corp.newsgroups.com>
Source record: 94390

Steve Nosko wrote:

> "Jim Kelley" <jwkelley@uci.edu> wrote:
>>I don't notice it until it the resulting chemical reaction takes place
>>on the retina of my eye. Until then, I can only imagine E crossing B,
>>and write the expression for it down on a piece of paper as it has no
>>physical manifestation.
>
> Yikes!. Do I read this as being equivalent to saying that there is no
> vibration in the air when a tree falls as long as no person is there to have
> these vibrations intercept the ear drum??

Jim is the only person in his own personal universe who is capable of
observing the collapse of a probability wave. :-) He doesn't realize
that probably waves collapse into exactly what one is trying to
measure. Got a hammer? - Would you believe? - Here comes a nail!
--
73, Cecil http://www.qsl.net/w5dxp

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3036. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 15:49:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b60eee$1_8@corp.newsgroups.com>
Source record: 94391

Steve Nosko wrote:

> "Richard Clark" <kb7qhc@comcast.net> wrote:
>
>><Cecil.A.Moore@ieee.org> wrote:
>>>Well Richard, here's your chance. Please enlighten us on J.C.
>>> Slater's words in _Microwave_Transmission_.
>>
>>What was the original question? [accredited stock response]
>
> It's clear that R.C. loves tweeking Cecil.

Trouble is, I usually have no idea what his random ramblings
are all about.
--
73, Cecil http://www.qsl.net/w5dxp

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3037. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 15:59:21 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b61142$1_8@corp.newsgroups.com>
Source record: 94392

Steve Nosko wrote:
> From this I infer that Cecil believes that once the transient portion of
> the response has concluded you are in the steady state and no more
> reflections are occurring. Is this a correct re-statement of your belief,

No, no, no. That is a re-statement of the other side of the argument
from mine. I often use devil's-advocate type arguments.

The definition of steady-state by the other side is pure unvarying
sine waves with no noise and no modulation. Then the reflections
sorta disappear into a steady-state mush of standing waves. A
modulated TV signal, according to their argument, is not a steady-
state signal. Within this steady-state mush of standing waves, energy
never makes it from the load back to the match point. Apparently,
because of the uncertainty principle, reflected energy doesn't
actually exist anywhere until it is radiated or dissipated, i.e.
its probability wave collapses.

I have challenged them to produce a standing wave without a rearward-
traveling wave but nobody has been up to that challenge.
--
73, Cecil http://www.qsl.net/w5dxp

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3038. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 16:04:35 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <u-mdndMrp5IMjCvdRVn-hA@comcast.com>
Source record: 94393

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:c92rhj$17k$1@newshost.mot.com...
>
> "Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> news:O9qdnQztu9obyC7dRVn-ig@comcast.com...
> >
> > "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> > news:laIsc.430$QD3.98@newssvr24.news.prodigy.com...
> > > Richard
> > > ...I got
> > > out the book REFLECTIONS II by Walt Maxwell W2DU. I'm typing
verbatim
> > from
> > > page 2-2 and 23-1
>
> I paraphrase / quote the quote:
> Power reflected from a mismatch back into the PA is not absorbed
there.
> He writes:
> "when the pi-network tank is tuned to resonance, a virtual
> short circuit to rearward traveling waves is created at the input
> of the network. Consequently, instead of the reflected power
> reaching the tubes of the amplifier, it is totally re-reflected
> toward the load by the virtual short "
>
> Hank, I'm sorry, but I believe this is not correct as stated. The
word
> "totally", I believe is misleading and contrary to what I think all will
> agree. Namely that there MUST be SOME real part (although the true amount
> is disputed here) to the Zout of the PA and therefore SOME power MUST be
> absorbed there. I believe the point of contention truely is just how much
> is absorbed and how much is reflected...
>
> >> ...Also what happens in a transistor final with no pi?
>
> AGAIN. Be careful that you DO NOT keep assuming that the full power is
the
> incident power. Incident meaning forward power or that which the
> transmitter is sending toward the load. I have a real corker below. Be
> careful. Do not try this at home, I am a professional. (yea, I know
this'll
> spawn all kinds of grief)
>
>

> Tam sez:
> > Henry,
> > Here is an example of what you just said. Take a sine wave source, and
> > connect it to a 1/4 wave section of shorted transmission line through a
> > series resistor R. The reflected wave will reach this resistor 1/2 cycle
> > later, and will be in phase with the source. For a lossless transmission
> > line, there will be *0 Volts across the resistor*. There will be 0
current
> > through the resistor, and the reflected wave will be re reflected for
all
> > values of R, including R=Z0, because the reflected wave will not "know"
> what
> > R is. You can get the same answer from knowing that the impedance
looking
> > into a 1/4 wave section of shorted transmission line is infinite.
> > Tam/WB2TT
>
> Tam,
> Although I believe you have digressed somewhat, I will follow this
path
> since it contains a closely related concept. You obviously have a pretty
> good handle on much of this (as others do, up to a point, and struggle to
> make their mental models fit the reality - or to make other's mental
models
> fit theirs)...However, there is a paradox here which appears to be the
root
> of this disagreement and your example hit it right on the head. You have
> some implicit assumptions here.
>
> 1) Zero volts across the resistor = (not said, but implied) the t-line
acts
> like an open at the input end, therefore there is no current into the line
> which results in the zero V across R. V=I^2 * R. I think everybody will
> agree with this. (shorted 1/4 wave acts like an open and an open 1/4 wave
> looks like a short - mantra of all, no?).
>
> 2) Resistor current = zero therefore reverse traveling wave gets reflected
> toward the load end. The implication clearly is that with zero resistor
> current, no energy can be flowing out that way, so it must be reflected.
>
> HOWEVER...
> Been a while since I went to this depth and interesting to do so,
though
> unnecessary, I will anyway...
>
> If the input to this stub acts like an open, there can be NO current,
> thus no power entering, therefore there can be no forward wave, no
reflected
> wave and no summation of waves to make the open in the first place and no
> need to re-reflect the reflected wave from the resistor who (or is it

whom)
> has no current. This appears to be the root cause of this problem.
> Now, we can say that (and I think it has been said) that it makes no
> difference how large these two waves (which cancel each other to form the
> open circuit at the stub input) can be any absolute magnitude. 1 amp 10
> amps 100 amps doesn't matter - they cancel. So what are they really?
> There are two things to consider as you work out how you will resolve
> this paradox in your mental model.
> 1) I believe the most important -- If the Z looking in to the stub is
high,
> how can you send a large amount of power down the line. If you say it is
an
> infinite Z then you have a really big problem explaining how it got there
in
> the first place.
> 2) There is a tendency to assume that the forward power is the same power
as
> when the load is not a short, but Zo.
>
> Interesting puzzle, but I don;t need to go further. At some point you
must
> 'believe' something and I can comfortably stop there...for now.
>
> Oh well...
> --
> Steve N, K,9;d, c. i My email has no u's.
>
>
Steve,
I think there is an analogy here to a high Q resonant parallel tuned
circuit. It takes very little to exite this, but there can be large
circulating current in the L and C.

BTW, on my shorted transmission line: I had looked at the current on the
transmission line - at the wrong end of the TL. There is current at the
shorted end, none on the source end in steady state. Didn't even know the
program was smart enough to know the difference. Seems to me that once you
have put all the energy into the TL that it can store, you don't have to
supply any more energy (?)

Tam/WB2TT

3039. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 16:08:48 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b6137a_8@corp.newsgroups.com>
Source record: 94394

Steve Nosko wrote:
> I paraphrase / quote the quote:
> Power reflected from a mismatch back into the PA is not absorbed there.
> He writes:
> "when the pi-network tank is tuned to resonance, a virtual
> short circuit to rearward traveling waves is created at the input
> of the network. Consequently, instead of the reflected power
> reaching the tubes of the amplifier, it is totally re-reflected
> toward the load by the virtual short "
>
> Hank, I'm sorry, but I believe this is not correct as stated. The word
> "totally", I believe is misleading and contrary to what I think all will
> agree. Namely that there MUST be SOME real part (although the true amount
> is disputed here) to the Zout of the PA and therefore SOME power MUST be
> absorbed there. I believe the point of contention truely is just how much
> is absorbed and how much is reflected...

Steve, what you are missing is that the match point is not at the transmitter terminals and reflections indeed do flow into the transmitter terminals. The match point is between the tube finals and the input to the pi-net tuning section. There are zero reflections between the input of the pi-net tuning section and the tube finals. This is what Walter Maxwell was saying. The "input of the network" that he is talking about is the wire between the tube finals and the built-in pi-net tuning section and, indeed in a properly tuned transmitter, there will be no reflections at that point which was commonly known as a "Zg-match point".

All of Walt's writings assumed a Zg-match internal in the tube transmitter at which all reflections were canceled. We hashed that out about 20 years ago. That's when I first communicated with Walt through snailmail.
--
73, Cecil http://www.qsl.net/w5dxp

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3040. Re: Power Factor

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 16:17:26 UTC
From: richardharrison@webtv.net
Message-ID: <28940-40B61496-265@storefull-3251.bay.webtv.net>
Source record: 94395

Dave, N3HE wrote:
"Picture an alternator delivering rated current into a resistance:---."

Reactive current adds to the total. It often comes from many lightly loaded induction motors supplied by the power system.

Fortunately, the power factor of a synchronous motor can be varied over a wide range by control of its excitation. Often, unloaded synchronous motors are connected to a power system for the sole purpose of controlling power factor. An unloaded synchronous motor can make a really large variable capacitor.

Best regards, Richard Harrison, KB5WZI

3041. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 16:37:39 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B61953.18BCC545@uci.edu>
Source record: 94396

Cecil Moore wrote:
>
> Steve Nosko wrote:
> > From this I infer that Cecil believes that once the transient portion of
> > the response has concluded you are in the steady state and no more
> > reflections are occurring. Is this a correct re-statement of your belief,
>
> No, no, no. That is a re-statement of the other side of the argument
> from mine.

Perhaps he thought you believed that because you're the only one who has
said it?

73, Jim AC6XG

3042. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 16:41:18 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B61A2E.99DC21FF@uci.edu>
Source record: 94398

Steve Nosko wrote:
>
> "Jim Kelley" <jwkelley@uci.edu> wrote in message
> news:40B2920E.C006DA70@uci.edu...
> > Cecil Moore wrote:
> [snip]
> > > When you view your reflection in a mirror, do you ignore the
> > > ExB power involved without which you would see nothing?
> >
> > I don't notice it until it the resulting chemical reaction takes place
> > on the retina of my eye. Until then, I can only imagine E crossing B,
> > and write the expression for it down on a piece of paper as it has no
> > physical manifestation.
> >
> > 73, Jim AC6XG
>
> Yikes!. Do I read this as being equivalent to saying that there is no
> vibration in the air when a tree falls as long as no person is there to have
> these vibrations intercept the ear drum??

No. But I'd be glad to explain what I did write if you'd like to ask a
question about it.

73, Jim AC6XG

3043. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 16:49:26 UTC
From: Lord Snooty <bonzo@dog.com>
Message-ID: <q_otc.12720$Tn6.12066@newsread1.news.pas.earthlink.net>
Source record: 94397

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:eu4bb0t2u9al33oro4hqtgl648uqn3a3oi@4ax.com...
> On Wed, 26 May 2004 02:07:50 GMT, "Lord Snooty" <bonzo@dog.com> wrote:
> Hi Andrew,
>
> >>a load capacitor value of 250 +/- 10pF (-j80 ohms @ 8 MHz) was found to
produce a
> >>minimum in the total voltage across the load.
> What was the voltage?

Load voltage lies in the 5 to 20 volt peak range, depending on the power
setting.
This minimum represented about a 15% dip.

> >>Also, as capacitance was increased over the range 100-700pF, the voltage
across the load resistor
> >>increased monotonically.
> What were the voltages?

Again, a nominal value between 5 and 20 V pk.

> >>The latter is easy to explain (it means the source reactance is positive,
and
> >>smaller than +j28.4 ohms), but the former is beyond my ken.

> as the capacitive reactance falls, you note the voltage climbs, this
> hardly requires an inductance to explain this. Simple divider action
> serves quite well. You have since revealed the inductor buffered
> output, but the data is still pretty skimpy to bless it as the major
> contributor to source Z.

Agreed, but if I keep increasing the load C (decreasing the capacitative
reactance), I will see a peak in the voltage across the load resistor, which
will only happen if a conjugate match is occurring.

> What are you using to measure this voltage?

A scope probe set to 10x, which has an unmeasurably high DC resistance and a
capacitance of 22 pF (measured). It's a good idea to use the 10x, not 1x,
setting, since the latter contributes about 80 pF, and will change the AC
response of the circuit.

Best,
Andrew

3044. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 17:11:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B62133.D7868AEE@uci.edu>
Source record: 94401

Tam/WB2TT wrote:
>
> SWCAD from Linear. I also built up a model of an ideal SWR meter.
>
> Tam

I almost bought LLTC when they came out with that. Should have. Thanks
Tam.

jk

3045. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 17:17:08 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B62294.B2B47DD7@uci.edu>
Source record: 94400

Tam/WB2TT wrote:
> Seems to me that once you
> have put all the energy into the TL that it can store, you don't have to
> supply any more energy (?)
>
> Tam/WB2TT

BINGO!! No more _energy_ flows - until or unless something changes.
(TV signals are of course always changing.)

73, Jim AC6XG

3046. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 17:22:53 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40b622fb$1_3@127.0.0.1>
Source record: 94399

Jim Kelley wrote:
>
> Cecil Moore wrote:
>
>>Steve Nosko wrote:
>>>From this I infer that Cecil believes that once the transient portion of
>>>the response has concluded you are in the steady state and no more
>>>reflections are occurring. Is this a correct re-statement of your belief,
>>
>>No, no, no. That is a re-statement of the other side of the argument
>>from mine.
>
> Perhaps he thought you believed that because you're the only one who has
> said it?

It's a very condensed verion of the reams of stuff that some posters have
posted over the past year. In particular, when I tried to introduce noise
and modulation to prove my point, I was told that noise and modulation are
not allowed during steady-state.
--
73, Cecil http://www.qsl.net/w5dxp

3047. help ID tower

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 17:47:24 UTC
From: Martin Walker <mbwalker@idontwantanyspam.localnet.com>
Message-ID: <10bcagda75jcqe4@corp.supernews.com>
Source record: 94402

I recently acquired a tower that is thought to be made by Rohn. I got some information on 25G and 45G towers from www.rohnnet.net but mine seems to be somewhere between these sizes. It measures ~13.75" between centers of the legs and the legs are 1.25" diameter. It is galvanized steel and otherwise resembles newer Rhon towers. It's probably 25 years old but is in excellent condition. Any info is appreciated.

Martin KC8CFP

3048. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 17:54:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <vm8cb0tg32t8l4jgs3djpbm4verf1s2oal@4ax.com>
Source record: 94403

On Wed, 26 May 2004 11:44:00 -0500, "Steve Nosko"
<suteuve.nosukowicuz@moutouroula.com> wrote:

> I think "superposition" is ther wrong term for this. If I could spell
>reciprocity, I'd say that it is a better word.
> Digression, though minor: Superposition refers typically, to the
>application of two signals to a circuit and the resulting response being the
>sum of the individual responses. no?

No/Yes. The "two" signals are those I described, the one from the
source as source and the one from load as source. This is the
convention of Circuit Analysis by Mesh or Nodes. Kirchhoff mandates
all voltages will sum to zero. The summing is a solution of
simultaneous equations - Superposition.

> Now some meat I'd like to pursue...
>>
>> ...a 500 Ohm Source...you will never launch much power into a 50 Ohm
>> system because it would immediately hit a reflective interface at the
>> antenna connector.
>
> There's a question I see here as to wheather the power was "launched" in
>the first place and this may be part of the assumption (or set thereof)
>which (my gut feel says) leads the logic astray.

It was an aside (a stage whisper).

>> This means that a 500 Ohm source, when confronted
>> by power going towards it from a 50 Ohm system will reflect most of
>> that power (but how did we get this power into the system in the first
>> place - Karma?) This, by design, will never happen in any transistor
>> ham rig built in the last quarter century.
>
> I think this is true...BUT let's ask this same question of a 5.0 ohm
>source?? How would you carry this through Richard C? I submit that THIS
>source CAN launch significant power down the line.

And here we come to issues of initial conditions and their variation
to force a conclusion. Namely, the unstated condition is how much
voltage is available? SWR is the diagnosis, and absorption of power
is the issue. Launching of power also suffers from the same
condition, but it would be well enough to examine the reflection
first. Launching problems is a sidebar.

>> The answer is the transmitter source Z is 50 Ohms at rated power.
>

> OK, so now I see you are of the "Zs=50 ohms" camp.

I have measured such things professionally and certified such facts as
accurate with a chain of references back to the National Bureau of
Standards. Such is my camp.

>> If a watt of power is chooglin' down the line toward it, that 50 Ohms is
>> going to dissipate into a watt worth of calories. This can be argued
>> with wave mechanics, or lumped circuit equivalents - doesn't matter
>> because it's all the same calories.
>
> All ok with me _IF_ Zs=50. I'm not convinced however. I have to think
>more about the modern broad-band transistor PA to have an strongly arguable
>opinion on this concept.

It is a convention of design that is covered in many design texts.
Academe takes this (Zs=50) for granted so much so that it is rarely
discussed. Even here I have references (Academic) that make this
point explicit and I have offered them here in debate.

>> what do we need tuners for?
>
> I think the answer here is that if the transmitter can take the strange
>impedance it sees, then it isn't needed. Like Hanks 30L1 that, however,
>couldn't take it very well.

However, this is not an answer to the question.

> Furthermore, there is an implicit assumption here in your reasoning
>which I believe is key and leading to some error. There is an unspoken
>assumption that the power which makes it to the antenna after all the "
>round-and-round until the antenna finally radiates it" is the FULL output
>and I believe it AIN'T.

As I have never stated this, you have to answer for the conflict that
follows.

> It is that little dribble that made it into the
>line in the first place. a.k.a. the Tx is not generating the full output.
>I think this assumption is causing much trouble.

This begs the question: What is the full output? A battery sitting on
the shelf is not generating its full output is a simple example, but
does not tell us what that full output may be. This is the problem of
definition by negatives.

It is not generating:
1W
nor
10V
nor
100ï¿½C
nor

1 H.P.

Was it ever capable of those generations in the first place? Under what conditions? Saying what is "not" has no useful information here.

If we are discussing what happens to power impinging upon the source, it should be obvious that if that power is OUT OF PHASE trouble follows in the form of currents. If that power is IN PHASE trouble follows in the form of potentials. Trouble is proportional to the degree of mismatch. Trouble arrives through the model of waves, trouble resides in the model of lumped equivalent circuits. It is the same trouble either way in the form of heat. Choose your poison because equipment manufacturers have built-in foldback mechanisms and advise you to use a tuner for good reason.

>Unless, of course, I have been smoking the wrong brand.

It will be available over the counter in British Columbia soon.

73's
Richard Clark, KB7QHC

3049. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 18:10:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40b62e0e$1_3@127.0.0.1>
Source record: 94404

Jim Kelley wrote:

> Tam/WB2TT wrote:
>>Seems to me that once you
>>have put all the energy into the TL that it can store, you don't have to
>>supply any more energy (?)
>>
> BINGO!! No more _energy_ flows - until or unless something changes.
> (TV signals are of course always changing.)

You can prove your point only by demonstrating an RF storage
battery in which RF energy stands still.

Got news for you, Jim. RF energy *always* flows because it *cannot*
stand still. It flows in one direction in a transmission line, at the
speed of light, until it encounters a physical impedance discontinuity
at which point reflections occur and some or all of the energy changes
directions, but always moving at the speed of light. ExH is the power.

Of course, you are talking about *NET* energy above. Forward
and reflected energy continue to flow unabated. RF component
energy has no choice except to flow at the speed of light. If
there doesn't exist a match point to turn the reflected energy
around, it *will* flow into the source. That you subtract the
reflected energy from the forward energy at the source output
to obtain the "generated energy", is just a math shortcut and
bears no resemblance to reality. It is a definition created by
man for the purpose of avoiding a very complicated problem.

It is akin to the problem of absolute motion in space-time.

It follows that when you have the same bank balance at the beginning
of the month and the end of the month, you tell everyone that you
had no debits or credits during that month. Again, you forgot to use
the word "NET".
--
73, Cecil http://www.qsl.net/w5dxp

3050. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 18:46:39 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <jlqtc.804$_k3.17012@bgtnsc05-news.ops.worldnet.att.net>
Source record: 94405

Cecil Moore wrote:

[snip]
>
> The definition of steady-state by the other side is pure unvarying
> sine waves with no noise and no modulation.
>
[snip]
>
> I have challenged them to produce a standing wave without a rearward-
> traveling wave but nobody has been up to that challenge.
>
> 73, Cecil http://www.qsl.net/w5dxp

Cecil,

I don't plan to enter this endless argument about transmission lines, but there are a couple of points you might want to consider.

* Steady state simply means that a phenomenon has no inherent reference to its time of origin. One cannot observe a steady-state wave and determine any clue about when it started. It contains no absolute time markers. A transient, on the other hand, contains direct reference information about when it was formed. There is no requirement that the steady state phenomenon is a simple sine wave.

Many problems in math, science, and engineering exhibit both transient and steady state solutions. It is not clear why there is any confusion at all in this thread.

* Standing waves don't require the pre-existence of traveling waves. A straightforward application of Maxwell's equations with appropriate boundary conditions for the physical environment will lead to standing waves directly. Check out one of your recently quoted favorite authors, J. C. Slater, and look at some of the resonant cavity stuff. Most definitely standing waves, but you will find lots of complex Bessel functions and darn few traveling waves.

In virtually every transmission line situation proposed on RRAA, whether tuned antenna feed lines or quarter-wave stubs, the transmission line is resonant. It is possible to consider the resulting standing waves as the sum of two traveling waves, but it is equally valid to consider the transmission line as a simple resonator. The physically measurable instantaneous voltages and currents are precisely the same whether one considers oscillation from capacitive to inductive energy storage in the line or the sum of two counter-traveling waves.

You often refer to wave-particle duality and to the use of S-parameters instead of lumped circuit analysis. The world of science and engineering is absolutely filled with this sort of dual description for physical phenomena. In many cases one approach will be more convenient or more intuitive, but that does not make the dual approach less valid.

There's more than one way to skin a cat.

73,
Gene
W4SZ

3051. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 18:48:07 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hmdcb09cmrm153g11v8esc0590gcs1rgj7@4ax.com>
Source record: 94406

On Wed, 26 May 2004 10:34:57 -0500, "Steve Nosko"
<suteuve.nosukowicuz@moutouroula.com> wrote:
>Hey! I know it HAD to be a PREGNANT Chicken that came first...

Well actually....

One explanation I've read (Scientific American, I think) offered that
some folks believe that chickens have eggs to get more chickens.
Wrong. Eggs have chickens to get more eggs.

Another superposition issue. ;-)

73's
Richard Clark, KB7QHC

3052. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 18:49:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dvdcb0dambj2dh1oa0vhf1kdsiho0fdahk@4ax.com>
Source record: 94407

On Thu, 27 May 2004 10:49:25 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>> It's clear that R.C. loves tweeking Cecil.
>
>Trouble is, I usually have no idea what his random ramblings
>are all about.

Steve, perhaps you should repeat your observation with easier words.

3053. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 18:59:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B63A83.705C5410@uci.edu>
Source record: 94408

Cecil Moore wrote:
>
> Jim Kelley wrote:
>
> > Tam/WB2TT wrote:
> >>Seems to me that once you
> >>have put all the energy into the TL that it can store, you don't have to
> >>supply any more energy (?)
> >>
> > BINGO!! No more _energy_ flows - until or unless something changes.
> > (TV signals are of course always changing.)

> Of course, you are talking about *NET* energy above.

Right. There isn't another kind.

73, Jim AC6XG

3054. Re: Tx Source Impedance & Load Reflections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 19:11:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <16ecb09b2a3aoupi0most0169fejiblane@4ax.com>
Source record: 94409

On Wed, 26 May 2004 09:51:03 -0500, "Steve Nosko"
<suteuve.nosukowicuz@moutouroula.com> wrote:

>Side Comment:
>
> Unfortunately, Richard Clark, the essence of your comment is completely
>lost on me. I haven't the faintest idea what you mean. Are you criticizing
>the quote or supporting it? Whatever...

I am criticizing it AND the lack of response to the explicit question.
Cut-and-paste journalism is as cheap as a dime a page at the Xerox
machine.

If I asked you to give me a definition of Ohm's law expressed with
three variables (one dependant and two independent); then wouldn't it
seem obtuse to get a philosophy of laminar flow in pipelines?

>Real content:
>
well, it is immaterial to the question at hand as it neither attends
Source Z nor Load Reflections. Except to allow:
>by diverting the unwanted TX signals to a load instead of the PA device..
>
> I believe his intent (I'm guessing) is to show an authoritative report
>that the output Z of a power amplifier is not equal to the load or
>transmission line impedance, right?

Where does it say that!? You had to guess, so that makes it less than
explicit, and now we have two questions to answer instead of one. Is
this accumulation of questions a linear or power progression? Web
debate is notorious for arguing the color of the table, then its
shape, then the number of chairs... before you get to the debate at
all.

If this posting had been headed with the answer "I don't know -
but...."

>As I stated before (with spelling corrected):
>
>Get this MPT theorem blockage out of your minds... It is a synthetic
>restriction.

I didn't infer it, much less explicitly address it. I made a
statement of fact, and it is quantifiable and measurable. Whatever
occurs as a consequence of it is entirely another matter.

73's
Richard Clark, KB7QHC

3055. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 19:26:21 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B640DD.13967981@uci.edu>
Source record: 94410

Cecil Moore wrote:
> It's a very condensed verion of the reams of stuff that some posters have
> posted over the past year. In particular, when I tried to introduce noise
> and modulation to prove my point, I was told that noise and modulation are
> not allowed during steady-state.

Stands to reason. Intentionally absent from the steady state are noise,
modulation, transients, and any other perturbation. It would be kinda
like opening the lid of an adiabatic chamber in order to see if the
internal temperature stays constant.

73, Jim AC6XG

3056. Re: help ID tower

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 19:41:28 UTC
From: tclay@qmc.ph.msstate.edu
Message-ID: <878yfdbqtz.fsf@qmc.ph.msstate.edu>
Source record: 94414

>I recently acquired a tower that is thought to be made by Rohn. I got some
>information on 25G and 45G towers from www.rohnnet.net but mine seems to be
>somewhere between these sizes. It measures ~13.75" between centers of the
>legs and the legs are 1.25" diameter. It is galvanized steel and otherwise
>resembles newer Rhon towers. It's probably 25 years old but is in excellent
>condition. Any info is appreciated.

I have some of the same tower. It is known as Rohn "35" or "HW". It was
apparently made for Motorola by Rohn.

You can find out more by searching the Towertalk archives for "Rohn 35"
http://lists.contesting.com/archives//html/Towertalk/

Torsten N4OGW

3057. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 19:44:15 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40b64415$1_3@127.0.0.1>
Source record: 94411

Gene Fuller wrote:
> * Standing waves don't require the pre-existence of traveling waves.

Please present an example of a standing wave that exists without
a forward-traveling wave component superposed with a rearward-
traveling wave component.
--
73, Cecil http://www.qsl.net/w5dxp

3058. Re: Measuring output impedance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 19:44:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <47gcb01njsjsf5hjav8fvq174osirfmi9r@4ax.com>
Source record: 94412

On Thu, 27 May 2004 16:49:26 GMT, "Lord Snooty" <bonzo@dog.com> wrote:

>"Richard Clark" <kb7qhc@comcast.net> wrote in message
>news:eu4bb0t2u9al33oro4hqtgl648uqn3a3oi@4ax.com...
>> On Wed, 26 May 2004 02:07:50 GMT, "Lord Snooty" <bonzo@dog.com> wrote:
>> Hi Andrew,
>>
>>>>a load capacitor value of 250 +/- 10pF (-j80 ohms @ 8 MHz)
>>>> was found to produce a minimum in the total voltage across the load.
>> What was the voltage?
>
>Load voltage lies in the 5 to 20 volt peak range, depending on the power
>setting.
>This minimum represented about a 15% dip.

Pick ONE power setting. What was the voltage across the load.
>
>>>>Also, as capacitance was increased over the range 100-700pF,
>>>> the voltage across the load resistor increased monotonically.
>> What were the voltages?
>
>Again, a nominal value between 5 and 20 V pk.

Pick the ONE and SAME power setting. What was the voltage across the
load resistor for:
100pF
200pF
300pF
...
700pF
>
>> >>The latter is easy to explain (it means the source reactance is positive,
>and
>> >>smaller than +j28.4 ohms), but the former is beyond my ken.
>
>> as the capacitive reactance falls, you note the voltage climbs, this
>> hardly requires an inductance to explain this. Simple divider action
>> serves quite well. You have since revealed the inductor buffered
>> output, but the data is still pretty skimpy to bless it as the major
>> contributor to source Z.
>
>Agreed, but if I keep increasing the load C (decreasing the capacitative
>reactance), I will see a peak in the voltage across the load resistor, which
>will only happen if a conjugate match is occurring.

This is a violation of terms. Just what constitutes the generator?
At one time you say the combination of the cap-resistor is the load,
hence the source is described ACROSS this series. THEN you isolate
the resistor which pushes the cap back into the source.

You originally asked for the complex impedance of the source, but if
the source contains a variable cap, this makes determination rather a
moving target.

In the world of metrology (folks who measure this stuff for a
living), you have an immutable boundary called the plane of the
source. On one side is everything that can be attributed to the
source and everything on the other side can be attributed to the load.
If there is a transmission line between, then you have two planes, the
plane of the source, and the plane of the load. Everything to the
right of the plane of the load (thinking in a left-right progression)
can be attributed to the load. Between the two planes is a transform.

The plane of the source is commonly the output connector, the plane of
the load is commonly the input connector. Things in between like
tuners, SWR meters, Lines, dividers, splitters, duplexers... are
transforms.

It is perfectly justifiable to make a component like a tuner resident
within (and behind) either plane, but once you do that, it is
considered bad form to go tweaking it and maintain nothing has
happened to the source/load.

>> What are you using to measure this voltage?
>
>A scope probe set to 10x, which has an unmeasurably high DC resistance and a
>capacitance of 22 pF (measured). It's a good idea to use the 10x, not 1x,
>setting, since the latter contributes about 80 pF, and will change the AC
>response of the circuit.

Perfectly adequate.

73's
Richard Clark, KB7QHC

3059. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 19:53:43 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B64747.FA344B51@uci.edu>
Source record: 94416

Cecil Moore wrote:
>
> Jim Kelley wrote:
>
> > Cecil Moore wrote:
> >>Of course, you are talking about *NET* energy above.
> >
> > Right. There isn't another kind.
>
> That goofy assertion doesn't even merit a response.

> Following your logic, two people shooting at each
> other with identical bullets can do no harm because
> the net energy is zero. Care to prove your theory?

How many sources ya got in that example, Cecil? Is that the same to
you? If it is, then I can see why you don't understand.

73, Jim AC6XG
> 73, Cecil http://www.qsl.net/w5dxp

3060. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 19:55:14 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40b646a9$1_3@127.0.0.1>
Source record: 94413

Jim Kelley wrote:

> Cecil Moore wrote:
>>Of course, you are talking about *NET* energy above.
>
> Right. There isn't another kind.

That goofy assertion doesn't even merit a response.

Following your logic, two people shooting at each
other with identical bullets can do no harm because
the net energy is zero. Care to prove your theory?
--
73, Cecil http://www.qsl.net/w5dxp

3061. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 19:57:36 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40b64735$1_3@127.0.0.1>
Source record: 94415

Jim Kelley wrote:

> Cecil Moore wrote:
>>It's a very condensed verion of the reams of stuff that some posters have
>>posted over the past year. In particular, when I tried to introduce noise
>>and modulation to prove my point, I was told that noise and modulation are
>>not allowed during steady-state.
>
> Stands to reason.

By no stretch of the imagination, can that be dubbed "reason".

3062. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 20:17:30 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0405271217.58410a09@posting.google.com>
Source record: 94417

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message news:<c92tov$1kv$1@newshost.mot.com>...
> OH! NO! Vortex vs. Bernoulli

Actually, it's Circulation vs. Newtonian vs. Bernoulli -- all three are different mathmatical means of describing accurately and precisely what happens when a airfoil produces lift. Actually each is simply a different way of expressing exactly the same thing, but none of them translates well to a real-life understanding of the concept. One of the problems is that causes and effects get confused and oversimplified by the math.

Much the same with reflections, transmission lines, and impedance matching. While reflections do indeed exist on transmission lines when mismatched to a source or load, they simply create standing waves. Standing waves create non-optimum impedances depending on the characteristics and length of the line. These impedances interact with source and load impedances in very predictable and calculated ways. Efficiency of power transfer is then determined by optimizing the matching of these impedances. Optimimizing impedances then eliminates reflections --- a circle of causes and effects.

Mathmatically, it's more expedient to skip much of the in-between cause-and-effect stuff, and jump directly to describing the entire process as a direct relationship between reflections and power transfer -- which causes problems when attempting to visualize or explain the process -- because that's not the way it really works. It's not quite that simple and direct.

A standard SWR meter is a good example. It can't conveniently measure reflections OR standing waves, so it measures mismatch. Since everything is directly related, it could be said that it measures reflections -- but it really doesn't. So, it doesn't really matter unless you try to understand how the meter works in terms of how it measures reflections or standing waves.

Al

3063. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 21:11:41 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <hQstc.1161$_k3.22105@bgtnsc05-news.ops.worldnet.att.net>
Source record: 94418

Cecil Moore wrote:
> Gene Fuller wrote:
>
>> * Standing waves don't require the pre-existence of traveling waves.
>
>
> Please present an example of a standing wave that exists without
> a forward-traveling wave component superposed with a rearward-
> traveling wave component.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>

Cecil,

Sorry, you are not paying attention.

I gave you a reference that is full of such examples. Another reference you have quoted on numerous occasions is "Transmission Lines and Networks" by Walter Johnson. Take a look on page 164. He gives a description of standing waves and then comments, "One can imagine two oppositely traveling waves, . . . "

Note that he uses "imagine", not required, essential, or any other mandatory word.

I do not claim the use of superposed traveling waves is wrong. However, it is merely a mathematical trick, not unlike describing a square wave as a summation of Fourier components. This is very commonly done, and it is often very useful. It does not mean that mathematically derived sub-components are somehow more valid representations of nature than the original form.

73,
Gene
W4SZ

3064. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 21:21:45 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40b65aef$1_3@127.0.0.1>
Source record: 94419

Jim Kelley wrote:

>
> Cecil Moore wrote:
>>Following your logic, two people shooting at each
>>other with identical bullets can do no harm because
>>the net energy is zero. Care to prove your theory?
>
> How many sources ya got in that example, Cecil? Is that the same to
> you? If it is, then I can see why you don't understand.

Couldn't possibly be that you don't understant, huh?

Someone has shot a bullet into an iron wash pot. It ran around
the rim of the pot and changed directions by 180 degrees. Just
as it was changing directions, another bullet was fired from
the same gun. The returning bullet has less energy than the
second bullet. Therefore, the net energy is away from the gun.
Want to stick your head in front of the ricochet bullet
to prove that component energy doesn't matter?
--
73, Cecil http://www.qsl.net/w5dxp

3065. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 21:23:46 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <C%stc.980$be3.695@newssvr24.news.prodigy.com>
Source record: 94420

I'm probably not the only one that is getting an adequate fill of facts,
opinions and quotes. I have only one request. Does anyone have verifiable
and repeatable evidence that a properly tuned pi network final amplifier
without a tuner does or does not dissipate power when there are reflections?
If they do can they please direct us to the source or give us an easliy
understandable write up.
tnx
--
73
Hank WD5JFR

"alhearn" <alhearn@earthlink.net> wrote in message
news:361741e8.0405271217.58410a09@posting.google.com...
> "Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:<c92tov$1kv$1@newshost.mot.com>...
> > OH! NO! Vortex vs. Bernoulli
>
> Actually, it's Circulation vs. Newtonian vs. Bernoulli -- all three
> are different mathmatical means of describing accurately and precisely
> what happens when a airfoil produces lift. Actually each is simply a
> different way of expressing exactly the same thing, but none of them
> translates well to a real-life understanding of the concept. One of
> the problems is that causes and effects get confused and
> oversimplified by the math.
>
> Much the same with reflections, transmission lines, and impedance
> matching. While reflections do indeed exist on transmission lines when
> mismatched to a source or load, they simply create standing waves.
> Standing waves create non-optimum impedances depending on the
> characteristics and length of the line. These impedances interact with
> source and load impedances in very predictable and calculated ways.
> Efficiency of power transfer is then determined by optimizing the
> matching of these impedances. Optimimizing impedances then eliminates
> reflections --- a circle of causes and effects.
>
> Mathmatically, it's more expedient to skip much of the in-between
> cause-and-effect stuff, and jump directly to describing the entire
> process as a direct relationship between reflections and power
> transfer -- which causes problems when attempting to visualize or
> explain the process -- because that's not the way it really works.
> It's not quite that simple and direct.
>
> A standard SWR meter is a good example. It can't conveniently measure
> reflections OR standing waves, so it measures mismatch. Since

> everything is directly related, it could be said that it measures
> reflections -- but it really doesn't. So, it doesn't really matter
> unless you try to understand how the meter works in terms of how it
> measures reflections or standing waves.
>
> Al

3066. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 21:59:31 UTC
From: Dave <noone@nowhere.com>
Message-ID: <L5ydnd7Js6BT-SvdRVn-vw@crocker.com>
Source record: 94321

WARNING! I use the sinusoidal steady state assumptions for this explanation, this means that all reflection transients have died out and the input signal is not changing. These are generally good assumptions for general use that does not depend on signal changing on a time scale similar to the reflection period, like radar or fast scan tv.... for cw, am, and even ssb in amateur sized systems these are generally very good and yeild answers that are more than adequate to answer problems like this.

given the above its very simple. look at the coax connector as if it was a connector on a black box, there are no reflections. period. the input of the black box looks like a simple linear impedance.

the procedure to find out how it affects your pi network is this: use your favorite circuit modeling program and model the linear and output network to whatever degree of detail you see fit. attach a load of 50+j0 and determine currents and voltages in the matching network. (note that you will have to include real world losses in the inductors and capacitors if you want to calculate power dissipation in them). change load to however bad a condition you want to model and compare currents and voltages to the 50 ohm case. this will show you if more or less power is lost in the matching network. if you have modeled a tube or fet with real world parameters it will also tell you if it's dissipation goes up or down.

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:C%stc.980$be3.695@newssvr24.news.prodigy.com...
> I'm probably not the only one that is getting an adequate fill of facts,
> opinions and quotes. I have only one request. Does anyone have
verifiable
> and repeatable evidence that a properly tuned pi network final amplifier
> without a tuner does or does not dissipate power when there are
reflections?
> If they do can they please direct us to the source or give us an easliy
> understandable write up.
> tnx
> --
> 73
> Hank WD5JFR
>
> "alhearn" <alhearn@earthlink.net> wrote in message
> news:361741e8.0405271217.58410a09@posting.google.com...
> > "Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
> news:<c92tov$1kv$1@newshost.mot.com>...
> > > OH! NO! Vortex vs. Bernoulli
> >
> > Actually, it's Circulation vs. Newtonian vs. Bernoulli -- all three

> > are different mathmatical means of describing accurately and precisely
> > what happens when a airfoil produces lift. Actually each is simply a
> > different way of expressing exactly the same thing, but none of them
> > translates well to a real-life understanding of the concept. One of
> > the problems is that causes and effects get confused and
> > oversimplified by the math.
> >
> > Much the same with reflections, transmission lines, and impedance
> > matching. While reflections do indeed exist on transmission lines when
> > mismatched to a source or load, they simply create standing waves.
> > Standing waves create non-optimum impedances depending on the
> > characteristics and length of the line. These impedances interact with
> > source and load impedances in very predictable and calculated ways.
> > Efficiency of power transfer is then determined by optimizing the
> > matching of these impedances. Optimimizing impedances then eliminates
> > reflections --- a circle of causes and effects.
> >
> > Mathmatically, it's more expedient to skip much of the in-between
> > cause-and-effect stuff, and jump directly to describing the entire
> > process as a direct relationship between reflections and power
> > transfer -- which causes problems when attempting to visualize or
> > explain the process -- because that's not the way it really works.
> > It's not quite that simple and direct.
> >
> > A standard SWR meter is a good example. It can't conveniently measure
> > reflections OR standing waves, so it measures mismatch. Since
> > everything is directly related, it could be said that it measures
> > reflections -- but it really doesn't. So, it doesn't really matter
> > unless you try to understand how the meter works in terms of how it
> > measures reflections or standing waves.
> >
> > Al
>
>

3067. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 22:13:02 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b668d7_2@corp.newsgroups.com>
Source record: 94322

Gene Fuller wrote:
> Note that he uses "imagine", not required, essential, or any other
> mandatory word.

You know that I know, "imagine" is just an expression authors use in the remote event that there might ever be a standing wave without a forward and reverse wave. All I am asking is for you to provide just one example where standing waves are not caused by forward and reverse waves.

You guys mealymouth all around that challenge but NEVER have provided a decent answer. If you are not going to provide that requested example, IMO, you have nothing to say worth listening to. So Gene, please, put up or shut up, and please stop jerking us off.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3068. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 22:24:40 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b66b91_2@corp.newsgroups.com>
Source record: 94323

Henry Kolesnik wrote:
> I'm probably not the only one that is getting an adequate fill of facts,
> opinions and quotes. I have only one request. Does anyone have verifiable
> and repeatable evidence that a properly tuned pi network final amplifier
> without a tuner does or does not dissipate power when there are reflections?
> If they do can they please direct us to the source or give us an easliy
> understandable write up.

Hank, when reflected current flows backwards through a pi-net loading
coil, some of the reflected power is dissipated as I^2*R losses in
the coil. Other than that, a properly tuned pi-net causes a match
point that reflects all the reflected energy back toward the load.

If a match point exists in a ham radio antenna system, no reflected
energy will reach the source. This is the great majority of amateur
radio systems and no-reflections-at-the-source is the goal of every
ham. The thing that you are worried about is the unusual case where
reflections are allowed to reach the source.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3069. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 22:35:13 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b66e0a_2@corp.newsgroups.com>
Source record: 94324

Dave wrote:
> ... for cw, am, and
> even ssb in amateur sized systems these are generally very good and yeild
> answers that are more than adequate to answer problems like this.

Yep, pretty good for answering the transmitter question. Not so
good for answering the question of what happens between a tuner
and an antenna. One must remember that with your method, one is
dealing with virtual impedances, i.e. voltage to current ratios,
which are themselves a result and not the cause of anything.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3070. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 22:40:19 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <n7utc.1360$_k3.25248@bgtnsc05-news.ops.worldnet.att.net>
Source record: 94325

Cecil,

Wow! Struck a nerve. Must be close to the truth.

I have said repeatedly that the alternative technical descriptions co-exist. I have never said that one "causes" the other. That would be folly, since we are dealing with math models, not physical cause and effect.

Let me turn the arrow back to you.

Give us one example where forward and reverse waves "cause" a standing wave, and then prove that it's not the other way 'round.

I am not aware of any credible technical writing on the subject of cause and effect in these matters, so I am anxiously awaiting your answer. (Hint: Don't waste your time.)

And as to "shut up", yes, I will now do that.

Until next time . .

73,
Gene
W4SZ

Cecil Moore wrote:
> Gene Fuller wrote:
>
>> Note that he uses "imagine", not required, essential, or any other
>> mandatory word.
>
>
> You know that I know, "imagine" is just an expression authors use in
> the remote event that there might ever be a standing wave without a
> forward and reverse wave. All I am asking is for you to provide just
> one example where standing waves are not caused by forward and reverse
> waves.
>
> You guys mealymouth all around that challenge but NEVER have provided
> a decent answer. If you are not going to provide that requested example,
> IMO, you have nothing to say worth listening to. So Gene, please, put
> up or shut up, and please stop jerking us off.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>

> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3071. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 22:59:40 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B672DC.49B7C8AE@uci.edu>
Source record: 94326

Cecil Moore wrote:
>
> Jim Kelley wrote:
>
> >
> > Cecil Moore wrote:
> >>Following your logic, two people shooting at each
> >>other with identical bullets can do no harm because
> >>the net energy is zero. Care to prove your theory?
> >
> > How many sources ya got in that example, Cecil? Is that the same to
> > you? If it is, then I can see why you don't understand.
>
> Couldn't possibly be that you don't understant, huh?

Bullets and radio waves? No. Matter behaves differently than do
electromagnetic waves. I'm quite confident about that.

73, Jim AC6XG

3072. Re: Reflected power (TV ghosts)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 23:11:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b6767d$1_8@corp.newsgroups.com>
Source record: 94327

Gene Fuller wrote:
> Give us one example where forward and reverse waves "cause" a standing
> wave, and then prove that it's not the other way 'round.

Too easy, Gene. Do a web search. *ALL* demonstrations of standing waves on the web using javascript have the standing wave *caused* by superposition of a forward wave and a reverse wave. There are hundreds, if not thousands, of examples. If standing waves could exist without forward and reflected waves, don't you think someone of your own steady-state cult would have provided an example by now?

Again, I challenge you (or anyone else) to provide an example of standing waves in a transmission line without forward-traveling and rearward-traveling waves. Is just one example, one tiny example, of what you are asserting, too much to ask? Apparently it is.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3073. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 23:16:44 UTC
From: jgboyles@aol.com
Message-ID: <20040527191644.07406.00000027@mb-m03.aol.com>
Source record: 94328

Reg, enjoyed reading your reply, thanks.
73 Gary N4AST

3074. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-27 23:25:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b679e9$1_8@corp.newsgroups.com>
Source record: 94329

Jim Kelley wrote:
> Bullets and radio waves? No. Matter behaves differently than do
> electromagnetic waves. I'm quite confident about that.

So what? Some matter behaves differently from other matter. Hint: Jim,
here's a heads-up for you. You must be omnipotent in order to prove that
you are omniscient. I hope you are up to that task.

My challenge still stands. Please provide a standing wave without a
forward-traveling wave and a rearward-traveling wave. If you can't,
at least send me a joint of whatever you are smokin'.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3075. Re: R-7000 in the rain

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 00:25:09 UTC
From: W4WNT <w4wnt@carolina.rr.com>
Message-ID: <FFvtc.69$Ef3.104435@twister.southeast.rr.com>
Source record: 94330

Check the seals on the box at the counterpoise "radials". You might be
getting leakage into the works in there.

Good luck,

Bill, W4WNT

"Daniel_FY1FV" <mycall@wanadoo.fr> wrote in message
news:c92qp8ucd1@news-reader3.wanadoo.fr...
> Hi,
> When it rains the ROS of my Cushcraft R7000 rises (>10:1) on all bands. It
> is about 1.5:1 when dry.
> Has anyone an idea?
> TNX in advance.
> 73's
> Daniel, FY1FV
>
>
>

3076. Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 02:06:26 UTC
From: bbskip@prodigy.net
Message-ID: <2124e412.0405271806.510bedbf@posting.google.com>
Source record: 94331

I would like to operate a 5 watt 151. MHz mobile transceiver into a ball and spring low band whip antenna similar to the old bumper mount CB antennas except that the antenna would be mounted directly to the top of the rear fender of a large 1960's American car and needs to be around 5-7 feet high. I need to use this type of antenna to give it the appearance of an old police car.

Is it possible to do this effectively without damaging the transmitter. I realize that this is an amateur radio board but I thought that amateurs would be the best group to ask. Thank you.

Bruno

3077. Re: Zagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 02:32:19 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0405271832.6930047c@posting.google.com>
Source record: 94332

Cecil Moore <Cecil.A.Moore@ieee.org> wrote in message
news:<40b54654$1_2@corp.newsgroups.com>...
> william ewald wrote:
> > "Zagi antenna construction and measurements
> > A zagi antenna is made from serrated wire or plate. It has reduced
> > dimension because of the slow wave characteristics of the periodic
> > structure. The student is asked to construct and measure a Zagi for
> > the 225MHz digital broadcast band in the UK. "
>
> Stand by - I am inventing a zig-zagi.

Chip already patented it.

>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3078. Re: Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 02:38:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5m8db01lipiilc8p0ahekj4ndk6salsi23@4ax.com>
Source record: 94333

On 27 May 2004 19:06:26 -0700, bbskip@prodigy.net (Bruno) wrote:

>I would like to operate a 5 watt 151. MHz mobile transceiver into a
>ball and spring low band whip antenna similar to the old bumper mount
>CB antennas except that the antenna would be mounted directly to the
>top of the rear fender of a large 1960's American car and needs to be
>around 5-7 feet high. I need to use this type of antenna to give it
>the appearance of an old police car.
>
>Is it possible to do this effectively without damaging the
>transmitter. I realize that this is an amateur radio board but I
>thought that amateurs would be the best group to ask. Thank you.
>
>Bruno

Hi Bruno,

MURS allows only 2W effective radiated power, not 5W going to an antenna. Further, this is into a simple antenna. Yeah, I know, yours seems to be a simple one, however as long as it is (5-7 feet high), it is both a poor match (almost no power out), and would have gain (a power multiplying factor) if you did match it (making it more powerful, hence the term "effective" radiated power). Even more unfortunate is that this gain (and most sensitivity for receiving) would be up into the sky! This is like drawing three cards to an inside straight: antenna too long, poor match, deaf too.

Now, this sounds like a lot of contradictions I am sure. The simplest antenna would be roughly 18 inches tall. Use the AM radio antenna for that, use a legal transmitter, and put up your buggy whip to impress the buddies. As an alternative, the antenna length you are describing is quite close to those used in the CB bands which would work just as well, if not better (as long as who you talk to use the same bands).

By the way, are you located near Norwalk Connecticut?

73's
Richard Clark, KB7QHC

3079. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 04:16:44 UTC
From: alhearn@earthlink.net
Message-ID: <361741e8.0405272016.15c2375@posting.google.com>
Source record: 94334

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:<C%stc.980$be3.695@newssvr24.news.prodigy.com>...
> I'm probably not the only one that is getting an adequate fill of facts,
> opinions and quotes. I have only one request. Does anyone have verifiable
> and repeatable evidence that a properly tuned pi network final amplifier
> without a tuner does or does not dissipate power when there are reflections?
> If they do can they please direct us to the source or give us an easliy
> understandable write up.

If you read Chapter 13, "RF Power Amplifiers and Projects", in the
2004 ARRL Handbook, there are pages and pages of discussion of
matching plate or transistor output impedances to 50 ohms output and
not once do they ever refer to output networks dissipating or
reflecting reflected power. Not once. It's always a matter of simply
matching one impedance to another to provide the highest power output
consistent with required linearity, while staying within the
amplifiying device's ratings.

Transmission lines have reflections; output matching networks and
tuners don't. The reflections on transmission lines don't make it past
the end of the transmission line -- that's where the reflections take
place. Beyond the end of the transmission line, the reflections are
seen as mere impedances created by standing waves, which are created
by reflections, assuming mismatch.

Al

3080. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 04:48:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9jfdb05503jfnb4o3oah8ml16toi96q1pv@4ax.com>
Source record: 94335

On 27 May 2004 21:16:44 -0700, alhearn@earthlink.net (alhearn) wrote:

>If you read Chapter 13, "RF Power Amplifiers and Projects", in the
>2004 ARRL Handbook, there are pages and pages of discussion of
>matching plate or transistor output impedances to 50 ohms output

Hi Al,

Watch it, this is a heresy. ARRL is certainly not the end-all be-all of design advice, but given these points are confirmed by professional design guidelines and technical papers, one should be able to trust it as a source written at a level suitable for amateur introduction.

>and not once do they ever refer to output networks dissipating or
>reflecting reflected power. Not once.

However, absence of discussion does not necessarily mean there is an absence of concern.

>It's always a matter of simply
>matching one impedance to another to provide the highest power output
>consistent with required linearity, while staying within the
>amplifiying device's ratings.

Simple logic dictates as much.

>Transmission lines have reflections; output matching networks and
>tuners don't.

Simple logic does not allow this however. However, verifying this property would be rather a challenge.

>The reflections on transmission lines don't make it past
>the end of the transmission line -- that's where the reflections take
>place.

True, but only insofar as the tuner is adjusted to offer a conjugate.

>Beyond the end of the transmission line, the reflections are
>seen as mere impedances created by standing waves, which are created
>by reflections, assuming mismatch.

Again, true after a fashion, but the distinction is only a matter of point of view. Wave mechanics/lumped circuits give the same result.

73's
Richard Clark, KB7QHC

3081. weird audio noises and can not tune

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 05:03:31 UTC
From: Dan <lists@elp.rr.com>
Message-ID: <06hdb0pifur70mfvbo56v5rqg3cencs2jv@4ax.com>
Source record: 94336

I am hoping someone here can guide me to what the heck is wrong with my antenna system. Here is what is going on. Frist, I know neight of trhese antennas are very good phtsically or functionally BUT they both can be tuned down to a very accepatble SWR. However, using eithe my Icom 706 G OR my old Kenwood 440 AT even with a good SWR <1.5 or better I get a terrible audio report. I have monitored the audio using the other radio and it sounds like a warble variable picth sounds as I speak. sounds like very high over driving but I have that all turned down. I have used an MFJ 949e tuner and even let the Kenwood with auto tuner tune the antenna same results .. good SWR but terrible audio. At first I assumed it was the icom 706 but the kenwood sounds exactly the same. BUT when I do tune on the Kenwood auto tuners it does seem better... at times...
The radioas are between two computers and I also have a echostation interface very close with the serial cable connected to the Icom.. I have tried all combos I can thik of removing and or changing all connection scables etc.. .. do you think even though the antennas tune ok and I know they are not the best (that i could be getting some type of werid resonating? One antenna is a ground mounted vertical the other is a mulit band trapped diploes I kinds suspect both (since they are very old) have bed traps etc BUT I still go back to they seem to tune down in SWR.. help.. it is driving me nuts,, (shirt drive)

thanks any and all ideas are appreciated...

3082. suggestions for a limited space HF antenna.. vertical or dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 05:11:54 UTC
From: Dan <lists@elp.rr.com>
Message-ID: <f5idb0523i81i1dfm0f8sbcgqd8dd5g1b1@4ax.com>
Source record: 94337

I live is an area that really does not mind antennas however my home and property are limited. I have about 70 by 130 feet an da coulpe small trees about 25 feet high. I think my best bet is a vertical. I also think i woud like one that states no radials required such as the Diamond 80 to 6 meter CP6 vertical or somethin gsimilar.. Any suggestions.. what am I missing ? verytical or diploe type or somethign else.. Thanks for any suggestions

3083. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 05:37:07 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c96j62nii1@titan.btinternet.com>
Source record: 94338

Richard said -
> True, but only insofar as the tuner is adjusted to offer a conjugate.
>
==========
Richard, how many more times do I have to tell you? The impedance looking back into the tuner is NOT the conjugate of the impedance looking into the transmission line towards the antenna - not even when the tuner is adjusted for SWR = 1-to-1.

You lead people astray.

Or did you make the assertion just to irritate yours truly?

Reg, G4FGQ

3084. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 06:07:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <7bldb0lv4qv1eurpulp6vpjt8aombfb450@4ax.com>
Source record: 94339

On Fri, 28 May 2004 05:37:07 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@ZZZbtinternet.com> wrote:

>Richard said -
>> True, but only insofar as the tuner is adjusted to offer a conjugate.
>>
>================================
>Richard, how many more times do I have to tell you?

One wonders how many more times indeed, must be love.

>You lead people astray.

Jealous?

>Or did you make the assertion just to irritate yours truly?

oooooo!

88's
Richard Clark, KB7QHC

Seriously, ducky, do you have any numbers, or is this the Brit version
of foreplay?

3085. Re: weird audio noises and can not tune

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 06:13:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4uldb01hi8h943ha1pdtata2s0cc515fen@4ax.com>
Source record: 94340

On Thu, 27 May 2004 23:03:31 -0600, Dan <lists@elp.rr.com> wrote:

>they seem to
>tune down in SWR.. help.. it is driving me nuts,, (shirt drive)
>
>thanks any and all ideas are appreciated...

Hi Dan,

Tune ONE antenna to lowest SWR;
Change the length of the transmission line;
Does the SWR change?
Yes - you have common mode problems
No - you need a paddle for your canoe

73's
Richard Clark, KB7QHC

p.s. What is a shirt drive?

3086. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 07:14:36 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <I1GeA4FcbutAFAgV@ifwtech.co.uk>
Source record: 94341

alhearn wrote:
>
>If you read Chapter 13, "RF Power Amplifiers and Projects", in the 2004
>ARRL Handbook, there are pages and pages of discussion of matching
>plate or transistor output impedances to 50 ohms output and not once do
>they ever refer to output networks dissipating or reflecting reflected
>power. Not once. It's always a matter of simply matching one impedance
>to another

Sorry, that isn't correct. Maybe the Handbook doesn't emphasize the
point clearly enough, but the design of output networks is specifically
not about impedance "matching".

The objective is to *transform* the impedance of the load at the
amplifier's output socket (usually the design value of 50R) into the
correct value of load impedance needed by the amplifier device.

As Al says, the correct value of load impedance for the amplifying
device is the one that will:

>provide the highest power output consistent with required linearity,
>while staying within the amplifiying device's ratings.
>

The whole point is to understand that the output network is not trying
to match any particular impedance. It's simply giving the amplifying
device the load impedance it needs in order to function correctly.

Those two objectives are not the same... and understanding the
difference is vital for this whole discussion.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3087. Re: weird audio noises and can not tune

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 07:33:22 UTC
From: Dan <lists@elp.rr.com>
Message-ID: <jmqdb09njtopico32msq4hjm3abif213mn@4ax.com>
Source record: 94342

On Fri, 28 May 2004 06:13:15 GMT, Richard Clark <kb7qhc@comcast.net>
wrotd:

>On Thu, 27 May 2004 23:03:31 -0600, Dan <lists@elp.rr.com> wrote:
>
>>they seem to
>>tune down in SWR.. help.. it is driving me nuts,, (shirt drive)
>>
>>thanks any and all ideas are appreciated...
>
>Hi Dan,
>
>Tune ONE antenna to lowest SWR;
>Change the length of the transmission line;
>Does the SWR change?
> Yes - you have common mode problems
> No - you need a paddle for your canoe
>
>73's
>Richard Clark, KB7QHC
>
>p.s. What is a shirt drive?

Richard,
thanks for the reply first "shirt drive" is because I either can not
type or cannot read what I type should be "short drive" ..
anyway , what is "common mode problems? not sure I understand ??
tnx

3088. Re: Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 07:49:32 UTC
From: bbskip@prodigy.net
Message-ID: <2124e412.0405272349.4fa15ed4@posting.google.com>
Source record: 94343

Hi Richard,

Thanks for the reply. Sorry, no, I'm not in Connecticut.

I believe the radio that I have is "rated" at 5 watts but
automatically cuts back to 2 watts when used on any of the "dot" MURS
frequencies for which no license is required as long as there is no
interference to licensed stations.

For appearance reasons the ONLY antenna that I can have on the car is
the spring/ball whip. There won't even be an AM band antenna on the
car. CB radios are out for a number of reasons. For one the 108" CB
whip is just as incorrect as the 18" whip. Plus I already have the
MURS radios- a mobile and handheld and my need is only to coordinate
legitimate communications with other existing MURS units at events. I
have a handheld that I can use but a mobile unit would just be easier
and safer to use while moving.

I know that antennas can be "electrically lengthened" with coils, is
there no way to "electrically shorten" them perhaps with some sort of
matching transformer?

Bruno

>
> Hi Bruno,
>
> MURS allows only 2W effective radiated power, not 5W going to an
> antenna. Further, this is into a simple antenna. Yeah, I know,
> yours seems to be a simple one, however as long as it is (5-7 feet
> high), it is both a poor match (almost no power out), and would have
> gain (a power multiplying factor) if you did match it (making it more
> powerful, hence the term "effective" radiated power). Even more
> unfortunate is that this gain (and most sensitivity for receiving)
> would be up into the sky! This is like drawing three cards to an
> inside straight: antenna too long, poor match, deaf too.
>
> Now, this sounds like a lot of contradictions I am sure. The simplest
> antenna would be roughly 18 inches tall. Use the AM radio antenna for
> that, use a legal transmitter, and put up your buggy whip to impress
> the buddies. As an alternative, the antenna length you are describing
> is quite close to those used in the CB bands which would work just as
> well, if not better (as long as who you talk to use the same bands).
>
> By the way, are you located near Norwalk Connecticut?
>

> 73's
> Richard Clark, KB7QHC

3089. Re: suggestions for a limited space HF antenna.. vertical or dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 07:57:30 UTC
From: Roger Conroy <rogerconroy@nospam.hotmail.com>
Message-ID: <c96sisgdf1@ctb-nnrp2.saix.net>
Source record: 94344

"Dan" <lists@elp.rr.com> wrote in message
news:f5idb0523i81i1dfm0f8sbcgqd8dd5g1b1@4ax.com...
> I live is an area that really does not mind antennas however my home
> and property are limited. I have about 70 by 130 feet an da coulpe
> small trees about 25 feet high. I think my best bet is a vertical. I
> also think i woud like one that states no radials required such as the
> Diamond 80 to 6 meter CP6 vertical or somethin gsimilar.. Any
> suggestions.. what am I missing ? verytical or diploe type or
> somethign else.. Thanks for any suggestions

Take a look at the MFJ-1798 It covers 80m to 2m. No radials and is only
about 6m tall. Can be ground or roof mounted. I know several owners who are
very happy with it.

73
Roger ZR3RC

3090. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 10:15:17 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <f$87iaR1ExtAFAzU@ifwtech.co.uk>
Source record: 94345

Henry Kolesnik wrote:
>I'm probably not the only one that is getting an adequate fill of
>facts, opinions and quotes. I have only one request. Does anyone have
>verifiable and repeatable evidence that a properly tuned pi network
>final amplifier without a tuner does or does not dissipate power when
>there are reflections? If they do can they please direct us to the
>source or give us an easliy
>understandable write up.

Sorry, Hank, I don't believe you can hope for that.

In all innocence, you have rigged the question so that it only allows certain kinds of answers. It has to be a pi network. It has to be "properly" tuned. There have to be reflections.

The question is tied up so tight by its built-in assumptions - the things you believe you already know - that there may not even *be* a correct answer.

Time after time, this same discussion about "reflected power" fails to reach any agreed answer. Time after time, we run the same maze like lab rats... only more predictably... and every time, we fail to reach the goal of a clear, agreed understanding.

And the conclusion of these experiments? That the concept of "reflected power" is not helping us to understand anything.

The irony is that nobody actually *needs* that concept, so you don't ever *need* to enter that maze. Everything about standing waves on transmission lines can be understood much more clearly by thinking only about forward and reflected voltage/current waves.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3091. Re: suggestions for a limited space HF antenna.. vertical or dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 11:44:06 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B72606.F3288DFE@cwis.net>
Source record: 94346

Dan,
I think you have several options, since a 70 by
130 foot lot isn't all that 'limited'. Trees, 20 to
25 feet tall, make for very nice antenna supports if
they aren't too close together, and if you have or can
have additional supports near the corners of your lot,
you even have room for a 160 meter antenna.
Vertical antennas do work, but the "Whiz - Bang", all
band verticals are more 'whiz' than 'bang', in my limited
experience, and not so limited opinion. A healthy dose
of 'salts' is always indicated with antenna claims!
How things are situated on your property is going to
have more impact on what antenna(s) you can use than any
thing else. If things are not exactly in the wrong places,
almost anything will work...
'Doc

3092. Re: weird audio noises and can not tune

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 11:51:27 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B727BF.41C6B0C2@cwis.net>
Source record: 94347

Dan,
If what you describe as a 'warbling' audio is what I
think it is, it isn't the antenna that's a problem, but
the power supply. Sounds like you're running the power
supply beyond it's capabilities. Drawing too much
current, the voltage 'sags', and causes a 'warbling'
audio, no matter which radio you use (unless both radios
have exactly the same 'problem', which is unlikely). I
guess it's possible, but antennas have very little affect
on transmitter audio.
'Doc

3093. Re: Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 12:06:01 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B72B29.F8605371@cwis.net>
Source record: 94348

Bruno,
To keep appearances 'correct', how about using a
'hidden' antenna of some sort? You can still have a
'dummy' antenna on the rear fender.
How you 'hide' the antenna depends on what you have
to work with and your ingenuity/imagination, and how
much 'compromise' in appearance you're willing to put
up with. If you think a fibreglass whip instead of a
steel one would look okay, it would be fairly simple.
Just snip the internal wire to the right length. Well,
maybe not so 'simple', but still possible.
Or, how about using very small conductors and glueing
the antenna to a window (burgler alarm tape?)?
'Doc

PS - Put a 2 meter antenna on a '51 Ford p/u like that,
it worked 'okay'...

3094. Re: help ID tower

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 12:07:25 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40B72B7D.9143D898@cwis.net>
Source record: 94349

Martin,
Sounds like you may have a 'Universal' tower instead
of a 'Rhon'. Not much difference in what they look like.
'Doc

3095. Re: R-7000 in the rain

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 12:12:06 UTC
From: Daniel_FY1FV <mycall@wanadoo.fr>
Message-ID: <c97aamrov1@news-reader1.wanadoo.fr>
Source record: 94350

I took apart this one carefully: many many corrosion around screws top and bottom. I have cleaned up all the junctions carefully with my Dremel and sealed around the cover with silicone gum. (NOT the hole around the SO239 plug!) I'm standing by the next big rain! TNX and 73's -- Daniel, FY1FV

"W4WNT" <w4wnt@carolina.rr.com> a crit dans le message de news:
FFvtc.69$Ef3.104435@twister.southeast.rr.com...
> Check the seals on the box at the counterpoise "radials". You might be
> getting leakage into the works in there.
>
> Good luck,
>
> Bill, W4WNT
>
> "Daniel_FY1FV" <mycall@wanadoo.fr> wrote in message
> news:c92qp8ucd1@news-reader3.wanadoo.fr...
> > Hi,
> > When it rains the ROS of my Cushcraft R7000 rises (>10:1) on all bands.
It
> > is about 1.5:1 when dry.
> > Has anyone an idea?
> > TNX in advance.
> > 73's
> > Daniel, FY1FV
> >
> >
> >
>
>

3096. Re: suggestions for a limited space HF antenna.. vertical or dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 12:21:45 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <10bebn188ar2td9@corp.supernews.com>
Source record: 94351

Dan,

Your space is not all that limited -- most hams find themselves in the same circumstances. I think it really depends on what you want to do.

If you're a DXer and want to work distant stations, multi-band verticals to work quite well. I use a HyGain AV640 (6 bands from 40 - 6, no traps, no radials, full power, individual adjustments on all bands) and it does well with distant stuff but is lousy for local QSOs on 40.

If you are more interested in local stuff, you have enough property for dipoles or loops from 80 on up... and even 160m with a little creative design. I use horizontal delta loops on 40m and 30m, and dipoles on 160 an 80.
--
-larry
K8UT
"Dan" <lists@elp.rr.com> wrote in message
news:f5idb0523i81i1dfm0f8sbcgqd8dd5g1b1@4ax.com...
> I live is an area that really does not mind antennas however my home
> and property are limited. I have about 70 by 130 feet an da coulpe
> small trees about 25 feet high. I think my best bet is a vertical. I
> also think i woud like one that states no radials required such as the
> Diamond 80 to 6 meter CP6 vertical or somethin gsimilar.. Any
> suggestions.. what am I missing ? verytical or diploe type or
> somethign else.. Thanks for any suggestions

3097. Re: suggestions for a limited space HF antenna.. vertical or dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 12:32:31 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <l3ceb0db7sv03c2t27dsn1f4g2pem4ho88@4ax.com>
Source record: 94352

On Thu, 27 May 2004 23:11:54 -0600, Dan <lists@elp.rr.com> wrote:

>I live is an area that really does not mind antennas however my home
>and property are limited. I have about 70 by 130 feet an da coulpe
>small trees about 25 feet high. I think my best bet is a vertical. I
>also think i woud like one that states no radials required such as the
>Diamond 80 to 6 meter CP6 vertical or somethin gsimilar.. Any
>suggestions.. what am I missing ? verytical or diploe type or
>somethign else.. Thanks for any suggestions

You could always put up an all-band "wonder" vertical. But then
augment it with the longest dipole you can stretch betwee your trees,
and feed it w/ladderline plus a tuner. That would kinda give you the
best of both worlds -- one or the other might be better, depending on
band or propagation.

bob
k5qwg

3098. Re: Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 12:35:39 UTC
From: Hans Sundkvist <hanssundkvist@dof.se>
Message-ID: <vmGtc.93644$dP1.300324@newsc.telia.net>
Source record: 94353

You could cut the whip to 3/4 wavelength, ca 1.5 meters which could give
reasonable swr.

73 de Hans SM3PXG
Sweden

Bruno wrote:
> Hi Richard,
>
> Thanks for the reply. Sorry, no, I'm not in Connecticut.
>
> I believe the radio that I have is "rated" at 5 watts but
> automatically cuts back to 2 watts when used on any of the "dot" MURS
> frequencies for which no license is required as long as there is no
> interference to licensed stations.
>
> For appearance reasons the ONLY antenna that I can have on the car is
> the spring/ball whip. There won't even be an AM band antenna on the
> car. CB radios are out for a number of reasons. For one the 108" CB
> whip is just as incorrect as the 18" whip. Plus I already have the
> MURS radios- a mobile and handheld and my need is only to coordinate
> legitimate communications with other existing MURS units at events. I
> have a handheld that I can use but a mobile unit would just be easier
> and safer to use while moving.
>
> I know that antennas can be "electrically lengthened" with coils, is
> there no way to "electrically shorten" them perhaps with some sort of
> matching transformer?
>
> Bruno
>
>
>>Hi Bruno,
>>
>>MURS allows only 2W effective radiated power, not 5W going to an
>>antenna. Further, this is into a simple antenna. Yeah, I know,
>>yours seems to be a simple one, however as long as it is (5-7 feet
>>high), it is both a poor match (almost no power out), and would have
>>gain (a power multiplying factor) if you did match it (making it more
>>powerful, hence the term "effective" radiated power). Even more
>>unfortunate is that this gain (and most sensitivity for receiving)
>>would be up into the sky! This is like drawing three cards to an
>>inside straight: antenna too long, poor match, deaf too.
>>
>>Now, this sounds like a lot of contradictions I am sure. The simplest

>>antenna would be roughly 18 inches tall. Use the AM radio antenna for
>>that, use a legal transmitter, and put up your buggy whip to impress
>>the buddies. As an alternative, the antenna length you are describing
>>is quite close to those used in the CB bands which would work just as
>>well, if not better (as long as who you talk to use the same bands).
>>
>>By the way, are you located near Norwalk Connecticut?
>>
>>73's
>>Richard Clark, KB7QHC

3099. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 12:44:56 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b73532$1_6@corp.newsgroups.com>
Source record: 94354

alhearn wrote:
> If you read Chapter 13, "RF Power Amplifiers and Projects", in the
> 2004 ARRL Handbook, there are pages and pages of discussion of
> matching plate or transistor output impedances to 50 ohms output and
> not once do they ever refer to output networks dissipating or
> reflecting reflected power.

However, the 15th edition of the ARRL Antenna Book goes into great
detail about how a match point reflects rearward-traveling waves.
If you are designing RF Power Amps, you can simulate load conditions
with lumped components. If you are trying to figure out what happens
on a transmission line (distributed network) you need to take
reflections into account.

> Transmission lines have reflections; output matching networks and
> tuners don't. The reflections on transmission lines don't make it past
> the end of the transmission line -- that's where the reflections take
> place. Beyond the end of the transmission line, the reflections are
> seen as mere impedances created by standing waves, which are created
> by reflections, assuming mismatch.

Impedances created by standing waves are merely V/I ratios, i.e. virtual
impedances. They are the result of standing waves and not the cause of
anything. Physical impedance discontinuities are the cause of reflections
that cause standing waves.
--
73, Cecil http://www.qsl.net/w5dxp

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3100. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 13:01:12 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c97d6o$797$1@sparta.btinternet.com>
Source record: 94355

"Ian White, G3SEK" wrote
> And the conclusion of these experiments? That the concept of "reflected
> power" is not helping us to understand anything.

==========

I've been saying for years, the so-called SWR-meter is itself the root of the trouble - it has forward and reflected power scales on it. So it is impossible to refer to it without becoming emotionally involved with the highly misleading reflected power notion.

Furthermore, the confounded thing doesn't even measure SWR. How can it measure SWR on a transmission line which does not exist?

It is a ridiculous, meaningless situation. People drag themseves off to UHF to air their knowledge about such things as echos, S-parameters, circulators and high power TV transmitters. Quite irrelevant to the notion of reflected power at 1.8 MHz.

All that's necessary is to erase the meter scales, or at least wash them from our minds, and change the name of the SWR meter to the TLI. (Transmitter Loading Indicator). Or some other more appropriate name.

Reg, G4FGQ

3101. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 13:02:08 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b7393b_6@corp.newsgroups.com>
Source record: 94357

Reg Edwards wrote:

> Richard said -
>>True, but only insofar as the tuner is adjusted to offer a conjugate.
>>
> Richard, how many more times do I have to tell you? The impedance looking
> back into the tuner is NOT the conjugate of the impedance looking into the
> transmission line towards the antenna - not even when the tuner is adjusted
> for SWR = 1-to-1.

Would you guys please define "conjugate". The following system is matched.
Is there a conjugate in there somewhere? To the right of the match point?

XMTR---50 ohm feedline---x---1/4WL 75 ohm feedline---112.5 ohm load
--
TNX & 73, Cecil http://www.qsl.net/w5dxp

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3102. Re: Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 13:02:42 UTC
From: gmz79@aol.comnospam
Message-ID: <20040528090242.04616.00000047@mb-m25.aol.com>
Source record: 94356

On 27 May 2004 19:06:26 -0700, bbskip@prodigy.net (Bruno) wrote:

>I would like to operate a 5 watt 151. MHz mobile transceiver into a
>ball and spring low band whip antenna similar to the old bumper mount
>CB antennas except that the antenna would be mounted directly to the
>top of the rear fender of a large 1960's American car and needs to be
>around 5-7 feet high. I need to use this type of antenna to give it
>the appearance of an old police car.
>
>Is it possible to do this effectively without damaging the
>transmitter. I realize that this is an amateur radio board but I
>thought that amateurs would be the best group to ask. Thank you.
>
>Bruno

Just a shot in the dark, Can ya stuff a rubber ducky in the Bubble Gum
dome? Or maybe a 74" + or- whip with GROUNDED gutter clip.
or a period correct GE Highband whip in addition to the ball and spring.
73
Greg
WG8Z

Greg Z
to thine own sound be true

3103. Re: Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 13:20:11 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b73d76$1_6@corp.newsgroups.com>
Source record: 94358

Bruno wrote:
> I know that antennas can be "electrically lengthened" with coils, is
> there no way to "electrically shorten" them perhaps with some sort of
> matching transformer?

Unfortunately, a too-long vertical tends to send the radiation
up at a high angle. EZNEC sez a 6' vertical used on 151 MHz
will have a take-off-angle of about 38 degrees - not good for
vhf mobile.

RS makes a fiberglass CB whip. How about cutting one of those
to your desired length and drilling through the center conductor
at the proper 1/4WL point? Epoxy the hole? Paint the fiberglass
to make it look like metal?
--
73, Cecil http://www.qsl.net/w5dxp

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3104. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 13:30:33 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b73fe4_6@corp.newsgroups.com>
Source record: 94359

Reg Edwards wrote:
> All that's necessary is to erase the meter scales, or at least wash them
> from our minds, and change the name of the SWR meter to the TLI.
> (Transmitter Loading Indicator). Or some other more appropriate name.

Reg, what would you call the SWR meter calibrated for 300 ohms
that I have installed in the 300 ohm line to my 20m-10m dipole?
--
73, Cecil http://www.qsl.net/w5dxp

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3105. Re: weird audio noises and can not tune

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 13:54:53 UTC
From: Keyboard In The Noise <KITN@cat.net>
Message-ID: <NwHtc.4918$oi5.47@fed1read07>
Source record: 94360

Why not use a dummy load and get the antenna and interface cables out of the equation?
If the problem persists, may be a power supply problem -- filtering or inadequate current handling.
Check the DX power supply with an Oscilloscope - Turn down the power and test again.

--
Keyboard In The Noise

Opinions are the cheapest commodities in the world. Author unknown but "right on"

"Dan" <lists@elp.rr.com> wrote in message news:06hdb0pifur70mfvbo56v5rqg3cencs2jv@4ax.com...
> I am hoping someone here can guide me to what the heck is wrong with
> my antenna system. Here is what is going on. Frist, I know neight of
> trhese antennas are very good phtsically or functionally BUT they both
> can be tuned down to a very accepatble SWR. However, using eithe my
> Icom 706 G OR my old Kenwood 440 AT even with a good SWR <1.5 or
> better I get a terrible audio report. I have monitored the audio using
> the other radio and it sounds like a warble variable picth sounds as I
> speak. sounds like very high over driving but I have that all turned
> down. I have used an MFJ 949e tuner and even let the Kenwood with
> auto tuner tune the antenna same results .. good SWR but terrible
> audio. At first I assumed it was the icom 706 but the kenwood sounds
> exactly the same. BUT when I do tune on the Kenwood auto tuners it
> does seem better... at times...
> The radioas are between two computers and I also have a echostation
> interface very close with the serial cable connected to the Icom.. I
> have tried all combos I can thik of removing and or changing all
> connection scables etc.. .. do you think even though the antennas tune
> ok and I know they are not the best (that i could be getting some
> type of werid resonating? One antenna is a ground mounted vertical the
> other is a mulit band trapped diploes I kinds suspect both (since they
> are very old) have bed traps etc BUT I still go back to they seem to
> tune down in SWR.. help.. it is driving me nuts,, (shirt drive)
>
> thanks any and all ideas are appreciated...

3106. newby question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 14:18:53 UTC
From: JJ <Sonbo@comcast.net>
Message-ID: <2hp00vFfpp6iU1@uni-berlin.de>
Source record: 94361

If I had a device with an internal antenna and no external antenna jack, could I construct a device to slip over the area of the internal antenna and pick up the signal threw induction and wire it to an external antenna ?

Thanks

JJ

3107. Re: newby question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 14:46:40 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b751bc_8@corp.newsgroups.com>
Source record: 94363

JJ wrote:
> If I had a device with an internal antenna and no external antenna jack,
> could I construct a device to slip over the area of the internal antenna and
> pick up the signal threw induction and wire it to an external antenna ?

http://www.ccrane.com/select_a_tenna_modelm.asp

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3108. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 14:47:22 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c97jdqfpv1@sparta.btinternet.com>
Source record: 94362

> Reg, what would you call the SWR meter calibrated for 300 ohms
> that I have installed in the 300 ohm line to my 20m-10m dipole?
> --
> 73, Cecil
==========
It depends on which end of the line you have installed it.

Or are you hedging your bets by locating it at the half-way point?

But wherever it is, it does not measure SWR.

Just because you may think it does, does not make it so!

But it's good to see you didn't disagree with me about TLI's

Reg

3109. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 15:14:35 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <vHltc.893$g15.88@nwrddc02.gnilink.net>
Source record: 94364

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:c97d6o$797$1@sparta.btinternet.com...
>
> "Ian White, G3SEK" wrote
> > And the conclusion of these experiments? That the concept of "reflected
> > power" is not helping us to understand anything.
>
> ============================
>
> I've been saying for years, the so-called SWR-meter is itself the root of
> the trouble - it has forward and reflected power scales on it. So it is
> impossible to refer to it without becoming emotionally involved with the
> highly misleading reflected power notion.
>
> Furthermore, the confounded thing doesn't even measure SWR. How can it
> measure SWR on a transmission line which does not exist?
>
> It is a ridiculous, meaningless situation. People drag themseves off to
UHF
> to air their knowledge about such things as echos, S-parameters,
circulators
> and high power TV transmitters. Quite irrelevant to the notion of
reflected
> power at 1.8 MHz.
>
> All that's necessary is to erase the meter scales, or at least wash them
> from our minds, and change the name of the SWR meter to the TLI.
> (Transmitter Loading Indicator). Or some other more appropriate name.
> ----
> Reg, G4FGQ

Reg

Just so I can get my thinking straight -- Does a slotted line measure
VSWR?

Jerry
>
>

3110. Re: weird audio noises and can not tune

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 15:28:54 UTC
From: j999w@aol.com
Message-ID: <20040528112854.09269.00000062@mb-m03.aol.com>
Source record: 94365

>Dan,
> If what you describe as a 'warbling' audio is what I
>think it is, it isn't the antenna that's a problem, but
>the power supply. Sounds like you're running the power
>supply beyond it's capabilities. Drawing too much
>current, the voltage 'sags', and causes a 'warbling'
>audio, no matter which radio you use (unless both radios
>have exactly the same 'problem', which is unlikely). I
>guess it's possible, but antennas have very little affect
>on transmitter audio.
> 'Doc

I agree. You'll hear plenty of stations with warbly audio come this Field Day !

I'd think that with SWR problems, you'd have low power output, but the audio
would be okay.

jw
K9RZZ

3111. Re: Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 15:44:26 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <dgneb0h54707eursgkej630372kkla49ln@4ax.com>
Source record: 94366

On Fri, 28 May 2004 08:20:11 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Bruno wrote:
>> I know that antennas can be "electrically lengthened" with coils, is
>> there no way to "electrically shorten" them perhaps with some sort of
>> matching transformer?
>
>Unfortunately, a too-long vertical tends to send the radiation
>up at a high angle. EZNEC sez a 6' vertical used on 151 MHz
>will have a take-off-angle of about 38 degrees - not good for
>vhf mobile.
>
>RS makes a fiberglass CB whip. How about cutting one of those
>to your desired length and drilling through the center conductor
>at the proper 1/4WL point? Epoxy the hole? Paint the fiberglass
>to make it look like metal?

Hi Bruno,

This is your best solution both for a correct length antenna and a
cosmetic appearance.

73's
Richard Clark, KB7QHC

3112. Re: newby question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 15:49:10 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrncbenrk.1ajj.bit-bucket@localhost.config.com>
Source record: 94367

On Fri, 28 May 2004 10:18:53 -0400, JJ hath writ:
> If I had a device with an internal antenna and no external antenna jack,
> could I construct a device to slip over the area of the internal antenna and
> pick up the signal threw induction and wire it to an external antenna ?
>
> Thanks

Yep.
For MW and HF applications:
Wind a half-dozen or so turns of small guage wire around the radio.
Since the orientation of most internal antennas are such that the
ferrite rod lies "east-west" along the long dimension of the case,
winding from the back - over the top - and down across the front
ought to line up your coil properly with the interal antenna
coil and "do it" for you.

One end, then, is connected to a 'long run' of wire out to a tree or
the such. For best results, the other end should be run to ground.

If this radio is mains powered, and there is _any_ chance that the
internal chassis, or metal brackets, or knob shafts, u.s.w., are
exposed, -- *DO NO DO THIS* -- unless you are very experienced and
know what you're doing, and/or have someone that _is_ very experienced
work with you on it.

HTH,
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | config.com | DM68mn SK

3113. Re: weird audio noises and can not tune

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 15:49:30 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2kneb0ps7um3itlj1s7qapaa75jkrt7mb9@4ax.com>
Source record: 94368

On Fri, 28 May 2004 01:33:22 -0600, Dan <lists@elp.rr.com> wrote:
>Richard,
>thanks for the reply first "shirt drive" is because I either can not
>type or cannot read what I type should be "short drive" ..
>anyway , what is "common mode problems? not sure I understand ??
>tnx

Hi Dan,

When the SWR changes, this is evidence of common mode currents on the outside of the braid of the coax going to the antenna.

This is a problem because it indicates power is returning to your transmitter and mixing with other functions (poor shielding). The garble you describe "could" be due to this, and the test of lengthening the coax lead to see if SWR changes would verify common modality. It is a very simple test with a very simple result: the SWR changes or it doesn't (it shouldn't in a well designed system).

73's
Richard Clark, KB7QHC

3114. Re: newby question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 16:09:45 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <csoeb0d2pog2r692hoqrfuk3j5usoobtp9@4ax.com>
Source record: 94369

On Fri, 28 May 2004 10:18:53 -0400, "JJ" <Sonbo@comcast.net> wrote:

>If I had a device with an internal antenna and no external antenna jack,
>could I construct a device to slip over the area of the internal antenna and
>pick up the signal threw induction and wire it to an external antenna ?
>
>Thanks
>
>JJ
>
Hi OM,

Not if it is a high, high, high frequency device like a wireless
phone.

Not if it is a high, high frequency device like an FM walkman (well
maybe).

Sure, if it is a short wave or AM radio.

73's
Richard Clark, KB7QHC

3115. Re: newby question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 17:15:13 UTC
From: JJ <Sonbo@comcast.net>
Message-ID: <2hpabiFfph93U1@uni-berlin.de>
Source record: 94370

2.4 to 5 Gig
Any solutions ?

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:csoeb0d2pog2r692hoqrfuk3j5usoobtp9@4ax.com...
> On Fri, 28 May 2004 10:18:53 -0400, "JJ" <Sonbo@comcast.net> wrote:
>
> >If I had a device with an internal antenna and no external antenna jack,
> >could I construct a device to slip over the area of the internal antenna
and
> >pick up the signal threw induction and wire it to an external antenna ?
> >
> >Thanks
> >
> >JJ
> >
> Hi OM,
>
> Not if it is a high, high, high frequency device like a wireless
> phone.
>
> Not if it is a high, high frequency device like an FM walkman (well
> maybe).
>
> Sure, if it is a short wave or AM radio.
>
> 73's
> Richard Clark, KB7QHC

3116. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 17:20:51 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40B774F3.331D73DA@uci.edu>
Source record: 94271

Cecil Moore wrote:
> You must be omnipotent in order to prove that
> you are omniscient. I hope you are up to that task.

I'll try and remember that. 8-|

> My challenge still stands. Please provide a standing wave without a
> forward-traveling wave and a rearward-traveling wave. If you can't,
> at least send me a joint of whatever you are smokin'.

Wow. Maybe I need to issue a "challenge".

How about this: If you can't prove that F does not equal m*a, then I am right about whatever issue on which we disagree!

Is that how it works, Cecil? ;-)

73, Jim AC6XG

3117. Re: Tx Source Impedance & Load Reflections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 17:29:58 UTC
From: richardharrison@webtv.net
Message-ID: <28320-40B77716-84@storefull-3258.bay.webtv.net>
Source record: 94272

Richard Fry wrote:
"This topic deserves more attention---."

Then Richard Fry attached a paper which includes:
"If the source impedance were equal to the fifty 0hm line impedance, half the transmitter`s output power would be dissipated in its internal output source impedance."

For a specific transmitter, that is certainly possible, but the statement is wrong as a general statement.

Many transmitters, such as the familiar type that uses a Class-C final amplifier, are 60 to 80% efficient..This does not mean it is not adjusted for maximum power transfer. It may well be conjugately matched and still exhibit high efficiency, the reason for using the Class-C configuration.

The internal resistace of a Class-C amplifier consists of two parts. One part gets hot and the other does not.

The part that gets hot is ortdinary loss. The part that does not get hot is the switched-off time of the final amplifier. It is just as adept at opposing transmitter output as is the common resistor, but it makes no heat.

Best regards, Richard Harrison, KB5WZI

3118. Re: newby question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 18:06:10 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qmveb0tpe7c6mg2co2qrm350pcmhtsolgs@4ax.com>
Source record: 94273

On Fri, 28 May 2004 13:15:13 -0400, "JJ" <Sonbo@comcast.net> wrote:

>2.4 to 5 Gig
>Any solutions ?

YOW!

Raise the sucker as high as you can, and extend the data wires to the point of use.

OR

Raise the sucker as high as you can, build a reflector or dish around it; and extend the data wires to the point of use.

Beyond that, you stand to lose more than you gain.

73's
Richard Clark, KB7QHC

3119. for sale or trade IC 718

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 19:15:07 UTC
From: nightowls627@aol.comnojunk
Message-ID: <20040528151507.02657.00000086@mb-m28.aol.com>
Source record: 94274

Looking to sell my less than year old, hardly used IC718. My mode of choice is cw and I would like to get an elecraft k1 or kx1. The 718 has the dsp card installed and includes manual, schematics. If traded for k1, I will throw in a rascal glx used for digital modes.- -400.00 plus shipping Thanks so much.

73
Greg
ki4bbl@arrl.net

3120. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 19:30:20 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9840caqu1@sparta.btinternet.com>
Source record: 94275

> Just so I can get my thinking straight -- Does a slotted line measure
> VSWR?
==========

No! A slotted line cannot measure VSWR.

But the VSWR on a slotted line can be measured. That is what it is there for. The slot allows access by a probe to the inner conductor.

It does not allow or facillitate the measurement of VSWR on any line other than on itself.

It is primarily used to make impedance measurements of R+jX etc in a standards laboratory. The Ohmic Standard is the characteristic impedance, Zo, of its own internal transmission line. Very accurate and stable.

3121. Re: newby question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 20:14:36 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <CYSdnWTCrMwaACrdRVn-uQ@comcast.com>
Source record: 94276

"JJ" <Sonbo@comcast.net> wrote in message
news:2hp00vFfpp6iU1@uni-berlin.de...
> If I had a device with an internal antenna and no external antenna jack,
> could I construct a device to slip over the area of the internal antenna
and
> pick up the signal threw induction and wire it to an external antenna ?

Sit it at the focus of a dish?

3122. suggestions for a limited space HF antenna.. vertical or dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 20:15:38 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0405281215.6a134e8f@posting.google.com>
Source record: 94277

Dan <lists@elp.rr.com> wrote in message
news:<f5idb0523i81i1dfm0f8sbcgqd8dd5g1b1@4ax.com>...
> I live is an area that really does not mind antennas however my home
> and property are limited. I have about 70 by 130 feet an da coulpe
> small trees about 25 feet high. I think my best bet is a vertical.

That depends on what bands you want to work, time of day you operate
and whether you're after DX or closer-in stuff (such as closer than
1500-1000 miles). Well-installed verticals are fine for DX but if you
want to ragchew on 80 or 40 they're not the best choice.

Also be aware that most manufactured verticals are severely restricted
in "SWR bandwidth" on 80 and to a lesser extent 40 meters.

> I
> also think i woud like one that states no radials required such as the
> Diamond 80 to 6 meter CP6 vertical or somethin gsimilar.. Any
> suggestions.. what am I missing ? verytical or diploe type or
> somethign else.. Thanks for any suggestions

With a 70 x 130 foot lot you have room for a full-size 80 meter dipole
if the trees and house are in the right spots. 40 meters can be
handled by a second dipole in parallel at the feedpoint, or with
easily-made traps.

If your house is in the middle of the property and there are trees at
the edges or ends, consider putting some TV mast on your roof, vent
pipe or chimney, and supporting the center of the dipole. The trees
support the ends. If your house is 2 stories and you use 15 feet of TV
mast the center will be at least 35-40 feet up and the ends 20 feet or
so.

73 de Jim, N2EY

3123. Re: BPL being deployed!!! Emergency

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 23:26:03 UTC
From: walter <wtmjr@airmail.net>
Message-ID: <40B7CA8B.9030504@airmail.net>
Source record: 94278

With a skip condition I am able to pick up BPL signals from a distance.
The rotator shows it is coming from the east coast...
Is there any way I can tap in on these strong signals to get free
internet. The frequencies I can pick up go from about 18 to 35 mhz with
my particular antennas. The other day there were two sources of the
signal coming from farther north, possibly somewhere in Mass... If
these companies are going to put signals on unbalances long wires for us
to pick up and possibly interfere with our ham communications, there
must be some kind of I.D. so we can report this interference... By the
way I worked Don Stoner, W6tns 40 years ago. I was in Japan at KA2YA and
he was in California..running 200 mw to a transistorized rig.. 1st of
it's kind... Very low power goes a very long way.. If you would like
information on BPL I can copy during skip conditions I will be happy to
coordinate and experiment on these signals... With 30 or so sources,
when the skip is in, you can count on destroying HF communications and
Shortwave broadcast... possibly world-wide...

Have fun till the RF hits the blower... Say hi to Michael for me..
When he retires I know who he is going to work for...

Walter McKay w5sfp.

Oh yes! The local cable company was fined for leaking signals from their
coax cable... Their signal levels were 1/200 as potent as the presently
measured local BPL...

Did you hear the one about the water temperature transmitter off the
coast of South America that was interfering with the U.S. government
communication and also marine radio traffic... 100 mw. check it out.

Bye... and have fun with your power line adaptor.

thatcher wrote:
> http://biz.yahoo.com/fool/040303/1078348320_1.html
>
>
> *Motley Fool*
> Broadband and Utilities, Oh My
> Wednesday March 3, 4:12 pm ET
> By Mark Mahorney
>
> Only a year ago, broadband over power line (BPL) was seen as a
> technology with an uncertain future and far from implementation. Despite
> early snafus, BPL has ironed out its kinks and is now being rolled out.
> Though largely ignored, this is one of the most exciting events to hit
> technology news in a long time.

>
> ADVERTISEMENT
>
> Considering how long the Internet has been sharing phone lines, it's
> taken a long time for power lines to reach the dual-use point. Cable and
> DSL Internet service providers have been crossing their fingers hoping
> it wouldn't happen.
>
> It's sneaking up on them just as cable Internet launched a sneak attack
> on dial-up providers. Now, the dial-up providers are largely dependent
> on phone company partnerships and rural customers who can't get cable or
> DSL. But what will become of them if those customers -- which represent
> a significant portion of the population -- can get broadband Internet
> over their power lines? And who would have thought we may soon be paying
> our power company for Internet access?
>
> Yesterday, *Cinergy* (NYSE: CIN <http://finance.yahoo.com/q?s=cin&d=t> -
> News <http://finance.yahoo.com/q/h?s=cin>) announced that its Cinergy
> Broadband subsidiary and partner Current Communications are rolling out
> the BPL service in the Cincinnati, Ohio area. After testing the service
> in a small region, the company is ready to unleash the power (no pun
> intended). It claims its service is faster -- more than three megabytes
> per second compared with cable's roughly two megs per second -- and
> cheaper than cable Internet.
>
> Test customers have been happy with the service, and there have been no
> problems with interference. Furthermore, all that's needed to tap into
> it is a $30 HomePlug power line modem, which the company will be giving
> away.
>
> Cinergy isn't the only utility looking at this technology, either. There
> are numerous power companies developing the capability or watching its
> development closely. Internet start-ups like Current Communications are
> waiting in the wings to help the utilities initiate and manage the service.
>
> It's a potentially huge revenue source for the utilities, with the
> possibility of being a huge revenue drain for the current Internet
> providers. Cable Internet providers like *Comcast* (Nasdaq: CMCSA
> <http://finance.yahoo.com/q?s=cmcsa&d=t> - News
> <http://finance.yahoo.com/q/h?s=cmcsa>), DSL providers like *Qwest
> Communications* (NYSE: Q <http://finance.yahoo.com/q?s=q&d=t> - News
> <http://finance.yahoo.com/q/h?s=q>), *BellSouth* (NYSE: BLS
> <http://finance.yahoo.com/q?s=bls&d=t> - News
> <http://finance.yahoo.com/q/h?s=bls>), and *SBC Communications* (NYSE:
> SBC <http://finance.yahoo.com/q?s=sbc&d=t> - News
> <http://finance.yahoo.com/q/h?s=sbc>), and even the traditional dial-ups
> like *Time Warner's* (NYSE: TWX <http://finance.yahoo.com/q?s=twx&d=t> -
> News <http://finance.yahoo.com/q/h?s=twx>) America Online (AOL) and
> *Microsoft's* (Nasdaq: MSFT <http://finance.yahoo.com/q?s=msft&d=t> -
> News <http://finance.yahoo.com/q/h?s=msft>) MSN should be paying attention.

>
> From the look of things, this technology will roll out much faster than
> most people expect. I am certainly willing to give it a try if and when
> it comes to my area. And I recommend you check with your local power
> company to see if it has any plans to implement the technology. If so,
> consider taking a good look at both the stock and the service. It could
> be the next big thing.
>
> /What do you think this new technology means for cable companies like
> Comcast <http://boards.fool.com/Messages.asp?bid=101774> or Internet
> service providers like Time Warner's AOL
> <http://boards.fool.com/Messages.asp?bid=100347>? Talk about it with
> other Fools on our discussion boards./
>
> /Motley Fool contributor Mark Mahorney <mailto:afool@cofishop.com>
> doesn't own shares of any companies mentioned./
>

3124. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 23:45:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b7d002_6@corp.newsgroups.com>
Source record: 94279

Reg Edwards wrote:
> But it's good to see you didn't disagree with me about TLI's

The 'brains' over on sci.physics.electromag tell me that it takes only
a couple of feet of 50 ohm coax on each side of an "SWR meter" to
guarantee that it exists in a 50 ohm environment. I indeed do have
three feet of RG-400 on each side of mine.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3125. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 23:49:09 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b7d0e2$1_6@corp.newsgroups.com>
Source record: 94280

k4wge wrote:
> Look like Steve's been busy.

He told me he needed to rewrite his QEX article based on what
he had learned on this newsgroup. Maybe that is it.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3126. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-28 23:54:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b7d21e_6@corp.newsgroups.com>
Source record: 94281

Jim Kelley wrote:
> How about this: If you can't prove that F does not equal m*a, then I am
> right about whatever issue on which we disagree!
>
> Is that how it works, Cecil? ;-)

That's how your logic obviously works, Jim. Most of us know
that it is impossible to prove a negative except for a binary
outcome.

Please, pretty please with cream and sugar on it, provide just
one single example of a standing wave without forward-traveling
or rearward-traveling components. That is certainly not too
much to ask.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3127. RF absorption question 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 00:42:35 UTC
From: Antenna Problem <orillia@rogers.com>
Message-ID: <%%Qtc.2814$JmE.2803@news04.bloor.is.net.cable.rogers.com>
Source record: 94282

Just put up an end fed 1/2 vertical cut for 40m. I was able to get a low SWR with my antenna tuner. The problem i found was the wire got tangled into the lower branches of the tree. My plan was to pull it away from the tree however the wire follows straight beside the trees. Will i have an RF absorption problem on 40m? Should i get the tree guy in to trim the branches so i can pull it away from the tree? Or should i just drink a few cold ones and enjoy this holiday weekend?

73

3128. Re: RF absorption question 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 00:49:23 UTC
From: k9sqg@aol.com
Message-ID: <20040528204923.11868.00000060@mb-m27.aol.com>
Source record: 94283

Well, I used a GAP Challenger vertical anchored to a 12 foot tree stump, about 8-10 inches in diameter and it worked out fine.

3129. Re: RF absorption question 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 00:50:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hbnfb0hqshepjj8fjolg05pvjttvrmem0l@4ax.com>
Source record: 94284

On Sat, 29 May 2004 00:42:35 GMT, "Antenna Problem"
<orillia@rogers.com> wrote:

>Will i have an RF absorption problem on 40m?

Only if bare wire against wet wood where the wire presents a high
potential. As you describe it, 1/2 wave, this would be at the ends.

>Should i get the tree guy in to trim the
>branches so i can pull it away from the tree?

It would solve practical problems over the long run.

>Or should i just drink a few
>cold ones and enjoy this holiday weekend?

In the short term, sure.

3130. How to go from 160-170 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 02:03:34 UTC
From: rlangevin@interwrx.com
Message-ID: <40B7EF76.90708@interwrx.com>
Source record: 94285

I ended up with a 4 bay antenna that is resonant from 150 - 170.
How much work is it to put this on 2 meters?

Rich L
KB7YEB

3131. Re: How to go from 160-170 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 02:18:10 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b7f2e2$0$436$5cbedd26@news.real-time.com>
Source record: 94286

rlangevin@interwrx.com wrote:
> I ended up with a 4 bay antenna that is resonant from 150 - 170.
> How much work is it to put this on 2 meters?
>
> Rich L
> KB7YEB
>

If you would please give a description of the antenna, in as much detail
as possible, the group will be able to help you.

tom
K0TAR

3132. Re: How to go from 160-170 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 06:19:34 UTC
From: Rick Frazier <rick@rickfrazier.com>
Message-ID: <40B82BAD.8F0B7BF2@rickfrazier.com>
Source record: 94287

Rich:

Well, as 2m transmit is 144-148, the antenna will be too short for the 2m band, and the spacing of the 4 bays will be too close.

Generally speaking, it's usually easier to cut down element length on a lower frequency antenna to bring it up to a higher frequency. Depending upon the design, this may not result in a reasonable gain figure for an individual antenna...

I'm assuming that when you say 4-bay, you mean an antenna array with 4 separate antennas in a 2x2 (square) configuration, which for the original design frequency range, would have yielded nearly 6db of gain over a single antenna of the array.

If you are serious about making the array work on 2m, the first thing you will need to do is to increase element lengths to bring resonance of the individual antennas within the 2m range. This may not result in near the gain the original antenna had at it's design frequency because the spacing of the elements will no longer be optimal. You might be able to model it in NEC, ezNEC or one of the other antenna programs to see what the current antenna gain and bandwidth figures are, and then change lengths of the elements (leaving the spacing the same) and see what the new antenna looks like.... Of course, even if it's ok, then you have to figure out how to "stretch" the elements to fit. Once you figure all of this out, and get a single antenna with decent gain at your frequency of interest, then you need to repeat it three more times, then connect them at the optimum spacing with an appropriate phasing harness for 2m operation....

If you haven't guessed by now, it may be easier to just sit down and make (or buy) an antenna with about the same gain figure the existing 4-bay has, and save yourself a lot of time. However, if you're willing to spend a bunch of time piddling around and aren't looking for optimum results, it can be a lot of fun to modify something like what you have, if you enjoy cut and try and have a lot of time on your hands...

Good Luck
--Rick AH7H

rlangevin@interwrx.com wrote:

> I ended up with a 4 bay antenna that is resonant from 150 - 170.
> How much work is it to put this on 2 meters?
>
> Rich L
> KB7YEB

3133. Re: Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 07:51:39 UTC
From: Ian Jackson <REMOVE-THIS-BIT@g3ohx.demon.co.uk>
Message-ID: <$MPdzePLEEuAFwND@g3ohx.demon.co.uk>
Source record: 94288

In message <5m8db01lipiilc8p0ahekj4ndk6salsi23@4ax.com>, Richard Clark
<kb7qhc@comcast.net> writes
>On 27 May 2004 19:06:26 -0700, bbskip@prodigy.net (Bruno) wrote:
>
>>I would like to operate a 5 watt 151. MHz mobile transceiver into a
>>ball and spring low band whip antenna similar to the old bumper mount
>>CB antennas except that the antenna would be mounted directly to the
>>top of the rear fender of a large 1960's American car and needs to be
>>around 5-7 feet high. I need to use this type of antenna to give it
>>the appearance of an old police car.
>>
>>Is it possible to do this effectively without damaging the
>>transmitter. I realize that this is an amateur radio board but I
>>thought that amateurs would be the best group to ask. Thank you.
>>
>>Bruno
>
>Hi Bruno,
>
>MURS allows only 2W effective radiated power, not 5W going to an
>antenna. Further, this is into a simple antenna. Yeah, I know,
>yours seems to be a simple one, however as long as it is (5-7 feet
>high), it is both a poor match (almost no power out), and would have
>gain (a power multiplying factor) if you did match it (making it more
>powerful, hence the term "effective" radiated power). Even more
>unfortunate is that this gain (and most sensitivity for receiving)
>would be up into the sky! This is like drawing three cards to an
>inside straight: antenna too long, poor match, deaf too.
>
>Now, this sounds like a lot of contradictions I am sure. The simplest
>antenna would be roughly 18 inches tall. Use the AM radio antenna for
>that, use a legal transmitter, and put up your buggy whip to impress
>the buddies. As an alternative, the antenna length you are describing
>is quite close to those used in the CB bands which would work just as
>well, if not better (as long as who you talk to use the same bands).
>
>By the way, are you located near Norwalk Connecticut?
>
>73's
>Richard Clark, KB7QHC

Actually, there is no problem.

As it stands, at the impedance looking into the coax (TX end) won't be
50 ohms. To keep the TX happy, all you need to do is to insert a simple

matching circuit (at the TX end) to transform whatever the impedance is to 50 ohms.

This won't change the impedance looking into the coax, and the SWR on the coax will be the same. As a result, the loss on the coax will be higher than if the SWR was 1:1. However, as the length of the coax won't be that great (even in those large American cars!), I doubt if you'll notice it.

For a suitable matcher, I suggest you get one of those very cheap small CB type (the kind in with the two compression trimmers, often found in a junk box), and rebuild it into a C-L-C pi configuration (if it isn't already). The coil will probably be about 4 turns 1/4" dia (some experimentation will be necessary). To adjust the matcher, insert an SWR meter between the TX and the matcher, and connect the matcher to the coax.

Cheers,
Ian.
--

3134. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 10:55:24 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <FdVd6gHcwGuAFAbu@ifwtech.co.uk>
Source record: 94289

Reg Edwards wrote:
>
>"Ian White, G3SEK" wrote
>> And the conclusion of these experiments? That the concept of "reflected
>> power" is not helping us to understand anything.
>
>============================
>
>I've been saying for years, the so-called SWR-meter is itself the root of
>the trouble - it has forward and reflected power scales on it. So it is
>impossible to refer to it without becoming emotionally involved with the
>highly misleading reflected power notion.
>
>Furthermore, the confounded thing doesn't even measure SWR. How can it
>measure SWR on a transmission line which does not exist?
>
>It is a ridiculous, meaningless situation. People drag themseves off to UHF
>to air their knowledge about such things as echos, S-parameters, circulators
>and high power TV transmitters. Quite irrelevant to the notion of reflected
>power at 1.8 MHz.
>
>All that's necessary is to erase the meter scales, or at least wash them
>from our minds, and change the name of the SWR meter to the TLI.
>(Transmitter Loading Indicator). Or some other more appropriate name.

Technically correct, but far too late. "SWR" is everywhere - the genie
is out of the bottle, and it won't go back.

To expand on what Reg already knows, but clear needs to be said again
and again...

The only way forward is for everybody to understand that SWR numbers are
just one of several alternatives for judging the "goodness" of an
impedance match to some specified reference impedance. Other
alternatives include reflection coefficient, return loss, gamma, S11,
etc.

All these alternatives are equally valid, and any one can easily be
converted to any other by doing a small amount of math. RF engineers do
it all the time, and it's absolutely no big deal.

If you're only using "SWR" as a number that indicates the goodness of an
impedance match, you can legitimately apply it to *anything* that
possesses an impedance (it doesn't need to have waves standing on it).

The discussion goes off the rails when someone starts to imagine that an "SWR meter" is truly *measuring* standing wave ratio. It isn't - it is actually measuring one of those other quantities (magnitude of reflection coefficient). Then there has to be a mathematical conversion from that number into the more familiar SWR number, which is done by calibrating the meter scale in a specific non-linear way.

It's vital to understand that difference: the instrument is *calibrated* in SWR, but it is actually *measuring* something else.

Likewise it's a mistake to believe that a Bird Thruline wattmeter is measuring "forward and reflected watts". It is just another gadget for measuring reflection coefficient, with a fixed sensitivity that allows the meter scale to be calibrated in watts. But it's only a calibration in terms of power - the Bird is not making a power measurement.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3135. Re: A cure for reflected power

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 13:48:16 UTC
From: George <K3UD@yahoo.com>
Message-ID: <K3UD-58D7C7.08481629052004@corp.supernews.com>
Source record: 94290

> ps. This technology does not come cheap. A six-foot, 60 Hz
> transmission line (power cord) sells for $492 at Parts Express. A six
> foot two wire balanced line costs $610, although there are price
> breaks for longer lengths.
>
> Damn, why didn't I think of this first?

When my son was into hi end (actually hi noise) car stereo of something called Outlaw SPL, I ran across an ad in one of the magazines devoted to the "sport" which pushed a "no loss" fuse that would allow better current stability for that 2 KW amp in the trunk. $35 each.

73
George
K3UD

3136. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 14:01:12 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9a537$l9t$1@sparta.btinternet.com>
Source record: 94291

The ONLY thing an SWR meter measures is the "Magnitude of the reflection coefficient relative to an arbitrary value of Ro", where Ro is usually 50 ohms. It actually throws away the other half of the possible information, ie., the "Reflection Coefficient Angle".

99.9 percent of radio amateurs have never heard of such a quantity. There's no reason why they should. It's of no practical use or interest.

But they are VERY interested in whether or not their transmitter is correctly loaded with 50+j0 ohms during transmissions and a simple indicating instrument is essential.

Isn't it time some enterprising manufacturer came into the market?

Reg, G4FGQ

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message news:FdVd6gHcwGuAFAbu@ifwtech.co.uk...
> Reg Edwards wrote:
> >
> >"Ian White, G3SEK" wrote
> >> And the conclusion of these experiments? That the concept of "reflected
> >> power" is not helping us to understand anything.
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> >highly misleading reflected power notion.
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> >Furthermore, the confounded thing doesn't even measure SWR. How can it
> >measure SWR on a transmission line which does not exist?
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> >It is a ridiculous, meaningless situation. People drag themseves off to
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> >to air their knowledge about such things as echos, S-parameters,
circulators
> >and high power TV transmitters. Quite irrelevant to the notion of
reflected
> >power at 1.8 MHz.
> >
> >All that's necessary is to erase the meter scales, or at least wash them
> >from our minds, and change the name of the SWR meter to the TLI.
> >(Transmitter Loading Indicator). Or some other more appropriate name.

>
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> is out of the bottle, and it won't go back.
>
> To expand on what Reg already knows, but clear needs to be said again
> and again...
>
>
> The only way forward is for everybody to understand that SWR numbers are
> just one of several alternatives for judging the "goodness" of an
> impedance match to some specified reference impedance. Other
> alternatives include reflection coefficient, return loss, gamma, S11,
> etc.
>
> All these alternatives are equally valid, and any one can easily be
> converted to any other by doing a small amount of math. RF engineers do
> it all the time, and it's absolutely no big deal.
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> If you're only using "SWR" as a number that indicates the goodness of an
> impedance match, you can legitimately apply it to *anything* that
> possesses an impedance (it doesn't need to have waves standing on it).
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> The discussion goes off the rails when someone starts to imagine that an
> "SWR meter" is truly *measuring* standing wave ratio. It isn't - it is
> actually measuring one of those other quantities (magnitude of
> reflection coefficient). Then there has to be a mathematical conversion
> from that number into the more familiar SWR number, which is done by
> calibrating the meter scale in a specific non-linear way.
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> It's vital to understand that difference: the instrument is *calibrated*
> in SWR, but it is actually *measuring* something else.
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> measuring "forward and reflected watts". It is just another gadget for
> measuring reflection coefficient, with a fixed sensitivity that allows
> the meter scale to be calibrated in watts. But it's only a calibration
> in terms of power - the Bird is not making a power measurement.
>
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> http://www.ifwtech.co.uk/g3sek

3137. magloop antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 14:17:17 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <NX0uc.209559$0qd.21699@twister01.bloor.is.net.cable.rogers.com>
Source record: 94292

Hello group. I am in the beginning of research for a magloop antenna as due to restrictions here.
Wonder what can be said of them , pro's and con's.
Also any idea for good articles about them and how to go about building them.?

Let me know what you think.

de Jean-Guy/ve9buf

3138. Re: newby question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 15:17:22 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <40b8aa04_4@newsfeed.slurp.net>
Source record: 94293

Probably. But you would be better off to do the surgery on the original device, and install an external antenna connector...

- KI6PR

"JJ" wrote
> If I had a device with an internal antenna and no external antenna jack,
> could I construct a device to slip over the area of the internal antenna
and
> pick up the signal threw induction and wire it to an external antenna ?
>
> Thanks
>
> JJ
>
>

3139. Re: magloop antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 15:21:37 UTC
From: Norbert <pa7nrNNOSPAMMM@qsl.net>
Message-ID: <2U1uc.20076$CM5.98263@zonnet-reader-1>
Source record: 94294

"Jean-Guy" <jglandry50@rogers.com>

> Hello group. I am in the beginning of research for a magloop antenna as
due
> to restrictions here.
> Wonder what can be said of them , pro's and con's.
> Also any idea for good articles about them and how to go about building
> them.?
>
> Let me know what you think.
>
> de Jean-Guy/ve9buf
>

Jean-Guy,

Please check my Internet site about my experience with Magnetic loop
antennas.

73, Norbert (PA7NR)
http://www.qsl.net/pa7nr/index.html

3140. Re: A cure for reflected power

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 15:40:43 UTC
From: "H. Adam Stevens" <hstevens@totalaccessNOSPAM.net>
Message-ID: <10bhbu0ropsfmea@corp.supernews.com>
Source record: 94295

"George" <K3UD@yahoo.com> wrote in message
news:K3UD-58D7C7.08481629052004@corp.supernews.com...
> > ps. This technology does not come cheap. A six-foot, 60 Hz
> > transmission line (power cord) sells for $492 at Parts Express. A six
> > foot two wire balanced line costs $610, although there are price
> > breaks for longer lengths.
> >
> > Damn, why didn't I think of this first?
>
> When my son was into hi end (actually hi noise) car stereo of something
> called Outlaw SPL, I ran across an ad in one of the magazines devoted to
> the "sport" which pushed a "no loss" fuse that would allow better
> current stability for that 2 KW amp in the trunk. $35 each.
>
> 73
> George
> K3UD

What passes for knowledge in the audio world
often makes this group look like a pack of geniuses.
=8*)
73
H.
NQ5H

3141. Re: How to go from 160-170 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 16:57:54 UTC
From: Mike <km6ab@pacbell.net>
Message-ID: <mi3uc.59200$ZE3.12666@newssvr29.news.prodigy.com>
Source record: 94296

We are assuming you have a 4 bay dipole array, common for commercial use. Some of these are basic dipoles fed with a gamma match and it would be fairly easy to lengthen the elements and retune the gamma match. Other brands use a closed loop dipole and that would be a challenge to cut and lengthen. The phasing harness would be a specific length for 160mHz center freq and you may need to make a new one for optimum results on 2m. If the harness if too long or too short it may tend to pull the pattern up or down slightly from the horizon.
Mike
rlangevin@interwrx.com wrote:
> I ended up with a 4 bay antenna that is resonant from 150 - 170.
> How much work is it to put this on 2 meters?
>
> Rich L
> KB7YEB
>

3142. Stacking Distance Qusetion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 17:02:58 UTC
From: ab5mm <ab5mm@9plus.net>
Message-ID: <c9afo40308t@enews1.newsguy.com>
Source record: 94297

Hi group... Need some input.

I need to stack two 432mhz quads, not in the traditional vertical plane, but horizontal. This brings me to two questions... (1) What distance apart? 1/2 wave length or 1 wave length or ?? (2) Do I need to make that measurement from boom center line to boom center line OR would it be end of element to end of element?

Thanks & 73,

Steve
ab5mm

3143. Re: How to go from 160-170 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 17:46:29 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <40b8cc75$1@news.vallnet.com>
Source record: 94298

<rlangevin@interwrx.com> wrote in message
news:40B7EF76.90708@interwrx.com...
> I ended up with a 4 bay antenna that is resonant from 150 - 170.
> How much work is it to put this on 2 meters?
>
> Rich L
> KB7YEB
I'd start with putting it on a (low power) radio and meter and seeing what
SWR you come out with in the portion of the 2m band you intend to use it on.
If it's less than 2:1 most would consider that acceptable. (Personally, I'd
shoot for less, but that's me). Depending on how 'wide band' this thing is,
it might cover 2m nicely.

If you want to actually alter it for 2m, it will involve:
Lengthening the antenna elements (2m is lower, so elements are longer)
Lengthening the phasing elements
Increasing the spacing between antenna elements.

3144. Re: Stacking Distance Qusetion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 18:10:39 UTC
From: Dave <noone@nowhere.com>
Message-ID: <x96dnbyzK-e-TyXdRVn-jw@crocker.com>
Source record: 94299

assuming they are being fed in phase and are polarized the same way they should work best at an odd multiple of 1/2 wave apart... measured boom to boom. of course at 70cm a 1/2 wave spacing is only 35cm, which is pretty close and will probably result in unwanted interaction between them. i would go for at least 3/2 or 5/2 wave spacing... 3/2 spacing is only about 1m which is very workable even in a small space and would be reasonable for fairly short quads. if they are long ones you may want to go for 5/2 or even wider spacing. one kind of generic rule of thumb is that you want them at least as far apart as their boom length..

one other thing, this is not an odd application. it is fairly common to see horizontal stacking of yagis for vhf and uhf. cushcraft used to sell a pair of 2m yagis with a cross member and phasing line. many big gun uhf stations will stack 4x70cm yagis in a square with an H shaped framework.

"ab5mm" <ab5mm@9plus.net> wrote in message
news:c9afo40308t@enews1.newsguy.com...
> Hi group... Need some input.
>
> I need to stack two 432mhz quads, not in the traditional vertical plane,
> but horizontal. This brings me to two questions... (1) What distance
> apart? 1/2 wave length or 1 wave length or ?? (2) Do I need to make
> that measurement from boom center line to boom center line OR would it
> be end of element to end of element?
>
> Thanks & 73,
>
> Steve
> ab5mm
>

3145. Re: magloop antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 18:30:37 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9aksddev1@titan.btinternet.com>
Source record: 94300

"Jean-Guy" wrote -
> Hello group. I am in the beginning of research for a magloop antenna as
due
> to restrictions here.
> Wonder what can be said of them , pro's and con's.
> Also any idea for good articles about them and how to go about building
> them.?
>
> Let me know what you think.
>
==========

Jean, look no further.

I assume your 'restriction' is the amount of space available, and the consequential environmental clutter which doesn't help.

From the important point of view of power radiating efficiency the magloop is the most efficient of all the small antennas. Much more efficient than most.

Small means small in relation to free-space wavelength. A loop diameter less than about 1/8 of a wavelength can be considered to be small. But loop antennas with a diameter as small as 1/80 wavelengths are quite usable when installed in a fairly clear and unobstructed environment. But don't let the prospect of using one in your bedroom or attic put you off.

With a wide range tuning capacitor a magloop can cover several bands, eg., 160 to 40 metres, or 20 to 10 metres, whereas other very small antennas are single band only.

Assuming you are not going to buy one.

A magloop consists of a square or hexagonal or circular loop of a LARGE diameter (one or two inches or more) conductor. Or a broad, flat strip. The actual shape of conductor doesn't matter all that much. A circular conductor is marginally the best. What matters is the enclosed area. Copper is marginally better than aluminium.

Construction of the loop itself is a straightforward mechanical task. The main difficulties lie in connecting the ends of the loop to the tuning capacitor. All connections MUST be of the same substantial construction as the loop itself.

The variable tuning capacitor, a vital component, for the highest frequencies (14 to 30 MHz), can be self-constructed. For the lowest frequencies variable capacitors (the vacuum type) as large as 1000 pF are

needed, and these can only be purchased. They are expensive but worth the money. They have a resale value.

For single band working a high-value fixed capacitor can be be used with a low-value home-made or purchased variable capacitor in parallel.

All capacitors must have high working voltages. For 100-watt transmitters working voltages of 5000V are needed. The smaller the loop diameter, the lower the frequency, the higher the working voltage.

The only other component is a small internal coupling loop which lies in the same plane as the the main loop and, to match to a 50-ohm line, it has a diameter about 1/5 of the main loop. It is a valuable property of a magloop that the diameter of the coupling loop remains approximately constant from one band to another, the only variable quantity needed to maintain a match to a 50-ohm line is the value of the tuning capacitor. (All other antenna matching circuits need at least two variable components.)

The coupling loop can be just a self-supporting circle of wire of no greater wire diameter than that of the inner conductor of the coaxial cable which feeds it. Ignore old wives' tales about Faraday screens. But if you feel like it, by all means extend the coaxial braid and jacket around the length of the coupling loop.

Especially at the lower frequencies, a very slow-motion control is needed for the variable tuning capacitor. This is necessary because of the extremely high Q and selectivity of the loop + capacitor tuned circuit. You can't have high efficiency without a high Q with magloops.

Well, I've given you the essentials. You will find on Google the various ways of making your own tuning capacitors complete with drawings - the most awkward part of the whole business. The first thing to do is obtain the values of the variable capacitors. See computer program below. Being lazy and rich enough I've always purchased mine.

To design your own magloop, or, once you have the dimensions, to compare the performance of one manufactured magloop with another, download in a few seconds program MAGLOOP4 from website below and run immediately. Program MAGLOOP4 has been written to professional standards.

.....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
.....

3146. Re: magloop antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 18:51:11 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <zY4uc.17202$lZz1.786@news01.bloor.is.net.cable.rogers.com>
Source record: 94301

Thanks Nobert for info, lots of reading over the weekend to do. Very well
dont page. very informative.
all the best of 73
de Jean-Guy/ve9buf

"Norbert" <pa7nrNNOSPAMMM@qsl.net> a crit dans le message de
news:2U1uc.20076$CM5.98263@zonnet-reader-1...
>
> "Jean-Guy" <jglandry50@rogers.com>
>
> > Hello group. I am in the beginning of research for a magloop antenna as
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> > to restrictions here.
> > Wonder what can be said of them , pro's and con's.
> > Also any idea for good articles about them and how to go about building
> > them.?
> >
> > Let me know what you think.
> >
> > de Jean-Guy/ve9buf
> >
>
> Jean-Guy,
>
> Please check my Internet site about my experience with Magnetic loop
> antennas.
>
> 73, Norbert (PA7NR)
> http://www.qsl.net/pa7nr/index.html
>
>

3147. Re: magloop antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 18:53:46 UTC
From: Jean-Guy <jglandry50@rogers.com>
Message-ID: <__4uc.216916$0qd.23282@twister01.bloor.is.net.cable.rogers.com>
Source record: 94302

Thanks Reg, printed out your info and in the process of reading, looks like
i will have lots of info and reading to do
all the best of weekend and cul.
73 de Jean-Guu/ve9buf

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> a crit dans le message de
news:c9aksddev1@titan.btinternet.com...
>
> "Jean-Guy" wrote -
> > Hello group. I am in the beginning of research for a magloop antenna as
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> antennas with a diameter as small as 1/80 wavelengths are quite usable
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> installed in a fairly clear and unobstructed environment. But don't let
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> 160 to 40 metres, or 20 to 10 metres, whereas other very small antennas
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Copper
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> Construction of the loop itself is a straightforward mechanical task. The
> main difficulties lie in connecting the ends of the loop to the tuning
> capacitor. All connections MUST be of the same substantial construction
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> The variable tuning capacitor, a vital component, for the highest
> frequencies (14 to 30 MHz), can be self-constructed. For the lowest
> frequencies variable capacitors (the vacuum type) as large as 1000 pF are
> needed, and these can only be purchased. They are expensive but worth the
> money. They have a resale value.
>
> For single band working a high-value fixed capacitor can be be used with a
> low-value home-made or purchased variable capacitor in parallel.
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> working voltages of 5000V are needed. The smaller the loop diameter, the
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>
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> same plane as the the main loop and, to match to a 50-ohm line, it has a
> diameter about 1/5 of the main loop. It is a valuable property of a
magloop
> that the diameter of the coupling loop remains approximately constant from
> one band to another, the only variable quantity needed to maintain a match
> to a 50-ohm line is the value of the tuning capacitor. (All other antenna
> matching circuits need at least two variable components.)
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> wire diameter than that of the inner conductor of the coaxial cable which
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> like it, by all means extend the coaxial braid and jacket around the
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> Well, I've given you the essentials. You will find on Google the various
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> and rich enough I've always purchased mine.
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the
> performance of one manufactured magloop with another, download in a few
> seconds program MAGLOOP4 from website below and run immediately. Program
> MAGLOOP4 has been written to professional standards.
> ----
> .....
> Regards from Reg, G4FGQ
> For Free Radio Design Software go to
> http://www.btinternet.com/~g4fgq.regp
> .....
>
>

3148. Antenna Tubing suppliers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 20:12:24 UTC
From: SB <abc@abc.com>
Message-ID: <c9aqr8$3jv$1@hercules.btinternet.com>
Source record: 94303

Can anyone suggest a UK outlet where I can obtain aluminium tubing for contsruction of beam antennas, also dipole centres and element to boom fixtures.

Thanks G7CPN.

3149. Re: RF absorption question 40m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 21:02:08 UTC
From: rhymer <ron@roncrowley.dot.com>
Message-ID: <7guhb09smd6jtqlimcebbm77uk0o85sl7v@4ax.com>
Source record: 94304

On Sat, 29 May 2004 00:42:35 GMT, "Antenna Problem"
<orillia@rogers.com> wrote:

>Just put up an end fed 1/2 vertical cut for 40m. I was able to get a low
>SWR with my antenna tuner. The problem i found was the wire got tangled
>into the lower branches of the tree. My plan was to pull it away from the
>tree however the wire follows straight beside the trees. Will i have an RF
>absorption problem on 40m? Should i get the tree guy in to trim the
>branches so i can pull it away from the tree?

>Or should i just drink a few
>cold ones and enjoy this holiday weekend?

That would be my vote :-)

3150. Radials for 6-BTV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 21:43:47 UTC
From: rhymer <ron@roncrowley.dot.com>
Message-ID: <3muhb051u7kocjd0566gv8cj1au0oc5dbp@4ax.com>
Source record: 94305

In an above ground installation, Hustler recommends a minimum of 2 radials for each band. That's 12 wires, the equivalent of 6 dipoles.

Now, I'm wondering, why bother with the vertical section at all. If I put a PVC pole up 25' (the height of the 6-BTV) and tie all the radial pairs as inverted vees to one feed line at the top, wouldn't that work as good. What effect would the feed line have on the radiation pattern?

The dipoles would also serve as guy lines.

Maybe a balun on the top?

I have had inverted vees in the past and they seem to work great.

Ron, W1WBV

3151. Attention MARS & Ex MARS Operators

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 22:40:05 UTC
From: Keyboard In The Noise <KITN@cat.net>
Message-ID: <9j8uc.11352$oi5.9374@fed1read07>
Source record: 94306

FYI: A MARS and Veterans Communicators Reunion is in the making -- a friend AC6V has posted it on his website.

MARS = Military Affiliate Radio System

http://ac6v.com/MARSREUNION.htm

Please don't e-mail me (I'm Anon) or AC6V

See web page for contacts and further info.

--
Keyboard In The Noise

Opinions are the cheapest commodities in the world. Author unknown but "right on"

3152. Re: Stacking Distance Qusetion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 23:10:15 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b91861$0$432$5cbedd26@news.real-time.com>
Source record: 94307

Here is a chart of what the EME'rs are doing for spacing on 2m. Scale
by exactly 3 for 432 for your boomlength.

http://www.vhfdx.net/VE7BQH.html

And here is the DL6WU stacking formula -

DL6WU Stacking Formula for Long Yagis

D = W / (2 * sin(B/2))

* D = stacking distance, vertical or horizontal
* W = wavelength, in same units as D
* B = beamwidth between -3dB points.
Use vertical beamwidth for vertical stacking (as above);
use horizontal beamwidth for horizontal stacking.

Or you can do it using YO, EZNEC, etc., and increase the spacing until
the first sidelobe is minimized, and the next stacking distance step
makes it larger. I think that's at 13dB down, but I could be wrong,
17dB also sounds correct. ;)

tom
K0TAR

ab5mm wrote:
> Hi group... Need some input.
>
> I need to stack two 432mhz quads, not in the traditional vertical plane,
> but horizontal. This brings me to two questions... (1) What distance
> apart? 1/2 wave length or 1 wave length or ?? (2) Do I need to make
> that measurement from boom center line to boom center line OR would it
> be end of element to end of element?
>
> Thanks & 73,
>
> Steve
> ab5mm
>

3153. Re: Radials for 6-BTV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 23:16:30 UTC
From: j999w@aol.com
Message-ID: <20040529191630.09801.00000103@mb-m06.aol.com>
Source record: 94308

Indeed.

Sounds like a good experiment.

jw
K9RZZ

3154. Re: Stacking Distance Qusetion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 23:18:30 UTC
From: j999w@aol.com
Message-ID: <20040529191830.09801.00000104@mb-m06.aol.com>
Source record: 94309

How big are the antennas? The pattern can get pretty sharp and hard to nail on the station you're trying to peak. No doubt you'll be loud once you're there, but the wind may blow you off track.

jw
K9RZZ

3155. VIRUS

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 23:37:27 UTC
From: Billybob <billybob@home.net>
Message-ID: <N89uc.8123$fw6.6627@fe39.usenetserver.com>
Source record: 94310
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

VIRUS
<rlyiyv@comcast.net> wrote in message news:fD6uc.19690$Ly.6353@attbi_s01...
> X Pics of my sister sticking a cucumber up herself X
>
>

>
>

3156. VIRUS

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-29 23:38:06 UTC
From: Billybob <billybob@home.net>
Message-ID: <p99uc.8125$fw6.7109@fe39.usenetserver.com>
Source record: 94311
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

VIRUS
<rlyiyv@comcast.net> wrote in message news:fD6uc.19690$Ly.6353@attbi_s01...
> X Pics of my sister sticking a cucumber up herself X
>
>

>
>

3157. Re: Stacking Distance Qusetion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 00:03:18 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <KLidnU-04r1VuSTdRVn-gw@ctc.net>
Source record: 94312

> I need to stack two 432mhz quads, not in the traditional vertical plane,
> but horizontal. This brings me to two questions... (1) What distance
> apart? 1/2 wave length or 1 wave length or ?? (2) Do I need to make
> that measurement from boom center line to boom center line OR would it
> be end of element to end of element?

Another one of the all depends questions. If you want a clean patern it is
one spacing, maximum gain is another.
Forget stacking quads at 432 and go with a longer length yagi if you want
the maximum gain.
Quads are good for maybe 6 meers and lower. By the time you get to 2 meters
it is beter to go with a long yagi as the aditional gain of quads start to
fall off compaired to yagies of the same boom length.

3158. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 00:29:41 UTC
From: kashe@sonic.net
Message-ID: <bhaib0180kpluff0mlsjao3j9b25h0s1j9@4ax.com>
Source record: 94313

On Tue, 25 May 2004 16:57:15 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>
>Proving that reflections actually exist, and that when all you have is a
>hammer, everything looks like a nail. Are you trying to prove
>something, or disprove it with your ghost story? You're not generating
>a clear picture. ;-)

Cecil's prior response does nothing to prove your overused,
childish hammer/nail aphorism. In any case it would only be true for
those sufficiently dim-witted as to see only a single use for a
hammer.

3159. Re: Attention MARS & Ex MARS Operators

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 00:44:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5dbib0de2jvjqkr1qfdr8k73tmd3rcd1sf@4ax.com>
Source record: 94314

On Sat, 29 May 2004 15:40:05 -0700, "Keyboard In The Noise"
<KITN@cat.net> wrote:

>Please don't e-mail me (I'm Anon)

Hi David,

>Keyboard In The Noise
or any of a list of, um, incognitos? ;-)

3160. Re: magloop antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 00:56:25 UTC
From: Mac <vk2evb@hotmail.com>
Message-ID: <40ba72f2$0$2301$61ce578d@news.syd.swiftdsl.com.au>
Source record: 94209

amazing performance considering size

73 Peter

"Jean-Guy" <jglandry50@rogers.com> wrote in message
news:NX0uc.209559$0qd.21699@twister01.bloor.is.net.cable.rogers.com...
> Hello group. I am in the beginning of research for a magloop antenna as
due
> to restrictions here.
> Wonder what can be said of them , pro's and con's.
> Also any idea for good articles about them and how to go about building
> them.?
>
> Let me know what you think.
>
> de Jean-Guy/ve9buf
>
>

3161. Re: Radials for 6-BTV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 01:01:36 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <5nauc.10120$6X.5097@lakeread03>
Source record: 94315

"rhymer" <ron@roncrowley.dot.com> wrote in message
news:3muhb051u7kocjd0566gv8cj1au0oc5dbp@4ax.com...
>
> In an above ground installation, Hustler recommends a minimum of 2
> radials for each band. That's 12 wires, the equivalent of 6 dipoles.
>
>

You're forgetting the take off angles. On 40 and 80 meters you'll
have a cloud warmer. Also, I'd think the odd-multiple relationships
(i.e. 40 meter radials working as a 3/4 wave on 15 meters)
could be exploited...

Pete

3162. Re: Stacking Distance Qusetion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 01:03:45 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b932fc$0$438$5cbedd26@news.real-time.com>
Source record: 94316

I verified that just about 13 dB down on the first sidelobe gives you
the best pattern, and is about .2 down from highest gain.

tom
K0TAR

Tom Ring wrote:

>

>
> Or you can do it using YO, EZNEC, etc., and increase the spacing until
> the first sidelobe is minimized, and the next stacking distance step
> makes it larger. I think that's at 13dB down, but I could be wrong,
> 17dB also sounds correct. ;)
>
> tom
> K0TAR

3163. Re: Radials for 6-BTV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 01:14:52 UTC
From: k9sqg@aol.com
Message-ID: <20040529211452.13157.00000084@mb-m20.aol.com>
Source record: 94317

Ron,

An inverted V has a different radiation pattern than a vertical. Plus, the multiple dipoles will interact with each other regarding adjustment.

I could discuss it further but since your email address is not valid, I didn't want to spend the bandwidth here, hi. I guess deleting the "dot" might get the right address but I'm a little pressed for time to play guessing games right now, hi.

73s,

Evan

3164. Re: How to go from 160-170 Mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 01:51:43 UTC
From: rlangevin@interwrx.com
Message-ID: <40B93E2F.3050605@interwrx.com>
Source record: 94318

I sweep the antenna with a MFJ259B and found out the bandwidth.
The 2 meters match is over 7:1 .
From the advice,it sounds like its a lot of work but good for parts
thanks for all of your help

RichL
KB7YEB

Tyas_MT wrote:
> <rlangevin@interwrx.com> wrote in message
> news:40B7EF76.90708@interwrx.com...
>
>>I ended up with a 4 bay antenna that is resonant from 150 - 170.
>>How much work is it to put this on 2 meters?
>>
>>Rich L
>>KB7YEB
>
> I'd start with putting it on a (low power) radio and meter and seeing what
> SWR you come out with in the portion of the 2m band you intend to use it on.
> If it's less than 2:1 most would consider that acceptable. (Personally, I'd
> shoot for less, but that's me). Depending on how 'wide band' this thing is,
> it might cover 2m nicely.
>
> If you want to actually alter it for 2m, it will involve:
> Lengthening the antenna elements (2m is lower, so elements are longer)
> Lengthening the phasing elements
> Increasing the spacing between antenna elements.
>
>

3165. Re: 10.512 MHz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 02:14:31 UTC
From: ricky <elrod@localnet.com>
Message-ID: <10bigs7tpfcld3a@corp.supernews.com>
Source record: 94319
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,alt.radio.uk,rec.radio.amateur.antenna,rec.radio.scanner,uk.radio.amateur

my scanner wont get it but on the clip... it sounds JUST PLAIN EIRD!
hmmm. what is it?
"Les &/or Claire" <les.clairefrontallobes@virgin.net> wrote in message
news:2h4t1kF9dvpjU1@uni-berlin.de...
> LJ wrote:
> >
> > I dialed up 10.512 MHz a couple of nights ago. I began to belive that
> > this posting was someone's idea of a joke, as all I heard was some
> > Spanish-speaking stations talking back and forth,like many of them do
> > on what they think are "private and unused by anyone else
> > frequencies". The next day, I heard the "music" - it wasn't too strong
> > here in the Pacific NW about 5:00 PM PDST Local time, and weaker yet
> > at 11:00 PM. I couldn't hear it at all early this morning (6:00 AM).
> >
> > Very interesting!
> >
> > LJ
>
> Yes, a very strange signal indeed. The odd thing is that on both
sides
> of the atlantic people thought of aliens first. if I was a film sound man
it
> would be "alien contact sound No.1"
>
> Les
>
>
>
> --
> http://www.stuffmongers.com
>
> "Homo sapiens, the first truly free species, is about to decommission
> natural selection, the force that made us.... Soon we must look deep
> within ourselves and decide what we wish to become." Edward O. Wilson
> Consilience, The Unity of Knowledge
>
> Remove frontal lobes to reply from a NG
>
>
>
>

3166. Re: Antenna Tubing suppliers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 10:12:06 UTC
From: gonetopot@hotmail.com
Message-ID: <c9cc31$ee6$1@newsg1.svr.pol.co.uk>
Source record: 94320

I am fairly local to you, Manchester way. I have a pile of assorted
Aluminium tube. I have to scrap, some time within the next 3 weeks. Old CB
ants ground plane rods and the like. Your welcome to it, the council are
compulsory purchasing the land my storage unit is on, so I have to empty it.
There is a 3 ell 6 meter beam, and all sorts of bits.
A Cushcraft butterfly mini beam, all damaged but the bits may be useable,
most of its just filthy, and will clean up.
Any how your welcome, if you can be bothered
to collect. It's better than the tip pikies getting it!
But,, if you want to pay, Knights CB have tons of spare bits for
sale.

3167. Stacking Distance Question. More Information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 11:59:44 UTC
From: ab5mm <ab5mm@9plus.net>
Message-ID: <c9cibl0l7o@enews2.newsguy.com>
Source record: 94171

Thanks to Tom, Dave and the rest of you that answered my question so quickly.

I thought I should give a little more pertinent info on this project. A elderly ham friend of mine is putting together a 70cm fast scan TV station. He chose the quad because of its wide band characteristics. His tower is Rohn 45 at 73 feet. It has a Glen Martin "Voyager" trolley/tram system. The steel mast is above the bearing plate about 14 feet. Out the top of the steel mast is 6 feet of thick wall fiberglass tubing. The two 70cm quads will be on a fiberglass cantilever arm that is approximately 48" long. It slips over the fiberglass mast and bolts into place. (arm required to clear the tower when cranking antenna system down) This arm will have two, 1 1/4" diameter post sticking up vertically to mount the quads. Here is where the question arose about how far apart the quads should be.

I don't think I could/should push the cantilever arm out any further. The system, all together, could probably withstand a little longer arm if required. ?? Three 1/2 wavelengths would be ~39 inches.

The quads are 7 1/2 feet long with 12 elements each and weigh 3.5 pounds.

We have no modeling software, just a desire to do it right the first time.

Thanks again & 73,

Steve
ab5mm

3168. Re: Stacking Distance Question. More Information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 12:45:44 UTC
From: Dave <noone@nowhere.com>
Message-ID: <5aKdnf0bgdvhSiTdRVn-hw@crocker.com>
Source record: 94172

sounds like a lot of joints that could slip. i wouldn't expect a lashup
like that to survive very long up here in ice and wind country. i would
get rid of the '1 1/4" posts sticking up' and mount the quads right to the
cross arm. and unless that extra 6' really is necessary i would mount the
crossarm directly to the steel mast. which way are these going to be
polarized, horizontal or vertical?? even if vertically polarized they
should be ok being 2' out from the steel mast i would think.

"ab5mm" <ab5mm@9plus.net> wrote in message
news:c9cibl0l7o@enews2.newsguy.com...
> Thanks to Tom, Dave and the rest of you that answered my question so
> quickly.
>
> I thought I should give a little more pertinent info on this project. A
> elderly ham friend of mine is putting together a 70cm fast scan TV
> station. He chose the quad because of its wide band characteristics. His
> tower is Rohn 45 at 73 feet. It has a Glen Martin "Voyager" trolley/tram
> system. The steel mast is above the bearing plate about 14 feet. Out the
> top of the steel mast is 6 feet of thick wall fiberglass tubing. The two
> 70cm quads will be on a fiberglass cantilever arm that is approximately
> 48" long. It slips over the fiberglass mast and bolts into place. (arm
> required to clear the tower when cranking antenna system down) This arm
> will have two, 1 1/4" diameter post sticking up vertically to mount the
> quads. Here is where the question arose about how far apart the quads
> should be.
>
> I don't think I could/should push the cantilever arm out any further.
> The system, all together, could probably withstand a little longer arm
> if required. ?? Three 1/2 wavelengths would be ~39 inches.
>
> The quads are 7 1/2 feet long with 12 elements each and weigh 3.5 pounds.
>
> We have no modeling software, just a desire to do it right the first time.
>
> Thanks again & 73,
>
> Steve
> ab5mm
>

3169. Confirm the resonant frequency of this folded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 13:16:49 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2hu55hFfsdtoU1@uni-berlin.de>
Source record: 94173

Hi. Can anyone please confirm for me the resonant frequency of the folded dipole below?

(I calculate abt. 159.025 Mhz).

```
L1
-----------------------------------
| | L2
--------------x L4 x---------------
L3 L5
```

Tube diameter = 10mm

L1: 90Cm; 35.43"; 2.953'
L2: 70mm; 2.76"; 0.230'
L4: 5.8Cm; 2.28"; 0.190'
L3&L5: 42.1Cm; 16.57"; 1.381'

L4 is fixed at 58mm, that is the distance between the bolts where the dipole attaches at the feedpoint. I guess I'm ignoring the connections within the plastic connection box, that would perhaps add 2.54Cm; 1.00" ; 0.083' to L3 and L5, which I suppose might make L3 & L5 44.63Cm; 17.75"; 1.46'. But is that of any real significance with such a wide-band antenna. Probably not eh.

BTW, Anyone know of an online calculator specifically written for VHF, tube-made, folded dipoles? TIA. Rich.

P.S. I'm seeking the dipole to be resonant at 159.025 Mhz.

3170. Re: Confirm the resonant frequency of this folded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 13:20:01 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2hu5bcFgsmvpU1@uni-berlin.de>
Source record: 94174

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2hu55hFfsdtoU1@uni-berlin.de...
> Hi. Can anyone please confirm for me the resonant frequency of the folded
> dipole below?
>
> (I calculate abt. 159.025 Mhz).
>
> L1
> ------------------------------------
> | | L2
> --------------x L4 x---------------
> L3 L5
>
> Tube diameter = 10mm

BTW 10mm is 0.394"; 0.033'.

3171. Re: Antenna Tubing suppliers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 13:24:24 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2hu5jkFgno5pU1@uni-berlin.de>
Source record: 94175

"SB" <abc@abc.com> wrote in message
news:c9aqr8$3jv$1@hercules.btinternet.com...
> Can anyone suggest a UK outlet where I can obtain aluminium tubing for
> contsruction of beam antennas, also dipole centres and element to boom
> fixtures.
>
> Thanks G7CPN.
>
http://www.sandpiperaerials.co.uk/

3172. Re: Radials for 6-BTV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 13:31:38 UTC
From: rhymer <ron@roncrowley.dot.com>
Message-ID: <sdnjb0pu5qh44kapb27oe564lpijuj2irl@4ax.com>
Source record: 94176

On 30 May 2004 01:14:52 GMT, k9sqg@aol.com (K9SQG) wrote:

>Ron,
>
>An inverted V has a different radiation pattern than a vertical. Plus, the
>multiple dipoles will interact with each other regarding adjustment.
>
>I could discuss it further but since your email address is not valid, I didn't
>want to spend the bandwidth here, hi. I guess deleting the "dot" might get the
>right address but I'm a little pressed for time to play guessing games right
>now, hi.
>
>73s,
>
>Evan

Evan,

If I thought I would be getting Email response to this post, I would
have included a good address, sorry.

I have decided that I will do a little experimentation. I have a
tripod on the back dormer with a 2m ground plane that is only 5 feet
above the roof. I can use that for an easy access connection point and
run a few dipoles sloping down from there. I will start with 40, 30
and 15 and see what happens. If that works, I will add more bands.
Once I have the lengths worked out, I can raise the center point.

I would be interested in any idea you have on the subject.

w1wbv@roncrowley.com

Ron

3173. Re: Antenna Tubing suppliers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 13:34:07 UTC
From: g3pho@nospamblueyonder.co.uk
Message-ID: <40b9e285.82752353@news.blueyonder.co.uk>
Source record: 94177

On Sat, 29 May 2004 20:12:24 +0000 (UTC), "SB" <abc@abc.com> wrote:

>Can anyone suggest a UK outlet where I can obtain aluminium tubing for
>contsruction of beam antennas, also dipole centres and element to boom
>fixtures.
>
>Thanks G7CPN.
I get a lot of my stuff from JB aerials on Abbeydale Road, Sheffield,
he stocks all the fittings and a wide selection of tubing, including
thick walled ali pipe for masts.

Peter, G3PHO

3174. Re: R-7000 in the rain

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 13:34:42 UTC
From: Daniel_FY1FV <mycall@wanadoo.fr>
Message-ID: <c9cntj$l40$1@news-reader4.wanadoo.fr>
Source record: 94178

Many thanks, Bill
My R-7000 fine works even under a waterfall! :-))

"W4WNT" <w4wnt@carolina.rr.com> a crit dans le message de news:
FFvtc.69$Ef3.104435@twister.southeast.rr.com...
> Check the seals on the box at the counterpoise "radials". You might be
> getting leakage into the works in there.
>
> Good luck,
>
> Bill, W4WNT
>
> "Daniel_FY1FV" <mycall@wanadoo.fr> wrote in message
> news:c92qp8ucd1@news-reader3.wanadoo.fr...
> > Hi,
> > When it rains the ROS of my Cushcraft R7000 rises (>10:1) on all bands.
It
> > is about 1.5:1 when dry.
> > Has anyone an idea?
> > TNX in advance.
> > 73's
> > Daniel, FY1FV
> >
> >
> >
>
>

3175. Re: Antenna Tubing suppliers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 13:36:27 UTC
From: g3pho@nospamblueyonder.co.uk
Message-ID: <40bae2ef.82858444@news.blueyonder.co.uk>
Source record: 94179

On Sun, 30 May 2004 13:34:07 GMT, g3pho@nospamblueyonder.co.uk wrote:

>On Sat, 29 May 2004 20:12:24 +0000 (UTC), "SB" <abc@abc.com> wrote:
>
>>Can anyone suggest a UK outlet where I can obtain aluminium tubing for
>>contsruction of beam antennas, also dipole centres and element to boom
>>fixtures.
>>
>>Thanks G7CPN.
>I get a lot of my stuff from JB aerials on Abbeydale Road, Sheffield,
>he stocks all the fittings and a wide selection of tubing, including
>thick walled ali pipe for masts.
>
>Peter, G3PHO

Just realised might mean for HF antennas ... I am referring to VHF/UHF
use only. The dipole centres and element to boom fittings are of the
TV and FM antenna variety and not suitable for HF beams.

Peter, G3PHO

3176. Re: Confirm the resonant frequency of this folded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 14:19:25 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2hu8quFh1qdqU1@uni-berlin.de>
Source record: 94180

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2hu55hFfsdtoU1@uni-berlin.de...
> Hi. Can anyone please confirm for me the resonant frequency of the folded
> dipole below?
>
> (I calculate abt. 159.025 Mhz).
>
> L1
> ------------------------------------
> | | L2
> --------------x L4 x---------------
> L3 L5
>
> Tube diameter = 10mm
>
> L1: 90Cm; 35.43"; 2.953'
> L2: 70mm; 2.76"; 0.230'
> L4: 5.8Cm; 2.28"; 0.190'
> L3&L5: 42.1Cm; 16.57"; 1.381'

As to calculators,I found two, but they are confusing to me.

Not very clear to me how to use this one:

http://n-lemma.com/calcs/dipole/fdipole.htm

Or this one:

http://www.optcom.net.au/wireless/folded_dipole.html

3177. Re: Confirm the resonant frequency of this folded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 14:30:51 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40b9f10e$1_3@corp.newsgroups.com>
Source record: 94181

Richard wrote:
> Hi. Can anyone please confirm for me the resonant frequency of the folded
> dipole below?

No, if we all made one, they would all have slightly different
resonant frequencies. If you want one that is right on frequency,
you have to trim it to that frequency and then don't change
anything about it or its environment.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3178. Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 14:44:15 UTC
From: Rob <noemail@pse.com>
Message-ID: <Vqmuc.77375$tb4.2764794@news20.bellglobal.com>
Source record: 94182
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

I am finally going to put up a VHF antenna for 2 meter and another antenna
for 70 cm.

What is type of coax should I use? Rg213? Or will RG213 be too lossy?

Recommendations please...

Rob

3179. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 15:02:19 UTC
From: Dave <noone@nowhere.com>
Message-ID: <6u6dnTFWLdTiaiTdRVn_iw@crocker.com>
Source record: 94183
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

more info needed. how long will the runs be? and what will you be using
them for, accessing the local repeater or moonbounce?

"Rob" <noemail@pse.com> wrote in message
news:Vqmuc.77375$tb4.2764794@news20.bellglobal.com...
> I am finally going to put up a VHF antenna for 2 meter and another antenna
> for 70 cm.
>
> What is type of coax should I use? Rg213? Or will RG213 be too lossy?
>
> Recommendations please...
>
> Rob
>
>

3180. Re: Confirm the resonant frequency of this folded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 15:03:18 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <WImuc.11120$Lq1.3237@nwrddc03.gnilink.net>
Source record: 94184

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2hu8quFh1qdqU1@uni-berlin.de...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:2hu55hFfsdtoU1@uni-berlin.de...
> > Hi. Can anyone please confirm for me the resonant frequency of the
folded
> > dipole below?
> >
> > (I calculate abt. 159.025 Mhz).
> >
> > L1
> > ------------------------------------
> > | | L2
> > --------------x L4 x---------------
> > L3 L5
> >
> > Tube diameter = 10mm
> >
> > L1: 90Cm; 35.43"; 2.953'
> > L2: 70mm; 2.76"; 0.230'
> > L4: 5.8Cm; 2.28"; 0.190'
> > L3&L5: 42.1Cm; 16.57"; 1.381'
>
>
>
> As to calculators,I found two, but they are confusing to me.
>
> Not very clear to me how to use this one:
>
> http://n-lemma.com/calcs/dipole/fdipole.htm
>
> Or this one:
>
> http://www.optcom.net.au/wireless/folded_dipole.html

Richard

Thanks for the references to the folded dipole calculator sites. If you
dont have the calculators figured out, you are welcome to E-mail me. They
seem OK to me.
I've been building some dipoles for 137MHz and have 'grid dipped' some
lengths for dipoles that indicate that your dimensions are very close to
correct.
Do you have any doubt that the antenna you describe will radiate well at

159 MHz?

Jerry

3181. Re: Confirm the resonant frequency of this folded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 15:08:38 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <WNmuc.24746$Ly.9941@attbi_s01>
Source record: 94185

If the elements are of different diameters, example 0.5 inches and 0.375 inches there are differences in Zo and slight differences in Fo.

To a first approximation I calculate 158.5 MHz as resonant point. That may have a 2 to 3 percent error due to endeffects, L/D ratio etc.

Your calculation is a good as mine.

DD, W1MCE

Richard wrote:

> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:2hu55hFfsdtoU1@uni-berlin.de...
>
>>Hi. Can anyone please confirm for me the resonant frequency of the folded
>>dipole below?
>>
>>(I calculate abt. 159.025 Mhz).
>>
>> L1
>>-----------------------------------
>>| | L2
>>--------------x L4 x---------------
>> L3 L5
>>
>>Tube diameter = 10mm
>>
>>L1: 90Cm; 35.43"; 2.953'
>>L2: 70mm; 2.76"; 0.230'
>>L4: 5.8Cm; 2.28"; 0.190'
>>L3&L5: 42.1Cm; 16.57"; 1.381'
>
>
>
>
> As to calculators,I found two, but they are confusing to me.
>
> Not very clear to me how to use this one:
>
> http://n-lemma.com/calcs/dipole/fdipole.htm
>
> Or this one:
>
> http://www.optcom.net.au/wireless/folded_dipole.html
>

>
>

3182. Re: Stacking Distance Question. More Information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 15:20:04 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40b9fbb1$0$437$5cbedd26@news.real-time.com>
Source record: 94186

A well designed yagi would have had plenty of bandwidth, but that's moot
now, I guess.

I would say 1.17m H plane, or 1.06m E plane would be pretty close.
That's based on an estimate of your gain. You could email me the plans,
and I would find where the 3dB points really are.

tom
K0TAR

ab5mm wrote:

> Thanks to Tom, Dave and the rest of you that answered my question so
> quickly.
>
> I thought I should give a little more pertinent info on this project. A
> elderly ham friend of mine is putting together a 70cm fast scan TV
> station. He chose the quad because of its wide band characteristics. His
> tower is Rohn 45 at 73 feet. It has a Glen Martin "Voyager" trolley/tram
> system. The steel mast is above the bearing plate about 14 feet. Out the
> top of the steel mast is 6 feet of thick wall fiberglass tubing. The two
> 70cm quads will be on a fiberglass cantilever arm that is approximately
> 48" long. It slips over the fiberglass mast and bolts into place. (arm
> required to clear the tower when cranking antenna system down) This arm
> will have two, 1 1/4" diameter post sticking up vertically to mount the
> quads. Here is where the question arose about how far apart the quads
> should be.
>
> I don't think I could/should push the cantilever arm out any further.
> The system, all together, could probably withstand a little longer arm
> if required. ?? Three 1/2 wavelengths would be ~39 inches.
>
> The quads are 7 1/2 feet long with 12 elements each and weigh 3.5 pounds.
>
> We have no modeling software, just a desire to do it right the first time.
>
> Thanks again & 73,
>
> Steve
> ab5mm
>

3183. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 15:30:56 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <YqadnVLYOrm1YyTdRVn-iQ@comcast.com>
Source record: 94187
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Rob" <noemail@pse.com> wrote in message
news:Vqmuc.77375$tb4.2764794@news20.bellglobal.com...
> I am finally going to put up a VHF antenna for 2 meter and another antenna
> for 70 cm.
>
> What is type of coax should I use? Rg213? Or will RG213 be too lossy?
>
> Recommendations please...
>
> Rob
>
>
RG213 is WW2 technology. You are better of with Times LMR400, Belden 9913,
or CPX1318.

Tam/WB2TT

3184. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 15:58:35 UTC
From: Hamguy <hamguy@arrl.net>
Message-ID: <Lwnuc.20625$j24.11706@twister.nyroc.rr.com>
Source record: 94188
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

I vote for the Belden 9913.

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:YqadnVLYOrm1YyTdRVn-iQ@comcast.com...
>
> "Rob" <noemail@pse.com> wrote in message
> news:Vqmuc.77375$tb4.2764794@news20.bellglobal.com...
> > I am finally going to put up a VHF antenna for 2 meter and another
antenna
> > for 70 cm.
> >
> > What is type of coax should I use? Rg213? Or will RG213 be too lossy?
> >
> > Recommendations please...
> >
> > Rob
> >
> >
> RG213 is WW2 technology. You are better of with Times LMR400, Belden 9913,
> or CPX1318.
>
> Tam/WB2TT
>
>

3185. Re: Confirm the resonant frequency of this folded dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 16:00:14 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9d0ee$k98$1@titan.btinternet.com>
Source record: 94189

Are you deluding yourself about the degree of accuracy required?

An error of 1 MHz in 159 MHz would make no detectable difference in behaviour or performance.

3186. Re: Stacking Distance Question. More Information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 16:18:22 UTC
From: j999w@aol.com
Message-ID: <20040530121822.06148.00000159@mb-m17.aol.com>
Source record: 94190

Why stack them horizontally rather than vertically?

jw
K9RZZ

3187. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 16:52:20 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40ba1090.329741187@news.galilei.com>
Source record: 94191
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Hi Rob

I use Belden 9913 and am most pleased with it!

TTUL
Gary

3188. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 18:29:28 UTC
From: Old Ed <eseniorsR-E-M-O-V-E@earthlink.net>
Message-ID: <cKpuc.17055$be.8577@newsread2.news.pas.earthlink.net>
Source record: 94192
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Hi -

Just curious: Do you know of any (reasonably priced) vendor that
offers 9913 conveniently made up in standard lengths, with connectors?
(CPX1318 is available in that form.)

73, Ed

"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message
news:40ba1090.329741187@news.galilei.com...
> Hi Rob
>
> I use Belden 9913 and am most pleased with it!
>
> TTUL
> Gary
>

3189. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 19:47:54 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9ddpa$he1$1@hercules.btinternet.com>
Source record: 94193

> But they are VERY interested in whether or not their transmitter is
> correctly loaded with 50+j0 ohms during transmissions and a simple
> indicating instrument is essential.
>
> Isn't it time some enterprising manufacturer came into the market?
> ---
> Reg, G4FGQ

The first such instrument will probably have "Made in China" on its back.

3190. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 19:48:46 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40ba3b91$1_8@corp.newsgroups.com>
Source record: 94194
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Hamguy wrote:
> I vote for the Belden 9913.

You must live in a dry climate.

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3191. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 20:02:06 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <h1ekb0h18seed16gb520d6hibga3t7qd82@4ax.com>
Source record: 94195

Hi Cecil,

I went to the url k4wge indicated for Steve's work and found that he has a book on antennas published by Noble Publications going for $207 after a 25% discount. I would need to know the quality of editorial review it survived before spending that much on a new book. I'm wondering if the book had ANY technical review before printing.

I'm also wondering how much of the stuff from his three-part QEX article will appear in his book. That article is chuck full of erroneous material. I know you and others on this thread tried to correct some of his incorrect notions to no avail. And you know that he and I went at it pretty strong, but he wouldn't listen. He told me early on that my concepts of matching appearing in Reflections are wrong, and said that using the statements I made there he could prove me technically incompetent.

In two Communications Quarterly issues he said as much, referring to my writings in Reflections and in QEX.. During our last email communication he reiterated his comment concerning incompetence, and said he was going to write a definitive article concerning matching that would prove it, but that this time he wasn't going to mention me by name. That 'definitive' article is the three-parter in QEX.. Well, he didn't mention me by name, but he presented one of my examples, number for number, and then erroneously tore it to pieces. Anyone having read my work would recognize that he was targeting me even though not by name.

Enough of that. I've been reading a little mail on the rraa, and I see you're still hangin' in there. Hope you're well, but I guess you must be, cuz you still have that characteristic sarcastic (no that's not quite the word for it) response at the right moment.

Take care,

Walt

3192. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 20:13:45 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <CeednV3MOrfs3SfdRVn-jA@comcast.com>
Source record: 94196
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40ba3b91$1_8@corp.newsgroups.com...
> Hamguy wrote:
> > I vote for the Belden 9913.
>
> You must live in a dry climate.
Cecil,
I don't think they sell the water pipe any more. I have the CPX stuff on
432, 9913 for 6m inside, and LMR400 if somebody else is paying for it.

Tam

3193. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 20:22:41 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <jcgkb05ghcuk23png1ad79mfqavoi34adq@4ax.com>
Source record: 94197
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

On Sun, 30 May 2004 18:29:28 GMT, "Old Ed"
<eseniorsR-E-M-O-V-E@earthlink.net> wrote:

>Hi -
>
>Just curious: Do you know of any (reasonably priced) vendor that
>offers 9913 conveniently made up in standard lengths, with connectors?
>(CPX1318 is available in that form.)
>
>73, Ed

The Wireman (see website), stocks no pre-made cables, but will make up
a custom cable of any type, any connector, any length -- just call
'em.

bob
k5qwg

>
>"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message
>news:40ba1090.329741187@news.galilei.com...
>> Hi Rob
>>
>> I use Belden 9913 and am most pleased with it!
>>
>> TTUL
>> Gary
>>
>

3194. MFJ Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 20:50:07 UTC
From: dan_hoffard@hailmail.net
Message-ID: <648fff84.0405301250.6ee75ece@posting.google.com>
Source record: 94198

Is anyone familiar at all with MFJ tuners? Mine is a 941B.. It has a little red button just above the RF/SWR meter.. Do I need to push this in to get the SWR reading? When I hold it down and play with the knobs I am able to get good SWR, but if I don't hold it down, the SWR never gets below 3. There is also another dial that says SWR/WATT that can be pushed in or pulled out.. The online version of the manual talks about pulling and pusing this dial but never mentions the little red button.

I tried hooking another SWR meter up between the xcvr and tuner and the reading is similar to what I see on the tuner when I press the red button but not exactly the same.

Thanks,

Dan H.

3195. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 21:30:17 UTC
From: John Bachtel <lilburn.ga.30047@att.net>
Message-ID: <Jnsuc.12097$_k3.281058@bgtnsc05-news.ops.worldnet.att.net>
Source record: 94199

A lump of sodium might make one eligible for a Darwin Award
jrb de nr4jb

AB2RC wrote:

>On 2004-05-25, cva <bn@art.com> wrote:
>
>
>>.
>>
>>
>absolutely nothing....
>
>but asked the following question in the subject header
>"Where can I get a lump of Sodium?"
>
>I don't even want to know why you would want a lump of soduim, but look here
>
>http://www.labdepotinc.com/chemical_details~pid~S1100.aspx
>
>
>
>

--
. . . . . .
. Note: Address modified to avoid so-called "spam". To reply via .
. e-mail, delete "the .30047" from address! tnx/jrb .
. . . . . .

3196. Re: fm antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 21:33:54 UTC
From: John Bachtel <lilburn.ga.30047@att.net>
Message-ID: <6rsuc.12108$_k3.280874@bgtnsc05-news.ops.worldnet.att.net>
Source record: 94200

http://www.arrl.org/catalog/?item=1964

Bob wrote:

>Hello. How can I improve the reception of a small handheld AM/FM antenna?
>What length antenna should I use and how would I attach it? Can I attach a
>t-type to a monopole telescoping antenna?
>
>
>Thans
>
>
>
>

--
. . . . . .
. Note: Address modified to avoid so-called "spam". To reply via .
. e-mail, delete "the .30047" from address! tnx/jrb .
. . . . . .

3197. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 21:45:03 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40ba56d3_5@corp.newsgroups.com>
Source record: 94201

Walter Maxwell wrote:
> In two Communications Quarterly issues he said as much, referring to my writings
> in Reflections and in QEX.. During our last email communication he reiterated
> his comment concerning incompetence, and said he was going to write a definitive
> article concerning matching that would prove it, but that this time he wasn't
> going to mention me by name.

Walt, as you know, I tangled with Steve over the subject of interference which he claimed didn't exist at a match point. He later changed his mind and told me in an email that he needed to rewrite part 3 of his article. Maybe he got it right on his CDs. _Optics_, by Hecht proves Steve's equations in part 3 to be the actual interference equations from optics with RF Power substituted for light Irradiance.

IMO, you and Steve were much closer in principles than either one of you realized.

He said in Part 3: "... the two rearward traveling waves at the match point (rearward waves 1 and 2) are 180 degrees out of phase with respect to each other and a complete cancellation of both waves occurs."

You said in Reflections II: "With equal magnitudes and opposite phase at the same point (Point A, the matching point), the sum of the two (rearward-traveling) waves is zero."

This agrees with J. C. Slater, from _Microwave_Transmissions_, "The fundamental principle behind the elimination of reflections is then to have each reflected wave canceled by another wave of equal amplitude and opposite phase."

All three above appear to me to be in agreement so the disagreements are really about the down-in-the-noise details. Some gurus on this newsgroup disagree with you, Dr. Best, and J. C. Slater.

Others on this newsgroup have been asking about your opinion of conjugately-matched transmitters. I have no interest in that particular discussion but you might point out some references.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3198. Attic HF anntenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 22:26:35 UTC
From: Jeff Lillard <jlco01@excite.com>
Message-ID: <vctuc.26846$Ly.11269@attbi_s01>
Source record: 94202

Howdy,

I'm moving into a house where I can't put up an exposed HF antenna. Any comments on in-attic antennas? I'm bringing my 10-15-20-40 meter shortened dipole with me. I think it will stretch out ok in the attic.

Thanks,

Jeff
AD6RH

3199. Re: Attic HF anntenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 22:29:41 UTC
From: ogrowup@webtv.net
Message-ID: <4760-40BA6055-102@storefull-3111.bay.webtv.net>
Source record: 94203

I run 25W into a dipole in my attic for 10M; when the prpagation was in, I was able to work into all of Europe, and out west as far as Central Kiribati and New Zealand. An attic dipole will work..just not as well as a 20-element Yagi at 150'!!

"There is no room in this country for hyphenated Americans"

Theodore Roosevelt

3200. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 22:39:18 UTC
From: ogrowup@webtv.net
Message-ID: <4760-40BA6296-104@storefull-3111.bay.webtv.net>
Source record: 94204

I just took the anual 8-hour HAZWOPER (First responder at operations level) HAZMAT course; one of the areas covered by our instruction was on protective equipment. He told us of an incident in Lynn, MA; the FD responded to a fire at a chemical company. The fire was in an area where there was a 100-pound vat of molten sodium. One of the firefighters threw a shovel ful of sand on the sodium.
In solid form, sodium is highly reactive. In molten form, if it comes in contact with ANY water, it explodes.
Maybe there had been some water on the shovel..or maybe in the sand.
Either way, the vat exploded.
There were seven firefighters in the room. All seven had disregarded instructions, and had their turnout gear in various forms of disarray.
All seven suffered severe, third-degree burns where their turnout gear wsasn't as it should be. All seven are now permanently disabled.
1) ALWAYS use protective gear properly.
2) Never, NEVER mess with elemental sodium!!!

"There is no room in this country for hyphenated Americans"

Theodore Roosevelt

3201. Re: Attic HF anntenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 23:24:35 UTC
From: Bob Schreibmaier <k3ph@ptd.net>
Message-ID: <aOacnXz0d6-v8CfdUSdV9g@ptd.net>
Source record: 94205

Hi Jeff (et al.),

Of course, it won't work as well as a full-size
antenna outside in the clear. But, it should work
just fine. I worked my first 140 countries or so
with attic dipoles and a barefoot transceiver.
So, it is certainly possible to work lots of DX,
as well as other stuff, with an attic antenna.

73,
Bob

In article <vctuc.26846$Ly.11269@attbi_s01>, jlco01@excite.com says...
>
>
>Howdy,
>
>I'm moving into a house where I can't put up an exposed HF antenna. Any
>comments on in-attic antennas? I'm bringing my 10-15-20-40 meter shortened
>dipole with me. I think it will stretch out ok in the attic.

--
+---+
| Bob Schreibmaier K3PH | E-mail: k3ph@ptd.net |
| Kresgeville, PA 18333 | http://www.dxis.org |
+---+

3202. Re: MFJ Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 23:30:15 UTC
From: jgboyles@aol.com
Message-ID: <20040530193015.16492.00000229@mb-m10.aol.com>
Source record: 94206

>When all else fails read the manual

Hi Dan, Good advice, but he has already read the on line manual, if you read the post. The 941E must be a later version of the 941B, which he is asking about. The only thing I can figure is; the 941E has a dual (cross hair) swr/ power meter. If the B version does not (and I don't know) the button in question may be a forward/reverse switch, which would explain why he only gets good readings when he pushes the button.
73 Gary N4AST

3203. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 23:33:04 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <nepkb0tmg3sms9bnempendh294c9kh4qa3@4ax.com>
Source record: 94207

On Sun, 30 May 2004 16:45:03 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> In two Communications Quarterly issues he said as much, referring to my writings
>> in Reflections and in QEX.. During our last email communication he reiterated
>> his comment concerning incompetence, and said he was going to write a definitive
>> article concerning matching that would prove it, but that this time he wasn't
>> going to mention me by name.
>
>Walt, as you know, I tangled with Steve over the subject of interference which
>he claimed didn't exist at a match point. He later changed his mind and told
>me in an email that he needed to rewrite part 3 of his article. Maybe he got
>it right on his CDs. _Optics_, by Hecht proves Steve's equations in part 3 to
>be the actual interference equations from optics with RF Power substituted for
>light Irradiance.
>
>IMO, you and Steve were much closer in principles than either one of you
>realized.

Sorry Cecil, I don't think so. Steve has missed the most vital aspect of the phenomenon--what happens to the energy, or power in the reflected waves on return to the match point.

>He said in Part 3: "... the two rearward traveling waves at the match point
>(rearward waves 1 and 2) are 180 degrees out of phase with respect to each
>other and a complete cancellation of both waves occurs."

Yes, but Cecil, the cancellation of the waves is only in the rearward direction, because at the match point the waves and the energy they carry (volts x amps) are totally reversed. Now to continue what Steve said is: "The result of this wave cancellation is that the total steady-state rearward-traveling wave has a net voltage of 0 V nd 0 A, respectively, and an impedance match occurs." No No No.

As we've discussed earlier, voltage and current cannot both go to zero simultaneously, except in the rearward direction. When voltage goes to zero at the match point because the two returning voltages are equal magnitude and of opposite phase, the current is doubled and the V x I energy in the rearward traveling waves is totally re-reflected in the forward direction. Steve totally ignores the energy in the reflected waves, except to say, "A total re-reflection of the reflected voltage, current and power does not occur at the match point and it (re-reflection) is not necessary for the impedance match to occur." This statement is totally untrue, because as I said above, all of the power in the reflected waves of voltage AND current is totally re-reflected in the forward direction, the same as if the E and H fields had encountered a physical short. We all know what happens in this case. The only difference is

that the virtual short established by the wave interference is one way only--to the rearward traveling waves.

I know you don't agree with me that a one-way virtual short is what causes the re-reflection, but in a short time I'll be able to prove it to you in a manner you'll not be able to rebut. Stay tuned.

>You said in Reflections II: "With equal magnitudes and opposite phase at the
>same point (Point A, the matching point), the sum of the two (rearward-
>traveling) waves is zero."

Which means zero impedance, the boundary condition causing the total re-reflection. This exactly what Slater is implying.

>This agrees with J. C. Slater, from _Microwave_Transmissions_, "The
>fundamental principle behind the elimination of reflections is then to have
>each reflected wave canceled by another wave of equal amplitude and opposite
>phase."

Cecil, the Slater reference is where I originally obtained this concept for my QST article that appeared in Oct 1973, nearly 30 years ago. Check the ref number in Reflections--No. 35.

>All three above appear to me to be in agreement so the disagreements are really
>about the down-in-the-noise details. Some gurus on this newsgroup disagree with
>you, Dr. Best, and J. C. Slater.

Those who disagree with Slater need to refresh their memories with a review of transmission lines 101. They ain't gonna win.
>
>Others on this newsgroup have been asking about your opinion of conjugately-
>matched transmitters. I have no interest in that particular discussion but you
>might point out some references.

Cecil, I don't have a particular reference handy, but I can quote some of my own measurements the others you mention might find of interest.. IMO they'll have a hard time disgreeing with the data if they don't already believe a transmitter is conjugately matched to its load when it's delivering all of its available power at an arbitrarily selected drive level within the normal operating range. Those who don't believe will get quite a surprise when I reveal what the output source resistance of the xmtr really is under this condition. Waddya think?

Walt

3204. Re: Attic HF anntenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-30 23:46:03 UTC
From: jgboyles@aol.com
Message-ID: <20040530194603.16492.00000232@mb-m10.aol.com>
Source record: 94208

>I'm moving into a house where I can't put up an exposed HF antenna. Any
>comments on in-attic antennas?

I have a zig-zag 100' dipole in my 40'X35' attic. I feed it with 450 ohm line and a home brew tuner. I keep a regular schedule on 75M and 40M with hams 350 miles out to 1000 miles with 100 watts. DX 20M on up. Yes, an attic antenna will work, and it will work all of you home electronics, as well as your neighbors, so get ready for that!
73 Gary N4AST

3205. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 00:03:04 UTC
From: Old Ed <eseniorsR-E-M-O-V-E@earthlink.net>
Message-ID: <YCuuc.17441$be.6870@newsread2.news.pas.earthlink.net>
Source record: 94210
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Thanks, Bob!

73, Ed

"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:jcgkb05ghcuk23png1ad79mfqavoi34adq@4ax.com...
> On Sun, 30 May 2004 18:29:28 GMT, "Old Ed"
> <eseniorsR-E-M-O-V-E@earthlink.net> wrote:
>
> >Hi -
> >
> >Just curious: Do you know of any (reasonably priced) vendor that
> >offers 9913 conveniently made up in standard lengths, with connectors?
> >(CPX1318 is available in that form.)
> >
> >73, Ed
>
> The Wireman (see website), stocks no pre-made cables, but will make up
> a custom cable of any type, any connector, any length -- just call
> 'em.
>
> bob
> k5qwg
>
> >
> >"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in
message
> >news:40ba1090.329741187@news.galilei.com...
> >> Hi Rob
> >>
> >> I use Belden 9913 and am most pleased with it!
> >>
> >> TTUL
> >> Gary
> >>
> >>
>

3206. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 00:40:03 UTC
From: Dan/W4NTI <w4nti@get>
Message-ID: <D9vuc.31474$zO3.25306@newsread2.news.atl.earthlink.net>
Source record: 94212
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Rob" <noemail@pse.com> wrote in message
news:Vqmuc.77375$tb4.2764794@news20.bellglobal.com...
> I am finally going to put up a VHF antenna for 2 meter and another antenna
> for 70 cm.
>
> What is type of coax should I use? Rg213? Or will RG213 be too lossy?
>
> Recommendations please...
>
> Rob
>
>

Simple. Use the lowest loss coax you can afford.

Dan/W4NTI

3207. Re: Radials for 6-BTV

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 00:55:36 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <Fq-dndlbBPPiHyfdRVn-jw@comcast.com>
Source record: 94213

When trimming multiple dipoles on one feedline, start with the lowest
frequency one first. It may take more than one iteration. Best if you can
run EZNEC on it first to get in the ballpark. My gut feeling is to not put
the wires for adjacent bands next to each other.

Tam/WB2TT
"rhymer" <ron@roncrowley.dot.com> wrote in message
news:sdnjb0pu5qh44kapb27oe564lpijuj2irl@4ax.com...
> On 30 May 2004 01:14:52 GMT, k9sqg@aol.com (K9SQG) wrote:
>
> >Ron,
> >
> >An inverted V has a different radiation pattern than a vertical. Plus,
the
> >multiple dipoles will interact with each other regarding adjustment.
> >
> >I could discuss it further but since your email address is not valid, I
didn't
> >want to spend the bandwidth here, hi. I guess deleting the "dot" might
get the
> >right address but I'm a little pressed for time to play guessing games
right
> >now, hi.
> >
> >73s,
> >
> >Evan
>
> Evan,
>
> If I thought I would be getting Email response to this post, I would
> have included a good address, sorry.
>
> I have decided that I will do a little experimentation. I have a
> tripod on the back dormer with a 2m ground plane that is only 5 feet
> above the roof. I can use that for an easy access connection point and
> run a few dipoles sloping down from there. I will start with 40, 30
> and 15 and see what happens. If that works, I will add more bands.
> Once I have the lengths worked out, I can raise the center point.
>
> I would be interested in any idea you have on the subject.
>
> w1wbv@roncrowley.com
>

> Ron

3208. Thoughts on odd behaviour of 10m vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 01:30:21 UTC
From: Arfa Daily <monitech@freeuk.com>
Message-ID: <Xns94FAFF716E35arfadailyitsalljustb@62.253.162.203>
Source record: 94211

Hi all

I have an odd situation with a Solarcon Ground Zero antenna operating on 10m. I am short of space, and dont have room to erect a traditional silver rod type vertical, or anything with a large radial system, so I cast around for something that would fit the bill and go on my existing mast. I came up with this Solarcon antenna. It is a continuously loaded - ie helically wound - monopole, about 4 feet long. It claims to be a groundplane-less electrical half wave, with voltage feed at the base, via what they call their patented " sidekicker unit ", which appears to be some kind of clamp mounted ferrite balun. It is able to be moved up and down a small section of the antenna to facilitate VSWR adjustment. It claims to be ok for use on fibreglass truck cabs etc, and does not require a conducting mount. I only wanted it for fairly short range local FM chit chat at 29Megs, and access to my local 10m repeater about 6 miles away. So far, so good.

Initial trials were carried out indoors, with the antenna fixed in a chemistry clampstand, about a foot above a bench, and fed with about 10 feet of coax. The VSWR set up PERFECTLY at 29.5MHz, and a < 2:1 VSWR was maintained over a couple hundred kHz. The repeater could be accessed with only a few watts, and a good signal was received from it.

I then mounted the antenna at the end of a 4 foot 1.5 inch diameter duralumin pole, and clamped this to my main 2.5 inch diameter station mast, at a height of about 4 feet above ground, and ran the full final length of coax back to the transmitter. I then carried out some final VSWR tweaks and repeated the tests with the repeater. Again, results were good. I also ran some simplex tests with a friend located near the repeater receive site, and again, results were good.

I then moved the antenna up the mast to what I hoped would be its final installation position at around 15 feet above ground - and here's where it all went wrong. A recheck of the VSWR at this point revealed that it had not changed, so the antenna was not being detuned in any way. However, the performance was now absolute crap. I needed over 20 watts to access the repeater, and the returned signal was 5 S points down. My friend could no longer pull me out of the noise below 5 watts. Several hours of tests then followed, and the upshot of these was that the lower I brought the antenna, the better it worked.

I am now at a total loss to explain this. As an electrical half wave, the antenna should not require a ground system to work against, and this would seem to be the case, as it tunes up so well. I thought maybe the radiation angle was rather high, although again, it shouldn't be for a half wave. If it were, maybe the ground was having an effect on this, and

pulling the radiation angle down. I'm loathe to believe this though, as the antenna is originally designed as a groundplane-less type for CB use, and this is primarily a short range band requiring a good ground wave.

Does anyone have any thoughts on what is going on here, and whether anything can be done to improve the situation? I have also considered using a Boomerang instead, as this can be centre mounted and is designed to work stood off from a pole similar to my situation.Again, any thoughts ?

I would appreciate any replies direct to

monitech@freeuk.com

Thanks Geoff G7RTC

3209. Re: Attic HF anntenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 02:38:15 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <10bl6kn4n2gdne4@corp.supernews.com>
Source record: 94214

One thing to consider is that many (if most) newer homes (apts, ect) have Ground Fault detection devices
installed in the wireing- get ready to find these tripped, as they dont like strong RF fields! (or replace them with conventional outlets, but be aware of the shock hazard)! Have friend , on 6 meters with a 2 el quad in a dormer in an apartment gets out rather well during band openings, and it rotates!, but doubt practical on 10, or below! If you have METAL (not plastic!) gutters, might be possible to load them with an antenna tunner, or place wire in plastic ones, perhaps working a counterpoise as a surface wire on the ground. (again with an antenna tunner. Good luck-- Jim NN7K

"Jeff Lillard" <jlco01@excite.com> wrote in message
news:vctuc.26846$Ly.11269@attbi_s01...
> Howdy,
>
> I'm moving into a house where I can't put up an exposed HF antenna. Any
> comments on in-attic antennas? I'm bringing my 10-15-20-40 meter shortened
> dipole with me. I think it will stretch out ok in the attic.
>
> Thanks,
>
> Jeff
> AD6RH
>
>

3210. Re: Thoughts on odd behaviour of 10m vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 03:14:23 UTC
From: j999w@aol.com
Message-ID: <20040530231423.29553.00000262@mb-m05.aol.com>
Source record: 94215

>the upshot of these was that the lower
>I brought the antenna, the better it worked.
>

If you're getting the coverage you want at only 4 ft up, why not just leave it there?

jw
K9RZZ

3211. Recomended mid-range shortwave set-up

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 05:58:35 UTC
From: Steve <abc@123.com>
Message-ID: <fQzuc.76675$gQ6.4150@newssvr25.news.prodigy.com>
Source record: 94228
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

Hi,

I have wanted to get involved with shortwave for years and would like to get some recommendations on a mid-range ($200-400) receiver and antenna set-up. I plan on telescoping mast for shortwave, TV (mostly for uhf PBS stuff), and FM. The height restriction in our town is 50' but I imagine anything around 30' would produce good results since there are no big hills or trees nearby. In addition I own a newer 2.8 GHz PC running Windows XP for any recommendations on how I might incorporate this into the overall set-up.

Being inexperienced I am thinking I should start with simply listening with a capable mid-range receiver and then after some years time buy into a transmitter as well. This is all untutored preliminary thinking on my part and would welcome anyone's ideas as to how a beginner could best get started on the road to mid-to-high end shortwave/ham listening/broadcasting. I see this initial step as phase one of a two or three part program that will extend over a period of five or ten years.

Thank you for your help.

Steve

Note: I will be buying "Passport to World Band Radio" as a way of educating myself on some of the issues I mentioned

3212. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 07:10:46 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <fMAuc.13056$Yf6.8891@bignews1.bellsouth.net>
Source record: 94216
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Have fun - use twin-lead 300-ohm or ladder-line 450ohm...
use a half-wave u-shape balun + a 1/4-wave stub on each end - and your runs
can be pretty long without a lot of loss - or a lot of expense.

"Rob" <noemail@pse.com> wrote in message
news:Vqmuc.77375$tb4.2764794@news20.bellglobal.com...
> I am finally going to put up a VHF antenna for 2 meter and another antenna
> for 70 cm.
>
> What is type of coax should I use? Rg213? Or will RG213 be too lossy?
>
> Recommendations please...
>
> Rob
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 5/22/2004

3213. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 08:39:58 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <mVlV4YFe9uuAFA+U@ifwtech.co.uk>
Source record: 94217
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Hal Rosser wrote:
>Have fun - use twin-lead 300-ohm or ladder-line 450ohm...
>use a half-wave u-shape balun + a 1/4-wave stub on each end - and your runs
>can be pretty long without a lot of loss - or a lot of expense.
>

I'm afraid this is largely a myth from the Olden Days. Back then, twin-lead was probably better than most types of coax that hams could buy... but coax has improved, and twin-lead hasn't.

The myth has been overly influenced by a few measurements dating back to the 1950s, made under ideal conditions that can't be achieved in real installations.

The reality is that twin-lead is difficult to install, sensitive to electrical disturbances, of very poor quality if it's also low-cost, and *very* sensitive to getting wet. The higher in frequency you go, the more each one of these things matters.

(Yes, I know there are a billion TV sets out there using twin-lead - but that doesn't make it right. Most viewers in the USA have been brainwashed to accept appalling standards of TV picture quality.)

Parallel-line can be excellent for power distribution and phasing *within* a stacked array. I've used it on the moonbounce array at 432MHz, in a wet climate, but those were short, straight lines that are self-supporting with mostly air insulation - a completely different thing.

>
>"Rob" <noemail@pse.com> wrote in message
>news:Vqmuc.77375$tb4.2764794@news20.bellglobal.com...
>> I am finally going to put up a VHF antenna for 2 meter and another antenna
>> for 70 cm.
>>
>> What is type of coax should I use? Rg213? Or will RG213 be too lossy?
>>
>> Recommendations please...
>>
As many others have said, it depends how important low loss will be for *your* particular application.

If a significant length is involved, and you're interested in weak signals, then RG213 (full quality, no substitutes) should be your minimum specification.

People in the USA can recommend specific brands that will be available
to you.

--
73 from Ian G3SEK
'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3214. Re: Thoughts on odd behaviour of 10m vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 11:34:09 UTC
From: Ian Jackson <REMOVE-THIS-BIT@g3ohx.demon.co.uk>
Message-ID: <xYd3W5BxgxuAFwdu@g3ohx.demon.co.uk>
Source record: 94218

In message <20040530231423.29553.00000262@mb-m05.aol.com>, J999w
<j999w@aol.com> writes
>>the upshot of these was that the lower
>>I brought the antenna, the better it worked.
>>
>
>If you're getting the coverage you want at only 4 ft up, why not just leave it
>there?
>
>jw
>K9RZZ
>
>

A REAL radio amateur is NEVER satisfied with the coverage or signal
strength!

However, the lack of signal strength in the elevated location could be
because of multipath reflections, and the antenna is now in a null wrt
the repeater antenna (this can happen on 10m).

Well, maybe.....

Ian.
--

3215. Re: Thoughts on odd behaviour of 10m vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 11:58:26 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40BB1DE2.50A6A5B0@cwis.net>
Source record: 94219

Geof,
All antennas are affected by 'ground', real (dirt), or the
artificial kind (radials/counterpoise/??), not to mention
everything around it. That's why you 'tune' one, right? I'm
not familiar with the particular antenna you speak of, but I
see no reason why it should be different.
'Doc

3216. Re: Antenna Tubing suppliers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 12:03:00 UTC
From: SB <abc@abc.com>
Message-ID: <c9f6tj$b1j$1@titan.btinternet.com>
Source record: 94220

<g3pho@nospamblueyonder.co.uk> wrote in message
news:40bae2ef.82858444@news.blueyonder.co.uk...
> On Sun, 30 May 2004 13:34:07 GMT, g3pho@nospamblueyonder.co.uk wrote:
>
> >On Sat, 29 May 2004 20:12:24 +0000 (UTC), "SB" <abc@abc.com> wrote:
> >
> >>Can anyone suggest a UK outlet where I can obtain aluminium tubing for
> >>contsruction of beam antennas, also dipole centres and element to boom
> >>fixtures.
> >>
> >>Thanks G7CPN.
> >I get a lot of my stuff from JB aerials on Abbeydale Road, Sheffield,
> >he stocks all the fittings and a wide selection of tubing, including
> >thick walled ali pipe for masts.
> >
> >Peter, G3PHO
>
>
> Just realised might mean for HF antennas ... I am referring to VHF/UHF
> use only. The dipole centres and element to boom fittings are of the
> TV and FM antenna variety and not suitable for HF beams.
>
> Peter, G3PHO

Thanks for all the suggestions gents, I will check out the companies, the query was for homebrewing VHF antennas.

Regards G7CPN.

3217. Re: Attic HF anntenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 12:06:10 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40BB1FB2.A6431A70@cwis.net>
Source record: 94221

Jeff,
Since you have already used an 'attic' antenna I figure you are familiar with at least a few of the 'draw backs'. Unless there's something really 'different' about your new home, it should work about as well as it did in the old place, maybe better, maybe not. There's not much anyone can say about how well it will work until you try it. Good luck...
'Doc

3218. Re: Antenna Tubing suppliers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 12:11:24 UTC
From: gonetopot@hotmail.com
Message-ID: <c9f7dcbpi1@news5.svr.pol.co.uk>
Source record: 94222

[No readable article body recovered]

3219. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 13:06:43 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bb2eda_3@corp.newsgroups.com>
Source record: 94223

Walter Maxwell wrote:

> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>>IMO, you and Steve were much closer in principles than either one of you
>>realized.
>
> Sorry Cecil, I don't think so. Steve has missed the most vital aspect of the
> phenomenon--what happens to the energy, or power in the reflected waves on
> return to the match point.

Well, once Steve admitted that the two reflected waves completely cancel each other in a matched system, what happens to the pre-existing energy in those two waves before they cancel is obvious. Energy cannot be destroyed and if it doesn't flow toward the source, it must flow toward the load as explained at the bottom of the Melles Griot Web Page:

http://www.mellesgriot.com/products/optics/oc_2_1.htm

"Clearly, if the wavelength of the incident light and the thickness of the film are such that a phase difference exists between reflections of p, then REFLECTED WAVEFRONTS INTERFERE DESTRUCTIVELY, and overall reflected intensity is a minimum. If the two reflections are of equal amplitude, then this amplitude (and hence intensity) minimum will be ZERO." (emphasis mine)

"In the absence of absorption or scatter, THE PRINCIPLE OF CONSERVATION OF ENERGY indicates ALL (rearward-traveling) "LOST" REFLECTED INTENSITY will appear as ENHANCED INTENSITY IN THE (forward-traveling) TRANSMITTED BEAM. The sum of the reflected and transmitted beam intensities is always equal to the incident intensity. This important fact has been confirmed experimentally." (emphasis mine)

Steve at first said the energy in the canceled waves continues to flow toward the source without a voltage and current and that interference was not involved. He later changed his mind. All that should be archived on r.r.a.a on Google for the summer of 2001. Here's an excerpt. Steve said: "The total forward power increases as a direct result of the vector superposition of forward voltage and current. This DOES NOT require a corresponding destructive interference process ..." thus contradicting Hecht in _Optics_ who says any constructive interference process must be accompanied by an equal magnitude of destructive interference.

> Now to continue what Steve said is: "The result of this
> wave cancellation is that the total steady-state rearward-traveling wave has a
> net voltage of 0 V nd 0 A, respectively, and an impedance match occurs." No No
> No.

> As we've discussed earlier, voltage and current cannot both go to zero
> simultaneously, except in the rearward direction.

But that's what he said above. The rearward-traveling wave indeed does have a net voltage of 0 V and 0 A and the reflections toward the source disappear at the match point. I think you and Steve really agree on about 98% of this match point stuff but you two obviously disagree on the definition of "re-reflection".

> I know you don't agree with me that a one-way virtual short is what causes the
> re-reflection, but in a short time I'll be able to prove it to you in a manner
> you'll not be able to rebut. Stay tuned.

You might want to check your work against an s-parameter analysis. The s-parameter equations are: b1 = s11(a1) + s12(a2) and b2 = s21(a1) + s22(a2)

Given that a match point in a transmission line can be considered to be a two-port network, |s22|^2 is the Power (re)reflected from the network output divided by the (reflected) Power incident on the network output. s22 is the reflection coefficient looking into port 2 and is *not equal to 1.0 or zero*. In a matched system with nothing but resistances, it is often the negative of the reflection coefficient at the load.

This is covered in HP's AN 95-1 available on the web.

> Those who don't believe will get quite a surprise when I reveal what the output
> source resistance of the xmtr really is under this condition. Waddya think?

I think I am too ignorant of the subject to venture an opinion. Which of the following systems do you think I would prefer, the conjugately-matched one at 50% efficiency or the non-conjucately one at 98% efficiency?

1 ohm XMTR----100V out---tuner---1/2WL 450 ohm line--50 ohm load

50 ohm XMTR---100V out---tuner---1/2WL 450 ohm line--50 ohm load

Arguing that Tesla/Westinghouse would have to conjugately match their 60 Hz AC generators is what shot down Edison's dream of an all DC power distribution system for the USA.

I would love to have a transmitter with a zero ohm internal impedance, completely conjugately unmatched. :-)
--
73, Cecil http://www.qsl.net

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3220. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 13:13:13 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bb3060_3@corp.newsgroups.com>
Source record: 94224
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Ian White, G3SEK wrote:
> Parallel-line can be excellent for power distribution and phasing
> *within* a stacked array. I've used it on the moonbounce array at
> 432MHz, in a wet climate, but those were short, straight lines that are
> self-supporting with mostly air insulation - a completely different thing.

Given a single dipole, multi-band antenna, parallel transmission line
is just about the only choice. The 50 ohm SWR on a one-wavelength
dipole is about 100:1. The 500 ohm SWR on a one-wavelength dipole is
about 10:1. Under those circumstances, it is no contest.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3221. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 13:26:58 UTC
From: "Peter O. Brackett" <none@no-such-domain.nul>
Message-ID: <CoGuc.31959$zO3.21155@newsread2.news.atl.earthlink.net>
Source record: 94225

Cecil:

[snip]
> I would love to have a transmitter with a zero ohm internal impedance,
> completely conjugately unmatched. :-)
> --
> 73, Cecil http://www.qsl.net
[snip]

I would love it as well!

:-)

I fear that Walter is far too hung up on that conjugate match stuff...
Walt, you need to move
on to more important things. Don't continue to fuss with others over such a
trivial and ultimately
unimportant point. Have you left for the North yet, or still in Deland?
Sorry I've been far too
busy with consulting to get over to see you this past winter.

BTW, Cecil...

Faced with the possibility of owning such an ideal transmitter and given the
choice...

I wonder, considering the condition of most amateur antennas... which you
would love better in practice...

A completely mismatched zero Ohm impedance voltage transmitter

-OR-

A completely mismatched infinite Ohm impedance current transmitter.

--
Peter K1PO
Indialantic By-the-Sea, FL.

3222. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 14:03:57 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <FqednZOs04fMpibd4p2dnA@ctc.net>
Source record: 94226
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

> I am finally going to put up a VHF antenna for 2 meter and another antenna
> for 70 cm.
>
> What is type of coax should I use? Rg213? Or will RG213 be too lossy?
>
It depends on what you wan to do . As mentioned use the lowest loss you can afford. The 5/8 inch hard-line is great but not many will want to pay the $ 5 per foot and about $ 70 per connector and put up with the stuff not being easy to bend.

Look at the LMR 400 or Belden makes some that is hard to find I think is called 9914. It has almost the same low loss as the 9913 but uses a solid dielectric instead of the hollow type of the 9913. If you are only using 30 or 40 feet and mostly the FM repeaters, the RG8x type is ok. As someone mentioned the RG 6 type sold for cable TV is fine for a run of 50 feet or so. The on;y problem is the connectors. IT is 70 ohm coax but for most simple systems it will not mater.

I have used most all of the above but the hard-line at home and it all depends on what I was doing. I only want a few local repeaters for a rig in the house so a homemade dipole (vertical) is up about 25 feet on the tower. It has about 40 feet of rg59 and then about 30 feet of rg58 going to it. Not the best but it works fine for what I am doing. I also have a 2 meter ssb rig in the shack that is fed with the 9913 and it seems to work ok for it. Using a dual band antenna to a scanner that is programmed with 2 meter and 440 repeaters and feeding it with about 100 feet of rg8x. The 2 meter part works great but not so good on the 440 band.
The satellite antennas are feed with the 9913 and sofar I have been able to keep the water out of the coax.

3223. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 14:06:04 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Grh93RKMvzuAFApK@ifwtech.co.uk>
Source record: 94227
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Cecil Moore wrote:
>> Parallel-line can be excellent for power distribution and phasing
>>*within* a stacked array. I've used it on the moonbounce array at
>>432MHz, in a wet climate, but those were short, straight lines that
>>are self-supporting with mostly air insulation - a completely
>>different thing.
>
>Given a single dipole, multi-band antenna, parallel transmission line
>is just about the only choice. The 50 ohm SWR on a one-wavelength
>dipole is about 100:1. The 500 ohm SWR on a one-wavelength dipole is
>about 10:1. Under those circumstances, it is no contest.

Very true... but also a *very* long way from the original question.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3224. Re: Attic HF anntenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 14:54:22 UTC
From: Jeff Lillard <jlco01@excite.com>
Message-ID: <yGHuc.31151$Ly.22431@attbi_s01>
Source record: 94229

Thaks all for your comments and emails.Lots of good tips! I'm hoping my trusty 'ol dipole will work OK. I'll watch for those ground-fault trippings! I should be on the air around 6/15 if all goes well.

Jeff

"Jeff Lillard" <jlco01@excite.com> wrote in message news:vctuc.26846$Ly.11269@attbi_s01...
> Howdy,
>
> I'm moving into a house where I can't put up an exposed HF antenna. Any
> comments on in-attic antennas? I'm bringing my 10-15-20-40 meter shortened
> dipole with me. I think it will stretch out ok in the attic.
>
> Thanks,
>
> Jeff
> AD6RH
>
>

3225. Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 14:59:31 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2i0vl6Fhp9rsU1@uni-berlin.de>
Source record: 94230

I'm just about getting around to making my 5 or 6 element marine band yagi, covering 156 - 162 Mhz RECEIVE ONLY. Do I have to employ a folded dipole or can I use just a simple hertz dipole as the "driven" element? I'm trying to get away from using a folded dipole if I can. Any wideband designs out there that use a simple hertz dipole that I can scale? I'm looking, but if you have some links aready. TIA.

3226. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 15:04:46 UTC
From: Allodoxaphobia <bit-bucket@config.com>
Message-ID: <slrncbmice.2umb.bit-bucket@localhost.config.com>
Source record: 94231
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

On Sun, 30 May 2004 10:44:15 -0400, Rob hath writ:

> I am finally going to put up a VHF antenna for 2 meter and another antenna
> for 70 cm.
> What is type of coax should I use? Rg213? Or will RG213 be too lossy?
> Recommendations please...

Cable TV Hardline. You can't beat the price. HI!HI!

http://jonz.net/W3DHJ/catvhardline.html

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | config.com | DM68mn SK

3227. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 15:06:49 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bb4aff$1_4@corp.newsgroups.com>
Source record: 94233
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Ian White, G3SEK wrote:
> Cecil Moore wrote:
>> Given a single dipole, multi-band antenna, parallel transmission line
>> is just about the only choice. The 50 ohm SWR on a one-wavelength
>> dipole is about 100:1. The 500 ohm SWR on a one-wavelength dipole is
>> about 10:1. Under those circumstances, it is no contest.
>
> Very true... but also a *very* long way from the original question.

Too bad English is not a context-free language, huh?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3228. Re: Recomended mid-range shortwave set-up

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 15:08:12 UTC
From: Keyboard In The Noise <KITN@cat.net>
Message-ID: <wTHuc.18388$oi5.15126@fed1read07>
Source record: 94232
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

Steve -- see receiver reviews and antenna projects at URL:
http://ac6v.com/swl.htm

Also a better place to post is rec.radio.shortwave

Good luck and DX

--
Keyboard In The Noise

Opinions are the cheapest commodities in the world. Author unknown but
"right on"
"Steve" <abc@123.com> wrote in message
news:fQzuc.76675$gQ6.4150@newssvr25.news.prodigy.com...
> Hi,
>
> I have wanted to get involved with shortwave for years and would like to
get
> some recommendations on a mid-range ($200-400) receiver and antenna
set-up.
> I plan on telescoping mast for shortwave, TV (mostly for uhf PBS stuff),
and
> FM. The height restriction in our town is 50' but I imagine anything
around
> 30' would produce good results since there are no big hills or trees
nearby.
> In addition I own a newer 2.8 GHz PC running Windows XP for any
> recommendations on how I might incorporate this into the overall set-up.
>
> Being inexperienced I am thinking I should start with simply listening
with
> a capable mid-range receiver and then after some years time buy into a
> transmitter as well. This is all untutored preliminary thinking on my part
> and would welcome anyone's ideas as to how a beginner could best get
started
> on the road to mid-to-high end shortwave/ham listening/broadcasting. I see
> this initial step as phase one of a two or three part program that will
> extend over a period of five or ten years.
>
> Thank you for your help.
>
> Steve
>
> Note: I will be buying "Passport to World Band Radio" as a way of

educating
> myself on some of the issues I mentioned
>
>

3229. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 15:28:28 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <iejmb05hsnu2h3tucheu3es7i5ej3ul63c@4ax.com>
Source record: 94235

On Mon, 31 May 2004 15:59:31 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

|I'm just about getting around to making my 5 or 6 element marine band yagi,
|covering 156 - 162 Mhz RECEIVE ONLY. Do I have to employ a folded dipole

No.

|or
|can I use just a simple hertz dipole as the "driven" element? I'm trying to
|get away from using a folded dipole if I can. Any wideband designs out there
|that use a simple hertz dipole that I can scale? I'm looking, but if you
|have some links aready. TIA.

All dimensions in inches

X Y Z X Y Z Dia

0.000 -18.553 0.000 0.000 18.553 0.000 0.187
9.275 -18.368 0.000 9.275 18.368 0.000 0.312
12.250 -17.077 0.000 12.250 17.077 0.000 0.187
23.800 -16.672 0.000 23.800 16.672 0.000 0.187
34.213 -16.672 0.000 34.213 16.672 0.000 0.187
47.211 -16.229 0.000 47.211 16.229 0.000 0.187

3230. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 15:28:40 UTC
From: fractenna@aol.com
Message-ID: <20040531112840.08258.00000180@mb-m12.aol.com>
Source record: 94234

>I'm just about getting around to making my 5 or 6 element marine band yagi,
>covering 156 - 162 Mhz RECEIVE ONLY. Do I have to employ a folded dipole or
>can I use just a simple hertz dipole as the "driven" element? I'm trying to
>get away from using a folded dipole if I can. Any wideband designs out there
>that use a simple hertz dipole that I can scale? I'm looking, but if you
>have some links aready. TIA.
>

A folded dipole as the driven element will have the best match over your
frequency range..

What you do have to worry about is the feedpoint resistance. Some Yagi-Uda
designs are expressly designed for (a driven) folded dipole, which in isolation
have a much higher feed resistance than 50 ohms. When you put parasitics in the
near field, in certain gain-optimized Yagi-Uda designs, that feed resistance
falls closer to 50 ohms.

Typically, a non-matched regular dipole as driven has a feedpoint resistance of
much less than 50 ohms in a high gain Yagi-Uda app. Thus you may be seeing 1-2
dB or mismatch from this lower feedpoint resistance. Or you can make a T-match
(for example).

If you have s specific design that uses a folded dipole, I suggest you stick
with it. Unless you want to eat a dB or 2 in possible mismatch, or put a
matching system in on a conventional dipole as a driven.

73,
Chip N1IR

3231. Re: Thoughts on odd behaviour of 10m vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 15:45:06 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40BB5302.2722@wt.net>
Source record: 94236

Arfa Daily wrote:
>

>
> Does anyone have any thoughts on what is going on here, and whether
> anything can be done to improve the situation? I have also considered
> using a Boomerang instead, as this can be centre mounted and is designed
> to work stood off from a pole similar to my situation.Again, any thoughts
> ?

Offhand, it would seem feedline radiation is ruining the pattern. Skews
the pattern up off the horizon. Not that your coax length is nearly a
1/2 wave now. It's probably acting as part of the antenna. Try a
choke, ferrite beads, etc, below the feedpoint. MK
--
http://web.wt.net/~nm5k

3232. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 15:51:41 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40bb5320.412317078@news.galilei.com>
Source record: 94237
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Old Ed" <eseniorsR-E-M-O-V-E@earthlink.net> verbositized:

>Hi -
>
>Just curious: Do you know of any (reasonably priced) vendor that
>offers 9913 conveniently made up in standard lengths, with connectors?
>(CPX1318 is available in that form.)

WHAT is a Standard Length?

And, do you want to trust factory installed cheap connectors?

Even if coax comes with connectors, I take those off and install my
own, so I know it was done right and will last.

TTUL
Gary

3233. Re: Recomended mid-range shortwave set-up

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 16:07:21 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <5tlmb05j18cqn4ae622c8f74odlqr2d6h6@4ax.com>
Source record: 94238

On Mon, 31 May 2004 05:58:35 GMT, "Steve" <abc@123.com> wrote:

>Hi,
>
>I have wanted to get involved with shortwave for years and would like to get
>some recommendations on a mid-range ($200-400) receiver and antenna set-up.
>I plan on telescoping mast for shortwave, TV (mostly for uhf PBS stuff), and
>FM. The height restriction in our town is 50' but I imagine anything around
>30' would produce good results since there are no big hills or trees nearby.
>In addition I own a newer 2.8 GHz PC running Windows XP for any
>recommendations on how I might incorporate this into the overall set-up.
>
>Being inexperienced I am thinking I should start with simply listening with
>a capable mid-range receiver and then after some years time buy into a
>transmitter as well. This is all untutored preliminary thinking on my part
>and would welcome anyone's ideas as to how a beginner could best get started
>on the road to mid-to-high end shortwave/ham listening/broadcasting. I see
>this initial step as phase one of a two or three part program that will
>extend over a period of five or ten years.

Just a note: it is illegal to engage in shortwave "broadcasting"
without a license.

You might subscribe to some of the shortwave magazines, to get a feel
for things.

And, also subscribe to QST if you're interested in ham radio.

Best of wishes...

Bob
k5qwg

>
>Thank you for your help.
>
>Steve
>
>Note: I will be buying "Passport to World Band Radio" as a way of educating
>myself on some of the issues I mentioned
>

3234. Re: Recomended mid-range shortwave set-up

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 16:25:17 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <N%luc.3445$cK3.630@newssvr22.news.prodigy.com>
Source record: 94239
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

For around $400 you can get a used Icom IC-R75 and if you're thinking of being a ham look at the IC-718, pretty much same Rx except no coverage above 30MHz. Yaesu FRG-7 is a decent analog Rx.

--
73
Hank WD5JFR
"Steve" <abc@123.com> wrote in message
news:fQzuc.76675$gQ6.4150@newssvr25.news.prodigy.com...
> Hi,
>
> I have wanted to get involved with shortwave for years and would like to
get
> some recommendations on a mid-range ($200-400) receiver and antenna
set-up.
> I plan on telescoping mast for shortwave, TV (mostly for uhf PBS stuff),
and
> FM. The height restriction in our town is 50' but I imagine anything
around
> 30' would produce good results since there are no big hills or trees
nearby.
> In addition I own a newer 2.8 GHz PC running Windows XP for any
> recommendations on how I might incorporate this into the overall set-up.
>
> Being inexperienced I am thinking I should start with simply listening
with
> a capable mid-range receiver and then after some years time buy into a
> transmitter as well. This is all untutored preliminary thinking on my part
> and would welcome anyone's ideas as to how a beginner could best get
started
> on the road to mid-to-high end shortwave/ham listening/broadcasting. I see
> this initial step as phase one of a two or three part program that will
> extend over a period of five or ten years.
>
> Thank you for your help.
>
> Steve
>
> Note: I will be buying "Passport to World Band Radio" as a way of
educating
> myself on some of the issues I mentioned
>
>

3235. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 16:45:57 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <bjJuc.682$Y21.578@lakeread02>
Source record: 94240

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2i0vl6Fhp9rsU1@uni-berlin.de...
> I'm just about getting around to making my 5 or 6 element marine band
yagi,
> covering 156 - 162 Mhz RECEIVE ONLY. Do I have to employ a folded dipole
or
> can I use just a simple hertz dipole as the "driven" element? I'm trying
to
> get away from using a folded dipole if I can. Any wideband designs out
there
> that use a simple hertz dipole that I can scale? I'm looking, but if you
> have some links aready. TIA.
>

Richard, I'm sure you have a specific reason for a direcitonal marine antenna, but just for others who like the sound of that idea... unless all your marine band traffic is DX from a relatively narrow range of direction, the beam antennas for marine are more trouble than they are worth in my experience. I wasted a lot of time spinning the rotator around 359 degrees with various directional antennas and finally scrapped them all. Even considering that most beams can hear front and back, more than 10 degrees to the side(s) and they are deaf by design. A great design popular with amateur radio and a superb performer on marine-band is the copper pipe J-pole. Tuned right on center 156.800 Mhz, I have yet to see a vertical hi-gain whip outperform this setup (probably because factory whips are so far off-center). I have over 100 miles coverage of USCG high-sites and approximately 15 miles coverage from on the water small craft with a J-pole. My antenna is mast-mounted on a 2d story chimney, and in spite of some erroneous construction advice, it is grounded (well!). The blunt-tip copper pipe cap on a J-pole is the ultimate lightning rod, and #4 or heavier conductor to at least an 8' ground rod is highly recommended.

73,
Jack Painter
Virginia Beach, Va

3236. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 17:06:15 UTC
From: w2rac <w2rac@bellsouth.net>
Message-ID: <26pmb0lkf3vtg8e9ckb06s479shl2f8idm@4ax.com>
Source record: 94241
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Go on ebay and get yourself some 1/2 andrews hardline.
Ends are not much money for N, so239 are more pricey.

If you cant, get some LMR400.

www.cablexperts.com are good people.

On Sun, 30 May 2004 10:44:15 -0400, "Rob" <noemail@pse.com> wrote:

>I am finally going to put up a VHF antenna for 2 meter and another antenna
>for 70 cm.
>
>What is type of coax should I use? Rg213? Or will RG213 be too lossy?
>
>Recommendations please...
>
>Rob
>

3237. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 17:07:18 UTC
From: Adair Winter <drummer_adair@mail.com>
Message-ID: <aDJuc.1982$Jn4.814@newssvr24.news.prodigy.com>
Source record: 94242
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> RG213 is WW2 technology. You are better of with Times LMR400, Belden 9913,
> or CPX1318.
>
> Tam/WB2TT
>
>
don't quote me on this but some commercial guys put up a run of LMR400
(don't remember the legenth but was 200-300ft) and even this the antenna
gain it was a negitive db number at the top.. this was at 450mhz.
so i know we are talking about a long run there but i still don't think
LMR400 is great..

Adair

3238. Re: Recomended mid-range shortwave set-up

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 17:13:45 UTC
From: BDK <kingratboyoboy@buckeye-express.com>
Message-ID: <MPG.1b2531d1c75e8a6989a14@news.buckeye-express.com>
Source record: 94243
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

In article <fQzuc.76675$gQ6.4150@newssvr25.news.prodigy.com>, abc@
123.com says...
> Hi,
>
> I have wanted to get involved with shortwave for years and would like to get
> some recommendations on a mid-range ($200-400) receiver and antenna set-up.
> I plan on telescoping mast for shortwave, TV (mostly for uhf PBS stuff), and
> FM. The height restriction in our town is 50' but I imagine anything around
> 30' would produce good results since there are no big hills or trees nearby.
> In addition I own a newer 2.8 GHz PC running Windows XP for any
> recommendations on how I might incorporate this into the overall set-up.
>
> Being inexperienced I am thinking I should start with simply listening with
> a capable mid-range receiver and then after some years time buy into a
> transmitter as well. This is all untutored preliminary thinking on my part
> and would welcome anyone's ideas as to how a beginner could best get started
> on the road to mid-to-high end shortwave/ham listening/broadcasting. I see
> this initial step as phase one of a two or three part program that will
> extend over a period of five or ten years.
>
> Thank you for your help.
>
> Steve
>
> Note: I will be buying "Passport to World Band Radio" as a way of educating
> myself on some of the issues I mentioned
>
>
>

For about $400, you can buy any of the following on the used market
(ebay) without working too hard at it.

ICOM R70a
ICOM R71A
Icom R75 (cutting it close, but you can probably find one for less than
400)
JRC NRD525 (again, cutting it close, but on SSB it's the best of this
bunch). The best ergonomics by a mile. Needs an external speaker, dont
bother with the JRC ones, just use anything available, it will at least
equal the 525's matching speaker. This thing was almost 1200 bucks new.

Yaesu Frg7700 I would put this a notch below any of the above.
Yaesu Frg8800 This one too.

BDK

3239. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 17:37:31 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bb6e52$1_1@corp.newsgroups.com>
Source record: 94244
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Gary V. Deutschmann, Sr. wrote:
> And, do you want to trust factory installed cheap connectors?

Installed by minimum wage workers?

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3240. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 17:52:59 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <96smb0h0lt3sg59qdegjngvtu6i997phj1@4ax.com>
Source record: 94245
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

On Mon, 31 May 2004 12:37:31 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Gary V. Deutschmann, Sr. wrote:
>> And, do you want to trust factory installed cheap connectors?
>
>Installed by minimum wage workers?
>
Who are judged by speed, not quality?

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3241. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 18:22:19 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <kpqmb052i9n5n026a9n5882o1gtk2j4d40@4ax.com>
Source record: 94246

On Mon, 31 May 2004 08:06:43 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>
>> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>>>IMO, you and Steve were much closer in principles than either one of you
>>>realized.
>>
>> Sorry Cecil, I don't think so. Steve has missed the most vital aspect of the
>> phenomenon--what happens to the energy, or power in the reflected waves on
>> return to the match point.
>
>Well, once Steve admitted that the two reflected waves completely cancel
>each other in a matched system, what happens to the pre-existing energy in
>those two waves before they cancel is obvious. Energy cannot be destroyed
>and if it doesn't flow toward the source, it must flow toward the load
>as explained at the bottom of the Melles Griot Web Page:
>
>http://www.mellesgriot.com/products/optics/oc_2_1.htm
>
>"Clearly, if the wavelength of the incident light and the thickness of the film
>are such that a phase difference exists between reflections of p, then REFLECTED
>WAVEFRONTS INTERFERE DESTRUCTIVELY, and overall reflected intensity is a minimum.
>If the two reflections are of equal amplitude, then this amplitude (and hence
>intensity) minimum will be ZERO." (emphasis mine)

In that case, of course all of the incident energy is transmitted.

>"In the absence of absorption or scatter, THE PRINCIPLE OF CONSERVATION OF ENERGY
>indicates ALL (rearward-traveling) "LOST" REFLECTED INTENSITY will appear as ENHANCED
>INTENSITY IN THE (forward-traveling) TRANSMITTED BEAM. The sum of the reflected and
>transmitted beam intensities is always equal to the incident intensity. This important
>fact has been confirmed experimentally." (emphasis mine)

Cecil, you're preaching to the choir here--see my above statement.

>Steve at first said the energy in the canceled waves continues to flow toward the
>source without a voltage and current and that interference was not involved. He later
>changed his mind. All that should be archived on r.r.a.a on Google for the summer
>of 2001. Here's an excerpt. Steve said: "The total forward power increases as a direct
>result of the vector superposition of forward voltage and current. This DOES NOT
>require a corresponding destructive interference process ..." thus contradicting Hecht
>in _Optics_ who says any constructive interference process must be accompanied by
>an equal magnitude of destructive interference.

Superposition of forward voltage and current? I didn't realize that voltage and current superpose. But if Steve says so. I agree on the interference, but doesn't the destructive have to occur before there can be constructive interference?

>> Now to continue what Steve said is: "The result of this
>> wave cancellation is that the total steady-state rearward-traveling wave has a
>> net voltage of 0 V nd 0 A, respectively, and an impedance match occurs." No No
>> No.
>
>> As we've discussed earlier, voltage and current cannot both go to zero
>> simultaneously, except in the rearward direction.
>
>But that's what he said above. The rearward-traveling wave indeed does have a
>net voltage of 0 V and 0 A and the reflections toward the source disappear at
>the match point. I think you and Steve really agree on about 98% of this match
>point stuff but you two obviously disagree on the definition of "re-reflection".

I don't recall Steve ever mentioning current. He simply says the voltages cancel, resulting in 0 V. What Steve apparently doesn't understand is how the energy direction is reversed when the rearward voltages and currents go to zero. Since the energy cannot go to zero what happens at the match point is that the E fields go to zero and the disappearing E field energy merges into the H field energy, raising both the H field energy and its associated current to double their values relative to those prior to re-reflection. The energy now propagates forward and the E and H fields resume their normal relationship, half the total energy in each. This is precisely what happens to the EM field when it encounters a physical short circuit. But in our case the reflected EM fields encounter a virtual short circuit, with the same result as with a physical short except that the virtual short to the reflected waves is transparent to the source wave.

>> I know you don't agree with me that a one-way virtual short is what causes the
>> re-reflection, but in a short time I'll be able to prove it to you in a manner
>> you'll not be able to rebut. Stay tuned.

As I said above I'll prove to you conclusively that the virtual short circuit is established by the wave interference, contrary to what you and many on this rraa thread believe.

>You might want to check your work against an s-parameter analysis. The s-parameter
>equations are: b1 = s11(a1) + s12(a2) and b2 = s21(a1) + s22(a2)
>
>Given that a match point in a transmission line can be considered to be a two-
>port network, |s22|^2 is the Power (re)reflected from the network output divided
>by the (reflected) Power incident on the network output. s22 is the reflection
>coefficient looking into port 2 and is *not equal to 1.0 or zero*. In a matched
>system with nothing but resistances, it is often the negative of the reflection
>coefficient at the load.
>
>This is covered in HP's AN 95-1 available on the web.

I have no disagreement with the S parameter analysis, Cecil.

>> Those who don't believe will get quite a surprise when I reveal what the output
>> source resistance of the xmtr really is under this condition. Waddya think?
>
>I think I am too ignorant of the subject to venture an opinion. Which of the
>following systems do you think I would prefer, the conjugately-matched one at
>50% efficiency or the non-conjucately one at 98% efficiency?
>
>1 ohm XMTR----100V out---tuner---1/2WL 450 ohm line--50 ohm load
>
>50 ohm XMTR---100V out---tuner---1/2WL 450 ohm line--50 ohm load

Cecil, your comparison above lacks logic. Your are assuming that the XMTR is a classical generator, where the maximum efficiency cannot exceed 50% because the internal resistance is dissipative. OTH, the souce resistance at the output of the XMTR is non-dissipative, in which case it wouldn't matter which of the two XMTRs you choose. The only dissipative resistance in the amp is that which heats the plate. That dissipation is the only dissipation in the source--the other dissipation is only in the load. If you don't agree with this concept please review Chapter 19 in Reflections 2. I also have other measurements that prove the concept is true.

>Arguing that Tesla/Westinghouse would have to conjugately match their 60 Hz
>AC generators is what shot down Edison's dream of an all DC power distribution
>system for the USA.

Doncha just love Tesla?

Walt

3242. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 18:26:09 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <dqtmb0l7eo727arfnnn02knaguott2c0gi@4ax.com>
Source record: 94247

On Mon, 31 May 2004 17:52:59 GMT, Gary S. <Idontwantspam@net> wrote:

>On Mon, 31 May 2004 12:37:31 -0500, Cecil Moore
><Cecil.A.Moore@ieee.org> wrote:
>
>>Gary V. Deutschmann, Sr. wrote:
>>> And, do you want to trust factory installed cheap connectors?
>>
>>Installed by minimum wage workers?
>>
>Who are judged by speed, not quality?

Well, the average ham with a mighty 40-watt soldering iron and rusty
pliers isn't going to do much better. At least the minimum wage guys
are probably making cables with good tools -- 120-watt or better
Weller irons with 1/2" tips, etcetera...

Bob
k5qwg

>
>Happy trails,
>Gary (net.yogi.bear)
>---
>at the 51st percentile of ursine intelligence
>
>Gary D. Schwartz, Needham, MA, USA
>Please reply to: garyDOTschwartzATpoboxDOTcom

3243. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 18:27:58 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <tvtmb09gfdd6vt7rpll629ka77hcsrag32@4ax.com>
Source record: 94248

On Mon, 31 May 2004 13:26:58 GMT, "Peter O. Brackett" <none@no-such-domain.nul>
wrote:

>Cecil:
>
>[snip]

>I fear that Walter is far too hung up on that conjugate match stuff...
>Walt, you need to move
>on to more important things. Don't continue to fuss with others over such a
>trivial and ultimately
>unimportant point.

Hi Peter, I agree, but if you had read the last portion of Cecil's post you'd
have seen that apparently others have again asked my opinion of the subject.

> Have you left for the North yet, or still in Deland?

Yep, been back in Michigan since April 12--coooold up here--wish we were still
in DeLand. Lot's a thunderstorms too.

>Sorry I've been far too
>busy with consulting to get over to see you this past winter.

We'll be back in DeLand in Nov. so please continue planning to come over.

Walt

3244. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 18:31:10 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <8665ace9e9.fsf@duchess.twilley.org>
Source record: 94249

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Bob" == Bob Miller <bxmillerNoSpam@texas.net> writes:

Gary> And, do you want to trust factory installed cheap connectors?

Cecil> Installed by minimum wage workers?

Gary> Who are judged by speed, not quality?

Bob> Well, the average ham with a mighty 40-watt soldering iron and
Bob> rusty pliers isn't going to do much better. At least the minimum
Bob> wage guys are probably making cables with good tools -- 120-watt
Bob> or better Weller irons with 1/2" tips, etcetera...

I spend just about eight hours a day lately at a factory where cables
and other stuff are made. Every day when I walk through the
cable-making section, I think to myself "wow, I wish I could use those
tools for my own nefarious purposes". The tools are expensive and
pretty high-quality, but the employees see them as just... tools.

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAu3n0GPFSfAB/ezgRAqCgAJ9FDrd7JxbaB+hBBoBVzPH1hsRjLwCgpYc2
SveSZSMgPvl1QlLs8sQByBU=
=Jya2
-----END PGP SIGNATURE-----

3245. Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 19:32:56 UTC
From: dan_hoffard@hailmail.net
Message-ID: <648fff84.0405311132.2448e399@posting.google.com>
Source record: 94250

I have a dipole in the attic tuned to around 14Mhz. Whenever I
transmit at full power, the laptop sitting next to my rig goes crazy
and the light in the next room turns on (its hooked up to a clapper).
When on 80 meters, if I transmit at full power and use my antenna
tuner to tune near perfect SWR, the treadmill in back of me turns on.
Is this normal? Should I worry about excessive radiation?

Thanks,
Dan

3246. Re: Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 20:06:44 UTC
From: Moe <stananger@mailasia.com>
Message-ID: <ofMuc.16041$oh7.5380@nwrddc01.gnilink.net>
Source record: 94251

Dan wrote:

> I have a dipole in the attic tuned to around 14Mhz. Whenever I
> transmit at full power, the laptop sitting next to my rig goes crazy
> and the light in the next room turns on (its hooked up to a clapper).
> When on 80 meters, if I transmit at full power and use my antenna
> tuner to tune near perfect SWR, the treadmill in back of me turns on.
> Is this normal? Should I worry about excessive radiation?
>
> Thanks,
> Dan

Radiation?? What radiation??

3247. Re: Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 20:11:09 UTC
From: Moe <stananger@mailasia.com>
Message-ID: <xjMuc.16065$oh7.10291@nwrddc01.gnilink.net>
Source record: 94252

Moe wrote:

> Dan wrote:
>
>> I have a dipole in the attic tuned to around 14Mhz. Whenever I
>> transmit at full power, the laptop sitting next to my rig goes crazy
>> and the light in the next room turns on (its hooked up to a clapper).
>> When on 80 meters, if I transmit at full power and use my antenna
>> tuner to tune near perfect SWR, the treadmill in back of me turns on.
>> Is this normal? Should I worry about excessive radiation?
>>
>> Thanks,
>> Dan
>
> Radiation?? What radiation??

You need to figure out how to solve the paranormal activity thats taking
place

3248. Re: Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 20:30:26 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <CBMuc.27107$eY2.17912@attbi_s02>
Source record: 94253

Dan wrote:
> I have a dipole in the attic tuned to around 14Mhz. Whenever I
> transmit at full power, the laptop sitting next to my rig goes crazy
> and the light in the next room turns on (its hooked up to a clapper).
> When on 80 meters, if I transmit at full power and use my antenna
> tuner to tune near perfect SWR, the treadmill in back of me turns on.
> Is this normal? Should I worry about excessive radiation?
>
> Thanks,
> Dan

Is this normal? Yep!

Should I worry about excessive radiation? Nope!

You have RF coupled into the power lines. You need some type 43 clamp on ferrites to solve the 'normal' RF susceptibility of those components.

3249. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 20:32:27 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <EridnUB3t6rCCybdRVn-vg@ctc.net>
Source record: 94254
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

> >
> don't quote me on this but some commercial guys put up a run of LMR400
> (don't remember the legenth but was 200-300ft) and even this the antenna
> gain it was a negitive db number at the top.. this was at 450mhz.
> so i know we are talking about a long run there but i still don't think
> LMR400 is great..
>
> Adair
>

If you don't think lmr 400 is great, what do you think is that is in the same size ,type, price range ? As far as I know it and the 9913 type have the lowest loss for the nominal 1/2 inch size flexiable coax.

There is some other coax types such as lmr 600 (think that is the number) that is some what larger and takes other more expensive connectors than the more comman types of pl259 or type N connectors.

3250. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 20:39:45 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <loudnQKFgbiaBSbd4p2dnA@comcast.com>
Source record: 94255
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Adair Winter" <drummer_adair@mail.com> wrote in message
news:aDJuc.1982$Jn4.814@newssvr24.news.prodigy.com...
>
> "Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> > RG213 is WW2 technology. You are better of with Times LMR400, Belden
9913,
> > or CPX1318.
> >
> > Tam/WB2TT
> >
> >
> don't quote me on this but some commercial guys put up a run of LMR400
> (don't remember the legenth but was 200-300ft) and even this the antenna
> gain it was a negitive db number at the top.. this was at 450mhz.
> so i know we are talking about a long run there but i still don't think
> LMR400 is great..
>
> Adair
>
>
Adair,
You can get slightly different numbers from different sources, but from the
CableXperts chart, the loss in 300 feet at 450 MHz would be 15.6 db for 213,
8.4 db for 9913, and 8.1 db for LMR400. For comparison, garden variety RG8
foam is 14.1 db, and 1/2 inch Heliax 4.5 db. Clearly, none is acceptable
without an antenna mounted amplifier.

Tam/WB2TT

3251. J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 21:05:17 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2i1kvkFiesvcU1@uni-berlin.de>
Source record: 94256

Whenever I think about a simple VHF wideband omnidirectional vertical antenna for my marine band listening, I'm always thinking folded dipole. I think I've got folded dipole on the brain. But wait - isn't it better to make J-pole. Constructionaly simpler I think, and you can feed with unbalanced coax. Are J-poles wideband antennas? I want any antenna to cover 156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here, bandwidth-wise?TIA.

3252. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 22:03:03 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40bbaba1$0$438$5cbedd26@news.real-time.com>
Source record: 94257

Richard wrote:
> Whenever I think about a simple VHF wideband omnidirectional vertical
> antenna for my marine band listening, I'm always thinking folded dipole. I
> think I've got folded dipole on the brain. But wait - isn't it better to
> make J-pole. Constructionaly simpler I think, and you can feed with
> unbalanced coax. Are J-poles wideband antennas? I want any antenna to cover
> 156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here,
> bandwidth-wise?TIA.
>

A search on google found this marine J-pole.

http://www.arrowantennas.com/j-pole.html

Looks well put together, and covers what you want at 1.5 to 1 claimed.

tom
K0TAR

3253. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 23:14:34 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <u%Ouc.26195$js4.6702@attbi_s51>
Source record: 94258

Receive only antenna shouldn't be nearly as critical as x-mit. fat tubing (say 1/2" copper water tubing) will be wider band than say 1/8" brazing/brass wire.

A search for 2 meter J-pole or VHF J-pole will turn up a lot of amateur/ham antenna designs, just shorten the lengths to 146 MHz / 159 MHz (0.92) times the published lengths.

You also can make a 1/4 wave ground plane antenna w/ a SO-259 (UHF) connector (or other flange mount RF connector) and a 17 1/2" (about) piece of brazing wire or small tubing vertical in the center lead solder socket and 3 or more (4 is easest) 17 1/2" wires attached to the coax shield grounded mounting flange and bent downward 45&#65533; or so. Google for home made ground plane antenna (and/or 1/4 wave, 2 meter, VHF, etc.) again scale 2m dimensions by 0.92

Performance for either should be similar, again the fatter the element diameter the broader the bandwidth, but for receive it is less critical than for transmit.

"Tom Ring" <tarnews@taring.org> wrote in message news:40bbaba1$0$438$5cbedd26@news.real-time.com...
> Richard wrote:
> > Whenever I think about a simple VHF wideband omnidirectional vertical
> > antenna for my marine band listening, I'm always thinking folded dipole.
I
> > think I've got folded dipole on the brain. But wait - isn't it better to
> > make J-pole. Constructionaly simpler I think, and you can feed with
> > unbalanced coax. Are J-poles wideband antennas? I want any antenna to
cover
> > 156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here,
> > bandwidth-wise?TIA.
> >
>
> A search on google found this marine J-pole.
>
> http://www.arrowantennas.com/j-pole.html
>
> Looks well put together, and covers what you want at 1.5 to 1 claimed.
>
> tom
> K0TAR
>

3254. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 23:14:43 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <D%Ouc.720$Y21.452@lakeread02>
Source record: 94259

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2i1kvkFiesvcU1@uni-berlin.de...
> Whenever I think about a simple VHF wideband omnidirectional vertical
> antenna for my marine band listening, I'm always thinking folded dipole. I
> think I've got folded dipole on the brain. But wait - isn't it better to
> make J-pole. Constructionaly simpler I think, and you can feed with
> unbalanced coax. Are J-poles wideband antennas? I want any antenna to
cover
> 156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here,
> bandwidth-wise?TIA.
>

http://www.hamuniverse.com/jpole.html This is the directions for the J-Pole
of copper pipe that I use very successfully for 2-way marine band traffic.
It is centered on 156.800 and works great over the whole marine band. I do
not use any form of choke on it, and feed it with RG-8U through a I.C.E
Lightning Arrestor from a JRC marine transceiver. Ground it well.

Jack Painter
Virginia Beach, Va

3255. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-05-31 23:20:02 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <C4Puc.26574$4A6.21751@attbi_s52>
Source record: 94260
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

1ft, 3ft, 6ft, 10ft, 25 ft, 50ft, 100ft would perhaps be considered standard (=often stocked). Still if you can get made to order instead then why not?

"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message news:40bb5320.412317078@news.galilei.com...
> "Old Ed" <eseniorsR-E-M-O-V-E@earthlink.net> verbositized:
>
> >Hi -
> >
> >Just curious: Do you know of any (reasonably priced) vendor that
> >offers 9913 conveniently made up in standard lengths, with connectors?
> >(CPX1318 is available in that form.)
>
> WHAT is a Standard Length?
>
> And, do you want to trust factory installed cheap connectors?
>
> Even if coax comes with connectors, I take those off and install my
> own, so I know it was done right and will last.
>
> TTUL
> Gary
>

3256. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 01:23:33 UTC
From: mike beauchamp <mbeauchamp@cogeco.ca>
Message-ID: <mUQuc.9716$XY6.879598@read2.cgocable.net>
Source record: 94262

what about a four element verticle dipole antenna or a two element for that
matter?
email me off of the group and ill send you to a link that has the plans for
the construction of on that will cover the 140-160 mhz band ...
8.0db gain.
de ve3 tya

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2i1kvkFiesvcU1@uni-berlin.de...
> Whenever I think about a simple VHF wideband omnidirectional vertical
> antenna for my marine band listening, I'm always thinking folded dipole. I
> think I've got folded dipole on the brain. But wait - isn't it better to
> make J-pole. Constructionaly simpler I think, and you can feed with
> unbalanced coax. Are J-poles wideband antennas? I want any antenna to
cover
> 156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here,
> bandwidth-wise?TIA.
>

3257. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 01:32:45 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <5gmnb0ljgfdmjl8tsg59fil7n6hoolkubu@4ax.com>
Source record: 94263

On 31 May 2004 15:28:40 GMT, fractenna@aol.com (Fractenna) wrote:

|>I'm just about getting around to making my 5 or 6 element marine band yagi,
|>covering 156 - 162 Mhz RECEIVE ONLY. Do I have to employ a folded dipole or
|>can I use just a simple hertz dipole as the "driven" element? I'm trying to
|>get away from using a folded dipole if I can. Any wideband designs out there
|>that use a simple hertz dipole that I can scale? I'm looking, but if you
|>have some links aready. TIA.
|>
|
|A folded dipole as the driven element will have the best match over your
|frequency range..

Unless of course it doesn't.
|
|What you do have to worry about is the feedpoint resistance. Some Yagi-Uda
|designs are expressly designed for (a driven) folded dipole, which in isolation
|have a much higher feed resistance than 50 ohms. When you put parasitics in the
|near field, in certain gain-optimized Yagi-Uda designs, that feed resistance
|falls closer to 50 ohms.
|
|Typically, a non-matched regular dipole as driven has a feedpoint resistance of
|much less than 50 ohms in a high gain Yagi-Uda app.

Unless it doesn't. For the example I offered earlier:

Freq R X VSWR Gain F/B dB

156 51.50 1.97 1.050 9.95 14.34
157 50.12 2.77 1.057 9.99 16.43
158 49.34 5.22 1.112 10.04 19.20
159 50.38 8.31 1.180 10.08 23.41
160 54.16 9.95 1.230 10.10 30.84
161 59.78 5.68 1.229 10.07 28.01
162 57.99 -8.24 1.237 9.96 21.35

3258. Re: VIRUS

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 02:18:55 UTC
From: Phil Witt <w4imm@mindspring.com>
Message-ID: <lrpnb0d9hm7f12tuohkjd2r051fl0hovno@4ax.com>
Source record: 94261
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors

At least somebody in the family knows how to do something.

On Sat, 29 May 2004 19:38:06 -0400, "Billybob" <billybob@home.net>
wrote:

>VIRUS
><rlyiyv@comcast.net> wrote in message news:fD6uc.19690$Ly.6353@attbi_s01...
>> X Pics of my sister sticking a cucumber up herself X
>>
>>
>
>
>--
>----
>
>
>>
>>
>
>

3259. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 03:12:14 UTC
From: fractenna@aol.com
Message-ID: <20040531231214.11469.00000156@mb-m11.aol.com>
Source record: 94264

Lucky for those of us when it does, Wes.

Nice model. Seems to meet a certain need. It is possible to get better F/B and F/S though. Not with your approach, however.

73,
Chip N1IR

3260. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 03:40:55 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <5dunb0t803n79u81428fjkafmlsvghn26n@4ax.com>
Source record: 94265

On 01 Jun 2004 03:12:14 GMT, fractenna@aol.com (Fractenna) wrote:

|Lucky for those of us when it does, Wes.
|
|Nice model. Seems to meet a certain need. It is possible to get better F/B and
|F/S though. Not with your approach, however.

I'm not taking credit. This is a minor adjustment of a Cebik design.
Seems to fit the OP's rqmts, however: no folded-dopole feed, 50 ohm
matched BW of >156-162 MHz and 5-6 elements.

Regards,

Wes

3261. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 05:49:32 UTC
From: Roger Halstead <Delete-Invallid.groups@tm.net>
Message-ID: <4s5ob0lif9puge201skv92tmah9qddu8s3@4ax.com>
Source record: 94266

On Sun, 30 May 2004 21:30:17 GMT, John Bachtel
<lilburn.ga.30047@att.net> wrote:

>A lump of sodium might make one eligible for a Darwin Award
>jrb de nr4jb

Oh, for heaven's sake. Sodium is easily handled if you are familiar
with the stuff. Keep it under Kerosene.

Don't get it near water and do not get it against bare skin.

OTOH I've taken *small* pieces/slivers of it and dropped it on water
as a demonstration. They skate around as if they were on ice, but
popping like tiny firecrackers.

Larger chunks into water would not be smart. It generates heat,
Hydrogen, and Oxygen. The Sodium is hot enough at the water interface
(at least to start before it gets hot) to ignite the Hydrogen/Oxygen
mix making the popping sounds with the little slivers.

In high school chem lab we used to get to play with Sodium and
Phosphorus. Now days they wouldn't even do the demos and as kids we
were able to do them ourselves.

Roger Halstead (K8RI & ARRL life member)
(N833R, S/N CD-2 Worlds oldest Debonair)
www.rogerhalstead.com

>
>AB2RC wrote:
>
>>On 2004-05-25, cva <bn@art.com> wrote:
>>
>>
>>>.
>>>
>>>
>>absolutely nothing....
>>
>>but asked the following question in the subject header
>>"Where can I get a lump of Sodium?"
>>
>>I don't even want to know why you would want a lump of soduim, but look here
>>
>>http://www.labdepotinc.com/chemical_details~pid~S1100.aspx
>>
>>

>>
>>

3262. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 05:51:23 UTC
From: Roger Halstead <Delete-Invallid.groups@tm.net>
Message-ID: <j86ob0pe4cr5id0h0ib6frt5d3rbn3q4af@4ax.com>
Source record: 94267

On Sun, 30 May 2004 18:39:18 -0400, ogrowup@webtv.net (Padraigh
ProAmerica) wrote:

>I just took the anual 8-hour HAZWOPER (First responder at operations
>level) HAZMAT course; one of the areas covered by our instruction was on
>protective equipment. He told us of an incident in Lynn, MA; the FD
>responded to a fire at a chemical company. The fire was in an area where
>there was a 100-pound vat of molten sodium. One of the firefighters
>threw a shovel ful of sand on the sodium.
>In solid form, sodium is highly reactive. In molten form, if it comes in
>contact with ANY water, it explodes.
>Maybe there had been some water on the shovel..or maybe in the sand.
>Either way, the vat exploded.

Almost any sand that has been setting around is at least damp. Bad
stuff to throw on Sodium.

Roger Halstead (K8RI & ARRL life member)
(N833R, S# CD-2 Worlds oldest Debonair)
www.rogerhalstead.com
>There were seven firefighters in the room. All seven had disregarded
>instructions, and had their turnout gear in various forms of disarray.
>All seven suffered severe, third-degree burns where their turnout gear
>wsasn't as it should be. All seven are now permanently disabled.
>1) ALWAYS use protective gear properly.
>2) Never, NEVER mess with elemental sodium!!!

>
>"There is no room in this country for hyphenated Americans"
>
> Theodore Roosevelt

3263. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 06:53:11 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <iomEHADXfCvAFA1j@ifwtech.co.uk>
Source record: 94268

Roger Halstead wrote:

>
>>A lump of sodium might make one eligible for a Darwin Award
>
>Oh, for heaven's sake.

Well, Cecil's classmate must have been a prime candidate, with his original idea about flushing a large lump down the toilet. Can't you see him, arriving at the Pearly Gates, still clutching the flush lever in his hand...

>Sodium is easily handled if you are familiar with the stuff.
[...]
>Don't get it near water

On the north coast of Scotland there used to be a nuclear power reactor that was cooled by molten sodium. On the other side of the main heat exchanger was high-pressure water, separated by the thinnest possible sheets of metal. The guys who operated the heat exchangers used to complain about that highly corrosive liquid... but they were talking about the water.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3264. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 09:11:14 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2i2vgtFhtsjvU1@uni-berlin.de>
Source record: 94269

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:iejmb05hsnu2h3tucheu3es7i5ej3ul63c@4ax.com...
> On Mon, 31 May 2004 15:59:31 +0100, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
> |I'm just about getting around to making my 5 or 6 element marine band
yagi,
> |covering 156 - 162 Mhz RECEIVE ONLY. Do I have to employ a folded dipole
>
> No.
>
> |or
> |can I use just a simple hertz dipole as the "driven" element? I'm trying
to
> |get away from using a folded dipole if I can. Any wideband designs out
there
> |that use a simple hertz dipole that I can scale? I'm looking, but if you
> |have some links aready. TIA.
>
> All dimensions in inches
>
> X Y Z X Y Z Dia
>
> 0.000 -18.553 0.000 0.000 18.553 0.000 0.187
> 9.275 -18.368 0.000 9.275 18.368 0.000 0.312
> 12.250 -17.077 0.000 12.250 17.077 0.000 0.187
> 23.800 -16.672 0.000 23.800 16.672 0.000 0.187
> 34.213 -16.672 0.000 34.213 16.672 0.000 0.187
> 47.211 -16.229 0.000 47.211 16.229 0.000 0.187
>

Sorry I'm a bit uncertain of what you wrote.

Obviously an efficient way to provide data for yagi's, but how do you read
it?

Is there a webpage associated with the design, so I can look at the general
construction?

Rich.

3265. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 09:13:45 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2i2vlnFhn4vrU1@uni-berlin.de>
Source record: 94270

"Jack Painter" <223bthp@cox.net> wrote in message
news:D%Ouc.720$Y21.452@lakeread02...
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:2i1kvkFiesvcU1@uni-berlin.de...
> > Whenever I think about a simple VHF wideband omnidirectional vertical
> > antenna for my marine band listening, I'm always thinking folded dipole.
I
> > think I've got folded dipole on the brain. But wait - isn't it better to
> > make J-pole. Constructionaly simpler I think, and you can feed with
> > unbalanced coax. Are J-poles wideband antennas? I want any antenna to
> cover
> > 156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here,
> > bandwidth-wise?TIA.
> >
>
> http://www.hamuniverse.com/jpole.html This is the directions for the
J-Pole
> of copper pipe that I use very successfully for 2-way marine band traffic.
> It is centered on 156.800 and works great over the whole marine band. I do
> not use any form of choke on it, and feed it with RG-8U through a I.C.E
> Lightning Arrestor from a JRC marine transceiver. Ground it well.
>
> Jack Painter
> Virginia Beach, Va

Obviously works then. No mention of the bandwidth of these designs.

3266. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 11:26:39 UTC
From: fractenna@aol.com
Message-ID: <20040601072639.29588.00000264@mb-m05.aol.com>
Source record: 94121

>I'm not taking credit. This is a minor adjustment of a Cebik design.
>Seems to fit the OP's rqmts, however: no folded-dopole feed, 50 ohm
>matched BW of >156-162 MHz and 5-6 elements.
>
>Regards,
>
>Wes
>

This looks like a modofied approach to an NBS Yagi-Uda.

Modern Y-U design allows for a higher feedpoint SWR. Matching loss is offset by higher gain and better consistency of F/B. If no matching, then a shaped, folded dipole is used. Typically a F/B better than 22 dB (sim) is acheived with a 10% bandwidth.

The design you discuss sounds more than adequate for this need though, in fact most needs.

73,
Chip N1IR

3267. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 13:23:10 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <7x8ShqP+MIvAFA3h@ifwtech.co.uk>
Source record: 94122

Fractenna wrote:
>>I'm not taking credit. This is a minor adjustment of a Cebik design.
>>Seems to fit the OP's rqmts, however: no folded-dopole feed, 50 ohm
>>matched BW of >156-162 MHz and 5-6 elements.
>>
>>Regards,
>>
>>Wes
>>
>
>This looks like a modofied approach to an NBS Yagi-Uda.
>
The only special feature of the NBS designs (other than the prestigious mailing address) was a self-imposed restriction to equal spacings between directors. That turned out to be an evolutionary dead-end, and you won't find it in any modern optimized yagi design.

The design proposed by Wes doesn't have that feature - fortunately - and is actually one of the OWA (Optimized Wideband Array) family. One of the special features of that family of yagis is a very close spacing between the driven element and the first director, which raises the feedpoint impedance to 50 ohms and allows a simple split-dipole driven element.

Even this feature is not original to the OWA family. I don't know when (or indeed how often) it might have been invented, but it was first systematically used by DL6WU some 25 years ago. With additional help from computer analysis and optimization, the OWA family continued the development.

>Modern Y-U design allows for a higher feedpoint SWR. Matching loss is offset by
>higher gain and better consistency of F/B. If no matching, then a shaped,
>folded dipole is used. Typically a F/B better than 22 dB (sim) is acheived with
> a 10% bandwidth.
>
We're now in the excellent position of having several alternative ways to design a yagi to meet each user's specific combination of requirements. That approach is certainly one of them.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3268. Re: Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 13:35:13 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <40bc8660_3@newsfeed.slurp.net>
Source record: 94123

Dan, you're (relatively) safe, but your household electronics may be in danger <G>...

You might want to look at RF grounding, or try changing the lengths of your dipole or the feedline (assuming it is coax?) . You might not fix all your problems, but you can alleviate a lot of them. The rest comes down to quality of design of the devices you're turning on...

- KI6PR
El Rancho R.F., CA

"Dan" wrote
> I have a dipole in the attic tuned to around 14Mhz. Whenever I
> transmit at full power, the laptop sitting next to my rig goes crazy
> and the light in the next room turns on (its hooked up to a clapper).
> When on 80 meters, if I transmit at full power and use my antenna
> tuner to tune near perfect SWR, the treadmill in back of me turns on.
> Is this normal? Should I worry about excessive radiation?
>
> Thanks,
> Dan

3269. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 14:04:51 UTC
From: Richard Heindel <rheindel@neo.rr.com>
Message-ID: <720vc.13771$DG4.12565@fe2.columbus.rr.com>
Source record: 94124

That Arrow antenna is a snap to build and even though centered
on 2m band receives really well fm aircraft band to wx band.

Richard WB8KRN

"Tom Ring" <tarnews@taring.org> wrote in message
news:40bbaba1$0$438$5cbedd26@news.real-time.com...
> Richard wrote:
> > Whenever I think about a simple VHF wideband omnidirectional vertical
> > antenna for my marine band listening, I'm always thinking folded dipole. I
> > think I've got folded dipole on the brain. But wait - isn't it better to
> > make J-pole. Constructionaly simpler I think, and you can feed with
> > unbalanced coax. Are J-poles wideband antennas? I want any antenna to cover
> > 156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here,
> > bandwidth-wise?TIA.
> >
>
> A search on google found this marine J-pole.
>
> http://www.arrowantennas.com/j-pole.html
>
> Looks well put together, and covers what you want at 1.5 to 1 claimed.
>
> tom
> K0TAR
>

3270. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 14:36:15 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <bb2pb016s4onnfhf08kirlsdb9n4vhlppd@4ax.com>
Source record: 94125

```
On Tue, 1 Jun 2004 10:11:14 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

|
|"Wes Stewart" <n7ws@_arrl.net> wrote in message
|news:iejmb05hsnu2h3tucheu3es7i5ej3ul63c@4ax.com...
|> On Mon, 31 May 2004 15:59:31 +0100, "Richard"
|> <nearlynews_email@ntlworld.com> wrote:
|>
|> |I'm just about getting around to making my 5 or 6 element marine band
|yagi,
|> |covering 156 - 162 Mhz RECEIVE ONLY. Do I have to employ a folded dipole
|>
|> No.
|>
|> |or
|> |can I use just a simple hertz dipole as the "driven" element? I'm trying
|to
|> |get away from using a folded dipole if I can. Any wideband designs out
|there
|> |that use a simple hertz dipole that I can scale? I'm looking, but if you
|> |have some links aready. TIA.
|>
|> All dimensions in inches
|>
|> X Y Z X Y Z Dia
|>
|> 0.000 -18.553 0.000 0.000 18.553 0.000 0.187
|> 9.275 -18.368 0.000 9.275 18.368 0.000 0.312
|> 12.250 -17.077 0.000 12.250 17.077 0.000 0.187
|> 23.800 -16.672 0.000 23.800 16.672 0.000 0.187
|> 34.213 -16.672 0.000 34.213 16.672 0.000 0.187
|> 47.211 -16.229 0.000 47.211 16.229 0.000 0.187
|>
|
|Sorry I'm a bit uncertain of what you wrote.
|
|Obviously an efficient way to provide data for yagi's, but how do you read
|it?
|
|Is there a webpage associated with the design, so I can look at the general
|construction?
|
|Rich.
```

This is the format for almost any of the common antenna modeling programs. See for example:

Free:

http://www.qsl.net/wb6tpu/swindex.html (look for files beginning 4nec2)

Almost free:

http://www.qsl.net/ac6la/multinec.html

Free demo:

www.eznec.com

etc.

With a fixed width font, the columns would line up and each line would represent one element, starting from the rear (reflector end) of the boom. The data are the X,Y,Z coordinates of the ends of the elements and the diameter of that element. Z is this case is zero since the model assumes free space. It also assumes no effects from the supporting boom; the usual compensations must be made for this, depending on the element mounting method. See:

http://www.antennspecialisten.se/en/ham/tech/bc.html

I assumed that you had some experience with Yagi design and construction and were simply looking for a design that gave both the required bandwidth and a fifty-ohm feedpoint; something this design delivers.

3271. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 17:18:09 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BCBA51.B1B6A8D1@uci.edu>
Source record: 94126

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > How about this: If you can't prove that F does not equal m*a, then I am
> > right about whatever issue on which we disagree!
> >
> > Is that how it works, Cecil? ;-)
>
> That's how your logic obviously works, Jim. Most of us know
> that it is impossible to prove a negative except for a binary
> outcome.
>
> Please, pretty please with cream and sugar on it, provide just
> one single example of a standing wave without forward-traveling
> or rearward-traveling components. That is certainly not too
> much to ask.

It's certainly no more than I was asking you to do.

73, Jim AC6XG

3272. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 18:18:25 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BCC871.51392D42@uci.edu>
Source record: 94127

kashe@sonic.net wrote:

> Cecil's prior response does nothing to prove your overused,
> childish hammer/nail aphorism. In any case it would only be true for
> those sufficiently dim-witted as to see only a single use for a
> hammer.

Among whom you can count yourself.

Congratulations on another finely crafted flame. I guess everybody
needs to be good at something.

73, Jim AC6XG

3273. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 18:24:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10bpiepa15jsrc8@corp.supernews.com>
Source record: 94128

I can easily be mistaken, but I don't believe the NBS Yagi designs were ever promoted as being optimal in any way. Their purpose, I believe, was to provide a set of easy-to-duplicate designs whose gains were well documented (although I understand an error was made in measuring the originals) and which anyone could construct as reference antennas with known gain.

Roy Lewallen, W7EL

Ian White, G3SEK wrote:
>>
> The only special feature of the NBS designs (other than the prestigious
> mailing address) was a self-imposed restriction to equal spacings
> between directors. That turned out to be an evolutionary dead-end, and
> you won't find it in any modern optimized yagi design.
>
> The design proposed by Wes doesn't have that feature - fortunately - and
> is actually one of the OWA (Optimized Wideband Array) family. One of the
> special features of that family of yagis is a very close spacing between
> the driven element and the first director, which raises the feedpoint
> impedance to 50 ohms and allows a simple split-dipole driven element.
>
> Even this feature is not original to the OWA family. I don't know when
> (or indeed how often) it might have been invented, but it was first
> systematically used by DL6WU some 25 years ago. With additional help
> from computer analysis and optimization, the OWA family continued the
> development.
>
>> Modern Y-U design allows for a higher feedpoint SWR. Matching loss is
>> offset by
>> higher gain and better consistency of F/B. If no matching, then a shaped,
>> folded dipole is used. Typically a F/B better than 22 dB (sim) is
>> acheived with
>> a 10% bandwidth.
>>
> We're now in the excellent position of having several alternative ways
> to design a yagi to meet each user's specific combination of
> requirements. That approach is certainly one of them.
>
>

3274. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 19:09:55 UTC
From: Adair Winter <drummer_adair@mail.com>
Message-ID: <7w4vc.2218$qg4.284@newssvr24.news.prodigy.com>
Source record: 94129
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> Adair,
> You can get slightly different numbers from different sources, but from
the
> CableXperts chart, the loss in 300 feet at 450 MHz would be 15.6 db for
213,
> 8.4 db for 9913, and 8.1 db for LMR400. For comparison, garden variety RG8
> foam is 14.1 db, and 1/2 inch Heliax 4.5 db. Clearly, none is acceptable
> without an antenna mounted amplifier.
>
> Tam/WB2TT

I agree, none of those are great numbers by any means. i honestly don't
remember the specifics of it all, it might have been 800Mhz at 100 ft.. i
just know that I whoever had put it up wasn't impressed with it.. (didnt'
live up the posted specs) and i do believe the loss was verified with an
IFR..
anyway.. i prolly should have kept my mouth shut not knowing everything in
detail.

Adair - kd5dyp

3275. Jbeam antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 21:51:54 UTC
From: franktodd@comcast.net
Message-ID: <682b4bfc.0406011351.5f907912@posting.google.com>
Source record: 94130

Can anyone tell me if Jbeam is still making amateur antennas out of the UK?

73 Frank K3EKO

3276. Patcomm pc-500 or icom ic 718

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 22:52:18 UTC
From: nightowls627@aol.comnojunk
Message-ID: <20040601185218.13387.00000141@mb-m26.aol.com>
Source record: 94131

I have an opportunity to trade an ic 718 for a pc 500. I am most interested in cw qrp. Does the pc500 have a good cw layout? Is it a decent trade off. . .100watts vs. 15watts but more cw amenities? I know this is an antenna group but I get a lot of great answers here.

Thanks
73
Greg
ki4bbl@arrl.net

3277. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 23:02:21 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <UdMZqKf9rQvAFAR$@ifwtech.co.uk>
Source record: 94134

Roy Lewallen wrote:
>I can easily be mistaken, but I don't believe the NBS Yagi designs were
>ever promoted as being optimal in any way. Their purpose, I believe,
>was to provide a set of easy-to-duplicate designs whose gains were well
>documented (although I understand an error was made in measuring the
>originals) and which anyone could construct as reference antennas with
>known gain.
>

They were in fact described as "optimum designs" in the original paper, but it's clear that claim was made subject to a number of reservations. Most of the hype came from antenna manufacturers who subsequently picked up the designs from the published reports, and misused the "NBS" name to boost the credibility of their own products.

With hindsight, the NBS designs were really quite good, and their forward gain is still competitive with more modern designs of the same boom length. But modern yagi designs are generally better, because there have been a further 35-40 years of development and optimization. In particular, the last 10 years have benefited from the availability of computer modeling techniques - you can now do more good work in a few evenings than the NBS program achieved in as many years.

As a result of this development, you can now have a better combination of features - for example, cleaner patterns, wider bandwidth and/or greater tolerance to dimensional errors, and easier impedance matching - and keep the good forward gain as well.

Many modern designs have been developed as complete 'families', with simple design rules that let you add or remove elements (changing the boom length accordingly) to create new yagis, each of which will be close to optimum for its boom length. The NBS yagis don't have that 'family' feature - each one is an individual design, and attempts to adapt them have generally not been successful. This lack of adaptability is a direct consequence of the original decision to use the same spacing between all elements; that's why I described it as an "evolutionary dead-end".

It costs exactly the same to build a good, modern yagi as it does to build an older, inferior design - the only differences are in *where* you apply the hacksaw and the drill. Therefore there's not much point in building an inferior design... which is what the NBS yagis have now become.

For many years, the greatest value of the NBS yagis was that they had accurate gain measurements, so they could be used as reliable benchmarks

in antenna gain shootouts. (The known error in the gain measurements applies to the 2-element yagi only.) Even that use has now been overtaken by computer modeling.

In summary, the NBS yagis deserve respect for their major contribution to the art and science of yagi design, but they are now mainly of historical interest.

For examples of modern yagis, and tips on construction, see the 'VHF/UHF Long Yagi Workshop' on my website.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3278. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 23:03:49 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <KP7vc.743$yP2.641@bignews1.bellsouth.net>
Source record: 94132
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

I respect your opinion, but the question did not say 'multiband' antenna.
I used belden 300-ohm twinlead for 2-meters because I had a long run to the top of a tree on the other side of the yard. The specs showed it to be low-loss at 2-meters. The cost was affordable - much less than low-loss coax.
So I used a u-bent half-wave piece of coax on each end and a 1/4-wave of 75-ohm coax with it - and it performed very well in the real world and the impedence match was good.
I even had the project published in the Antenna Compendium a few yrs back.

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message news:40bb3060_3@corp.newsgroups.com...
> Ian White, G3SEK wrote:
> > Parallel-line can be excellent for power distribution and phasing
> > *within* a stacked array. I've used it on the moonbounce array at
> > 432MHz, in a wet climate, but those were short, straight lines that are
> > self-supporting with mostly air insulation - a completely different thing.
>
> Given a single dipole, multi-band antenna, parallel transmission line
> is just about the only choice. The 50 ohm SWR on a one-wavelength
> dipole is about 100:1. The 500 ohm SWR on a one-wavelength dipole is
> about 10:1. Under those circumstances, it is no contest.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

---
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Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 5/22/2004

3279. Re: Jbeam antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 23:03:58 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ZtUamkfetQvAFAT3@ifwtech.co.uk>
Source record: 94133

Frank wrote:
>Can anyone tell me if Jbeam is still making amateur antennas out of the UK?

No, they haven't been for many years. (A successor company is still in operation, but not in the amateur radio market.)

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3280. Re: help ID tower

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 23:25:40 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <sI7vc.32677$eY2.16397@attbi_s02>
Source record: 94135

"Martin Walker" <mbwalker@idontwantanyspam.localnet.com> wrote in message
news:10bcagda75jcqe4@corp.supernews.com...
>I recently acquired a tower that is thought to be made by Rohn. I got some
> information on 25G and 45G towers from www.rohnnet.net but mine seems to
> be
> somewhere between these sizes. It measures ~13.75" between centers of the
> legs and the legs are 1.25" diameter. It is galvanized steel and otherwise
> resembles newer Rohn towers. It's probably 25 years old but is in
> excellent
> condition. Any info is appreciated.
>
> Martin KC8CFP
>

Martin,

I does sound like a Universal Tower.
They looked very similar to the Rohn 25G product (which was originally made
in Peoria, IL),
but Universal Towers were made in the Chicago area (as I was told during
coffee last week).
The Universal tower was also very heavy!

You might do a couple of google searches of the Universal product

Greg
w9gb

3281. Re: help ID tower

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 23:26:20 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <wg8vc.29055$IB.24927@attbi_s04>
Source record: 94136

"Martin Walker" <mbwalker@idontwantanyspam.localnet.com> wrote in message
news:10bcagda75jcqe4@corp.supernews.com...
>I recently acquired a tower that is thought to be made by Rohn. I got some
> information on 25G and 45G towers from www.rohnnet.net but mine seems to
> be
> somewhere between these sizes. It measures ~13.75" between centers of the
> legs and the legs are 1.25" diameter. It is galvanized steel and otherwise
> resembles newer Rohn towers. It's probably 25 years old but is in
> excellent
> condition. Any info is appreciated.
>
> Martin KC8CFP
>

Martin,

I does sound like a Universal Tower.
They looked very similar to the Rohn 25G product (which was originally made
in Peoria, IL),
but Universal Towers were made in the Chicago area (as I was told during
coffee last week).
The Universal tower was also very heavy!

You might do a couple of google searches of the Universal product

Greg
w9gb

3282. Re: Question on transmitter/antenna mismatch compatibility

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-01 23:59:06 UTC
From: bbskip@prodigy.net
Message-ID: <2124e412.0406011559.6a545953@posting.google.com>
Source record: 94137

Before GOOGLE Groups does funny things again I'd like to thank you all for your input and help. The trick about the fiberglass antenna sounds interesting. There are a lot of ideas to experiment with here, I'll have to see which one works best.

Thanks again,

Bruno

3283. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 00:02:41 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <kE8vc.1615$Ua7.559@bignews2.bellsouth.net>
Source record: 94138
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

I've used it with success - recently. 450-ohm window-line (has copper-clad steel conductors, so its tuff)
then on each end: a combination to match impedence - a 75-ohm 1/4-wave stub (goes from 50 to 112.5 ohm) then a half-wave u-bent setup (112.5 to 450 ohm)
see page 165 of Antenna Compendium vol 6 for a better description - I wrote that article back in 1999 or so.
I've also used similar setups and 300-ohm belden twinlead.
It may be a myth from the olden days, but 2+2 still equals 4 - just like the old days. And its not a myth - it really does work.

Hal
w4pmj

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message news:mVlV4YFe9uuAFA+U@ifwtech.co.uk...
> Hal Rosser wrote:
> >Have fun - use twin-lead 300-ohm or ladder-line 450ohm...
> >use a half-wave u-shape balun + a 1/4-wave stub on each end - and your runs
> >can be pretty long without a lot of loss - or a lot of expense.
> >
>
> I'm afraid this is largely a myth from the Olden Days. Back then,
> twin-lead was probably better than most types of coax that hams could
> buy... but coax has improved, and twin-lead hasn't.
>
> The myth has been overly influenced by a few measurements dating back to
> the 1950s, made under ideal conditions that can't be achieved in real
> installations.
>
> The reality is that twin-lead is difficult to install, sensitive to
> electrical disturbances, of very poor quality if it's also low-cost, and
> *very* sensitive to getting wet. The higher in frequency you go, the
> more each one of these things matters.
>
> (Yes, I know there are a billion TV sets out there using twin-lead - but
> that doesn't make it right. Most viewers in the USA have been
> brainwashed to accept appalling standards of TV picture quality.)
>
> Parallel-line can be excellent for power distribution and phasing
> *within* a stacked array. I've used it on the moonbounce array at
> 432MHz, in a wet climate, but those were short, straight lines that are
> self-supporting with mostly air insulation - a completely different
> thing.

>
>
> >
> >"Rob" <noemail@pse.com> wrote in message
> >news:Vqmuc.77375$tb4.2764794@news20.bellglobal.com...
> >> I am finally going to put up a VHF antenna for 2 meter and another
antenna
> >> for 70 cm.
> >>
> >> What is type of coax should I use? Rg213? Or will RG213 be too
lossy?
> >>
> >> Recommendations please...
> >>
> As many others have said, it depends how important low loss will be for
> *your* particular application.
>
> If a significant length is involved, and you're interested in weak
> signals, then RG213 (full quality, no substitutes) should be your
> minimum specification.
>
> People in the USA can recommend specific brands that will be available
> to you.
>
>
>
> --
> 73 from Ian G3SEK
> 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 5/22/2004

3284. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 00:06:10 UTC
From: Roger Halstead <Delete-Invallid.groups@tm.net>
Message-ID: <r46qb051da5k3c630p03lofmj7afl0kci7@4ax.com>
Source record: 94139

On Tue, 1 Jun 2004 07:53:11 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Roger Halstead wrote:
>
>>
>>>A lump of sodium might make one eligible for a Darwin Award
>>
>>Oh, for heaven's sake.
>
>Well, Cecil's classmate must have been a prime candidate, with his
>original idea about flushing a large lump down the toilet. Can't you see
>him, arriving at the Pearly Gates, still clutching the flush lever in
>his hand...

I had thought of that, but thought I'd leave it be <LOL> Most likely
some one the next floor down would get the bath. More than one cherry
bomb and M-80 has gone "down the tubes" in years gone by.
.
>
>>Sodium is easily handled if you are familiar with the stuff.
>[...]
>>Don't get it near water
>
>On the north coast of Scotland there used to be a nuclear power reactor
>that was cooled by molten sodium. On the other side of the main heat
>exchanger was high-pressure water, separated by the thinnest possible
>sheets of metal. The guys who operated the heat exchangers used to
>complain about that highly corrosive liquid... but they were talking
>about the water.

De-ionized water wants ions and it'll take them from any available
metal. It's particularly corrosive with brass. We had a series of
induction heating units that used high power RF. The tubes and coils
were cooled with de ionized water. A brass hose barb would crumble in
your hand after only a years exposure to the di water.

Roger Halstead (K8RI & ARRL life member)
(N833R, S# CD-2 Worlds oldest Debonair)
www.rogerhalstead.com

3285. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 00:53:14 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bd25f7_2@corp.newsgroups.com>
Source record: 94140

Jim Kelley wrote:
>
> Cecil Moore wrote:
>>Please, pretty please with cream and sugar on it, provide just
>>one single example of a standing wave without forward-traveling
>>or rearward-traveling components. That is certainly not too
>>much to ask.
>
> It's certainly no more than I was asking you to do.

On the contrary, you asked me to prove a negative, a logical
impossibility, e.g., prove that you have never robbed a bank.
Not getting caught is NOT proof.

OTOH, all I am asking from you is one measly example out of the
multitudes of your postings in which examples have been alluded.
If I paid you $100, would you please produce such an example?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3286. Re: Patcomm pc-500 or icom ic 718

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 01:00:10 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <ka9qb0db2gg4ud1grn2i03hulufmu8jjdp@4ax.com>
Source record: 94141

On 01 Jun 2004 22:52:18 GMT, nightowls627@aol.comnojunk (Greg Doughty)
wrote:

>I have an opportunity to trade an ic 718 for a pc 500. I am most interested in
>cw qrp. Does the pc500 have a good cw layout? Is it a decent trade off. .
>.100watts vs. 15watts but more cw amenities? I know this is an antenna group
>but I get a lot of great answers here.
>
>Thanks
>73
>Greg
>ki4bbl@arrl.net

Sorta begs the question, why don't you just turn your 718 power
control down to qrp levels -- the 100 watts are still there, should
you need them later.

Also begs -- why trade a $600 Icom for a $400 Patcomm?

Also, is Patcomm in business nowadays?

Bob
k5qwg

3287. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 01:27:51 UTC
From: Tom Ring <tarnews@taring.org>
Message-ID: <40bd2d22$0$431$5cbedd26@news.real-time.com>
Source record: 94142

It looks enough better mechanically than the normal J, that I decided I
have to build one just to see if it works well. And I don't need one,
but that probably hasn't stopped too many people in this group.

tom
K0TAR

Richard Heindel wrote:
> That Arrow antenna is a snap to build and even though centered
> on 2m band receives really well fm aircraft band to wx band.
>
> Richard WB8KRN
>
>
> "Tom Ring" <tarnews@taring.org> wrote in message
news:40bbaba1$0$438$5cbedd26@news.real-time.com...
>
>>Richard wrote:
>>
>>>Whenever I think about a simple VHF wideband omnidirectional vertical
>>>antenna for my marine band listening, I'm always thinking folded dipole. I
>>>think I've got folded dipole on the brain. But wait - isn't it better to
>>>make J-pole. Constructionaly simpler I think, and you can feed with
>>>unbalanced coax. Are J-poles wideband antennas? I want any antenna to cover
>>>156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here,
>>>bandwidth-wise?TIA.
>>>
>>
>>A search on google found this marine J-pole.
>>
>>http://www.arrowantennas.com/j-pole.html
>>
>>Looks well put together, and covers what you want at 1.5 to 1 claimed.
>>
>>tom
>>K0TAR
>>
>
>
>

3288. Re: Patcomm pc-500 or icom ic 718

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 01:31:57 UTC
From: nightowls627@aol.comnojunk
Message-ID: <20040601213157.15320.00000181@mb-m26.aol.com>
Source record: 94143

Well, I am relatively new to cw so unaware of what filters there out there and what things may be packed into a certain rig. The pc-500 may only have 15watts, but it could be optimized for cw. The icom may have 100 watts and cost more, but it is still entry level. I can actually be cleaner with my rockmite 20 @ .5 watts and not get any qso's with my icom at 50 watts. But propagation could have changed. The K1 is packed with cw stuff that I have no clue about would like to learn as qrp is a lot of kit building and homebrew and a wealth of knowledge is necessary.

Thanks
73
Greg
ki4bbl@arrl.net

3289. Re: Patcomm pc-500 or icom ic 718

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 02:43:48 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <38fqb05ghcf3bn62h9mqlthpjq9k47ahsp@4ax.com>
Source record: 94144

On 02 Jun 2004 01:31:57 GMT, nightowls627@aol.comnojunk (Greg Doughty)
wrote:

>Well, I am relatively new to cw so unaware of what filters there out there and
>what things may be packed into a certain rig. The pc-500 may only have
>15watts, but it could be optimized for cw. The icom may have 100 watts and
>cost more, but it is still entry level. I can actually be cleaner with my
>rockmite 20 @ .5 watts and not get any qso's with my icom at 50 watts. But
>propagation could have changed. The K1 is packed with cw stuff that I have no
>clue about would like to learn as qrp is a lot of kit building and homebrew and
>a wealth of knowledge is necessary.
>
>Thanks
>73
>Greg
>ki4bbl@arrl.net

FWIW, the Patcomm is also just a 2-band rig.

If you are an ARRL member, you might look some of these rigs up in the
Product Reviews Section of the ARRL website -- they do a pretty good
job of laying out what a rig will do in CW and other modes.

see
http://www.arrl.org/members-only/prodrev/bymfg.html

bob
k5qwg

3290. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 03:05:08 UTC
From: Jim <NN7K@Reno.Rmci.Net>
Message-ID: <10bqgv6ggee2j74@corp.supernews.com>
Source record: 94145

Yeh, now Phosphorus, otoh, is extremely reactive to OXYGEN (O2)! This stuff, keep submerged in oil- DO NOT EXPOSE TO AIR- as to the results- Keep sodium, and Potassium away from water, Keep Phosphorus away from air, and be sure NOT TO GET THESE BACKWARDS!! Magnesium also is interesting, but needs to be ignighted, and as for POWDERED ALUMINUM, -well need I get too explicit?
had friend, that was given a bucket of the stuff (was used to make aluminium paint, in the 30's) and told to get rid of it- decided to throw it in the incinerator-- Ill leave it to your immagination just WHAT happened!!
Jim

--
No trees were killed in the sending of this message. However, a large number of electrons were terribly inconvenienced !

" People who never get carried away, should be! " --- Malcom Forbes

"Roger Halstead" <Delete-Invallid.groups@tm.net> wrote in message news:4s5ob0lif9puge201skv92tmah9qddu8s3@4ax.com...
> On Sun, 30 May 2004 21:30:17 GMT, John Bachtel
> In high school chem lab we used to get to play with Sodium and
> Phosphorus. Now days they wouldn't even do the demos and as kids we
> were able to do them ourselves.
>
> Roger Halstead (K8RI & ARRL life member)
> (N833R, S# CD-2 Worlds oldest Debonair)
> www.rogerhalstead.com

3291. Re: Jbeam antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 03:27:24 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <wObvc.33475$eY2.13955@attbi_s02>
Source record: 94146

"Frank" <franktodd@comcast.net> wrote in message
news:682b4bfc.0406011351.5f907912@posting.google.com...
> Can anyone tell me if Jbeam is still making amateur antennas out of the
> UK?
>
> 73 Frank K3EKO

Frank,

I followed up with the US company that served as the US importer and
distributor -
they sold last stock in early 1990's at Dayton hamfest.

I still have an interest in finding a skeleton slot antenna (J-beam) for 2
meters and 70 cm -
that my VHF Elmer in Hamilton, IL had. Alas, I am sure one of the local
amateurs purchased it ---
and the only plans are from the RSGB VHF-UHF Handbook - 1970s edition

Greg
w9gb

3292. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 03:45:43 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406011945.470cddae@posting.google.com>
Source record: 94147

Bob Miller <bxmillerNoSpam@texas.net> wrote in message
news:<dqtmb0l7eo727arfnnn02knaguott2c0gi@4ax.com>...
> On Mon, 31 May 2004 17:52:59 GMT, Gary S. <Idontwantspam@net> wrote:
>
> >On Mon, 31 May 2004 12:37:31 -0500, Cecil Moore
> ><Cecil.A.Moore@ieee.org> wrote:
> >
> >>Gary V. Deutschmann, Sr. wrote:
> >>> And, do you want to trust factory installed cheap connectors?
> >>
> >>Installed by minimum wage workers?
> >>
> >>Who are judged by speed, not quality?
> >
> >
> Well, the average ham with a mighty 40-watt soldering iron and rusty
> pliers isn't going to do much better. At least the minimum wage guys
> are probably making cables with good tools -- 120-watt or better
> Weller irons with 1/2" tips, etcetera...

Speaking of tips . . here's one. I've never been happy with any of the
Weller irons, not even the clunky big 300W versions when it comes to
"doing" PL-259s. Turns out that Sears has a very light and compact
transformerless pistol type "instant heat" 400/150 watt iron which I
bought for $59.95 about a year and a half ago. Does a great job on
connectors and heavy antenna wire.

> Bob
> k5qwg

w3rv

3293. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 06:22:14 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <RtWYGQBWIXvAFACg@ifwtech.co.uk>
Source record: 94149

Brian Kelly wrote:
>> Well, the average ham with a mighty 40-watt soldering iron and rusty
>> pliers isn't going to do much better. At least the minimum wage guys
>> are probably making cables with good tools -- 120-watt or better
>> Weller irons with 1/2" tips, etcetera...
>
>Speaking of tips . . here's one. I've never been happy with any of the
>Weller irons, not even the clunky big 300W versions when it comes to
>"doing" PL-259s. Turns out that Sears has a very light and compact
>transformerless pistol type "instant heat" 400/150 watt iron which I
>bought for $59.95 about a year and a half ago. Does a great job on
>connectors and heavy antenna wire.
>
I've never been happy with monster irons either, but have had very good results using a hot-air gun as 'pre-heat' for my regular 45W Weller.

It's very easy to judge how long to pre-heat the whole connector body. Then the regular small iron has plenty of power to make a good, clean joint in the solder holes. The same technique is also good for fine soldering work on large lumps of metal.

The bonus is that a hot-air gun is much cheaper than a large iron, and you can also use it for other things too, like heat-shrink tubing. (Did somebody mention removing old paint? What's this "paint" stuff? :-)

It isn't a technique to use at the top of a tower... but there isn't *any* good way to do heavy soldering under those conditions. For that kind of application, seek out the pressure-sleeve connectors that only require the center pin to be soldered.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3294. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 06:28:32 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ZNXaeoBQOXvAFABF@ifwtech.co.uk>
Source record: 94148
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Hal Rosser wrote:
>I've used it with success - recently. 450-ohm window-line (has
>copper-clad steel conductors, so its tuff) then on each end: a
>combination to match impedence - a 75-ohm 1/4-wave stub (goes from 50
>to 112.5 ohm) then a half-wave u-bent setup (112.5 to 450 ohm) see page
>165 of Antenna Compendium vol 6 for a better description - I wrote that
>article back in 1999 or so. I've also used similar setups and 300-ohm
>belden twinlead. It may be a myth from the olden days, but 2+2 still
>equals 4 - just like the old days. And its not a myth - it really does work.
>
What frequency? What length? What loss did you measure? Was it raining?

Of course twin-lead can "work" in a wide range of applications.

The myth is that it can beat a modern coax cable at VHF, on a long run
with practical installation difficulties, and in the rain.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3295. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 06:41:15 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <y9hQyVCLaXvAFAGm@ifwtech.co.uk>
Source record: 94150

Roger Halstead wrote:
>>The guys who operated the heat exchangers used to
>>complain about that highly corrosive liquid... but they were talking
>>about the water.
>
>De-ionized water wants ions and it'll take them from any available
>metal. It's particularly corrosive with brass. We had a series of
>induction heating units that used high power RF. The tubes and coils
>were cooled with de ionized water. A brass hose barb would crumble in
>your hand after only a years exposure to the di water.
>
Vicious stuff, that water.

The added problem with tube power amplifiers is that there's usually high voltage around. DI water is a good insulator, but if there are enough ions in solution the leakage current will cause electrolysis... which dissolves more metal ions, and then the whole system goes rapidly downhill.

According to an article by N6CA (which was in the ARRL Handbooks for some years) the secret is to monitor the DC leakage current, and change the water when the current starts to creep upward. Modern plastic components help a lot, by minimizing the total area of exposed metal.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3296. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 07:29:17 UTC
From: B Ghostrider <Barryufp@hotmail.com>
Message-ID: <ucvqb0ho1nc9po6h14vsggt16opiksminq@4ax.com>
Source record: 94151

I have a assortment of antenna that I can use for listening .The one
that I get the best Reception on is a 5/8 wave groundplane, feed with
RG-59. I put my MFJ antena analszer on it and and the SWR was nearly
flat all the way across (123 Mhz to 172 Mhz) this year I have things
set up o I can hook two scanners on to the one antena. One thing I
would advise, If you are gonig to cooper in your construction, give it
a coat of trimcald. I ended up doing some high level repairs to my
antena . The groundplane element had a a greenish ttimg to them after
on one year of being exposed to the elemts(weather).

On Mon, 31 May 2004 22:05:17 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>Whenever I think about a simple VHF wideband omnidirectional vertical
>antenna for my marine band listening, I'm always thinking folded dipole. I
>think I've got folded dipole on the brain. But wait - isn't it better to
>make J-pole. Constructionaly simpler I think, and you can feed with
>unbalanced coax. Are J-poles wideband antennas? I want any antenna to cover
>156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here,
>bandwidth-wise?TIA.

3297. indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 07:54:34 UTC
From: Jim noname <asdf@asdf.com>
Message-ID: <SIfvc.34985$eY2.14267@attbi_s02>
Source record: 94152

hello. I just had a few questions about building 2m antennas.

This will be used indoors. I havent decided if its worth the trouble to climb around in the attic or if I should just mount it on the wall. I have vinyl siding so hopefully that is a plus.

My first is about the classic ground plane built on a so239 connector. I went with #14 wire and soldered the center wire on no problem. My question is whats the sturdiest way to stick on the radials? I have a 100 watt iron and still can't get a solid connection for the radials.

I was also considering just putting up a vertical dipole on the wall. I've heard people say they had better luck with the ground plane but maybe they didnt have the coax ran off to the side far enough or just dropped it straight down? It seems a little tricky feeding it from the center and having the antenna vertical but maybe a few wire tacks can fix that.

As a alternative to the dipole on the wall I also thought about just getting a connector and soldering the wire directly to it bent upwards and then using some flexible wire for the ground and let it hang below the shelf. Would this work ok being connected directly to the radio?

What do you guys suggest?

thanks

3298. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 08:49:01 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <xRcQp2K9RZvAFAFy@ifwtech.co.uk>
Source record: 94153

Jim noname wrote:
>My first is about the classic ground plane built on a so239 connector.
>I went with #14 wire and soldered the center wire on no problem. My
>question is whats the sturdiest way to stick on the radials? I have a
>100 watt iron and still can't get a solid connection for the radials.
>
See the message in another thread, about using a hot-air gun to pre-heat the connector before applying the iron. That'll do it.

#14 wire will tend to sag under its own weight, so it's better to use thicker copper wire like #12. Some designs show the radials attached with solder-tags, but in my experience they bend. It's better to crimp radials through each of the four holes in the socket, and then solder them on directly. Cut the radials to their final length *after* you have completed the crimping and soldering.

There may be a problem with soldering to some kinds of plating, so choose a connector made from brass as the base material. Drill the surface plating out of the four holes, and also file it away around the corners so you're soldering to bare brass. Also pre-tin the four corners with solder before you crimp on the heavy wire radials. Then it will solder easily.

If the SO239 doesn't have teflon insulation, screw on a PL259 to keep the center pin from moving when the insulation softens, and leave it to cool down before you remove the plug.

Finally, be aware that the feedline needs to run straight down through the four sloping radials and some way beyond. If you notice any weird behavior, it's probably due to RF currents on the surface of the feedline - this type of antenna is quite prone to that problem. Two large ferrite beads clipped onto the feedline will probably fix it; use one right behind the PL259, and a second one about 19in down.

Having said all that, any 2m antenna will work much better outside! If you're tied up in CC&Rs, take a look at the Ventenna concept for a well-disguised outside antenna.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3299. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 09:04:05 UTC
From: "Heiner-P.Landsberg" <hlandsbe-die9weg-@tcrz.net>
Message-ID: <c9k512$1lh$05$1@news.t-online.com>
Source record: 94154

http://members.home.nl/blues/scanner/jantenne.html

http://www.eham.net/articles/2418

lowcost, simple and good.
73 de heiner

3300. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 11:57:18 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406020357.7e612842@posting.google.com>
Source record: 94155

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<RtWYGQBWIXvAFACg@ifwtech.co.uk>...
> Brian Kelly wrote:
> >> Well, the average ham with a mighty 40-watt soldering iron and rusty
> >> pliers isn't going to do much better. At least the minimum wage guys
> >> are probably making cables with good tools -- 120-watt or better
> >> Weller irons with 1/2" tips, etcetera...
> >
> >Speaking of tips . . here's one. I've never been happy with any of the
> >Weller irons, not even the clunky big 300W versions when it comes to
> >"doing" PL-259s. Turns out that Sears has a very light and compact
> >transformerless pistol type "instant heat" 400/150 watt iron which I
> >bought for $59.95 about a year and a half ago. Does a great job on
> >connectors and heavy antenna wire.
> >
> I've never been happy with monster irons either, but have had very good
> results using a hot-air gun as 'pre-heat' for my regular 45W Weller.
>
> It's very easy to judge how long to pre-heat the whole connector body.
> Then the regular small iron has plenty of power to make a good, clean
> joint in the solder holes. The same technique is also good for fine
> soldering work on large lumps of metal.

That's clever, I have a heat gun (somewhere), I'll try it. Sounds like
the method might reduce the total number of BTUs/calories absorbed by
the dielectric which has always been a concern here. Barbequed coax is
very annoying.

> The bonus is that a hot-air gun is much cheaper than a large iron, and
> you can also use it for other things too, like heat-shrink tubing. (Did
> somebody mention removing old paint? What's this "paint" stuff? :-)
>
> It isn't a technique to use at the top of a tower... but there isn't
> *any* good way to do heavy soldering under those conditions.

. . . propane torch . .

> For that
> kind of application, seek out the pressure-sleeve connectors that only
> require the center pin to be soldered.

w3rv

3301. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 12:21:29 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40BDC649.73B0A2@cwis.net>
Source record: 94156

Jim,
If your soldering iron isn't 'heavy' enough you can always
use a few bolts to attach the radials.
Another options besides the walls and desk top is the
ceiling,
hang the antenna from a hook. Or, if you're feeling
adventurous,
draw the antenna on a large sheet of paper with a graphite/lead
pencil, tape it where ever you want. Or use 'burglar alarm'
tape
on a window.
As Ian said, the 'best' option is to put the antenna
outside...
'Doc

3302. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 13:37:30 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bdd918_4@corp.newsgroups.com>
Source record: 94157

Walter Maxwell wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>Steve at first said the energy in the canceled waves continues to flow toward the
>>source without a voltage and current and that interference was not involved. He later
>>changed his mind. All that should be archived on r.r.a.a on Google for the summer
>>of 2001. Here's an excerpt. Steve said: "The total forward power increases as a direct
>>result of the vector superposition of forward voltage and current. This DOES NOT
>>require a corresponding destructive interference process ..." thus contradicting Hecht
>>in _Optics_ who says any constructive interference process must be accompanied by
>>an equal magnitude of destructive interference.
>
> Superposition of forward voltage and current?

I'm sure he meant "superposition of forward voltages and superposition of
forward currents."

> I don't recall Steve ever mentioning current.

I think you are right re his article. The above quote is from an
r.r.a.a. posting circa Summer 2001.

> What Steve apparently doesn't understand is how the
> energy direction is reversed when the rearward voltages and currents go to zero.

"How" is not explained in any of the physics references. The closest
physics reference that explains it is _Optics_, by Hecht where he says
something like, at a point some distance from a source, constructive
interference must be balanced by an equal magnitude of destructive interference.
In a matched system, there is "complete destructive interference" toward the
source side of the match point and "complete constructive interference" toward
the load side of the match point. Energy is always displaced from the "complete
destructive interference" event to the "complete constructive interference"
event. (That's what you call a "virtual short" or "virtual open" capable of
re-reflecting the reflected energy.)

In s-parameter terms, b1 is the reflected voltage from port 1 toward the source.
Port 1 is the input to a matched tuner (transmatch). The equation is:

rearward-traveling voltage reflected toward the source b1 = s11(a1) + s12(a2)

For b1 to be zero, i.e. zero reflections toward the source, s11(a1) must be equal
in magnitude and opposite in phase to s12(a2). That is "complete destructive
interference". Since there are only two directions, "complete constructive interference"
must occur in the direction of b2 = s21(a1) + s22(a2) toward the load which is the
opposite direction from b1.

s11 is the port 1 reflection coefficient. a1 is the port 1 incident voltage.
s21 is the port 2 to port 1 transmission coefficient. a2 is the voltage
reflected from the load that is incident upon port 2.

Match-Point
Port1 Port2
Source------Z01--------x------------Z02------------load
a1--> <--a2
<--b1 b2-->

> The only dissipative resistance in the amp is that which heats
> the plate. That dissipation is the only dissipation in the source--the other
> dissipation is only in the load.

Why isn't the source impedance a negative resistance, i.e. a source
of power Vs a positive resistance, a sink of power?
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3303. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 13:51:13 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <LvGdnZTcH6fPRiDdRVn-vw@comcast.com>
Source record: 94158

"Jim noname" <asdf@asdf.com> wrote in message
news:SIfvc.34985$eY2.14267@attbi_s02...
> hello. I just had a few questions about building 2m antennas.
>
> This will be used indoors. I havent decided if its worth the trouble to
> climb around in the attic or if I should just mount it on the wall. I
have
> vinyl siding so hopefully that is a plus.
>
I had a 1/4 wave 2m GP in the attic, built around an SO239 connector. Worked like gangbusters. I later put up an Isopole outside, but in some directions the attic antenna worked better.

> My first is about the classic ground plane built on a so239 connector. I
> went with #14 wire and soldered the center wire on no problem. My question
> is whats the sturdiest way to stick on the radials? I have a 100 watt
iron
> and still can't get a solid connection for the radials.

Don't try to solder the radials on to the connector. Get 4 spade lug or ring terminals, and solder one to each wire. Fasten to SO239 with the mounting screws. There is no wind in the attic; so you can use soft #16 wire if you want. You can either put an insulator on the top of the vertical and hang it from the peak of the roof, or nail a vertical piece of wood up from the rafters. For the latter, fasten some sort of horizontal plate (wood, plastic, metal) to the top, and mount the SO to that.
>
> I was also considering just putting up a vertical dipole on the wall. I've
> heard people say they had better luck with the ground plane but maybe they
> didnt have the coax ran off to the side far enough or just dropped it
> straight down? It seems a little tricky feeding it from the center and
> having the antenna vertical but maybe a few wire tacks can fix that.

I would not tack the vertical dipole to a wall. Put insulators on the ends, and run it between the rafters and the peak of the roof. You need to run the coax at right angles to the dipole for as far as possible. Taping the dipole to a thin piece of dry wood, or piece of plastic pipe might be OK.
>
> As a alternative to the dipole on the wall I also thought about just
getting
> a connector and soldering the wire directly to it bent upwards and then
> using some flexible wire for the ground and let it hang below the shelf.
> Would this work ok being connected directly to the radio?
>
> What do you guys suggest?

>
> thanks

I was able to bring up repeaters 60 miles away with 10W using the attic GP.

Tam/WB2TT

3304. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 14:05:13 UTC
From: j999w@aol.com
Message-ID: <20040602100513.24870.00000188@mb-m21.aol.com>
Source record: 94159

>Don't try to solder the radials on to the connector. Get 4 spade lug or ring
>terminals, and solder one to each wire. Fasten to SO239 with the mounting
>screws.

Bingo, I was going to say the same thing.

It doesn't matter if your radials are droopy or not.

That's an excellent antenna for the attic.

jw
K9RZZ

3305. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 14:21:12 UTC
From: Walt <Walt@aol.net>
Message-ID: <40BDE256.CD2265CC@aol.net>
Source record: 94160

Now you are on the air, here are a few more to look at !

http://www.cebik.com/hs.html
http://www.cebik.com/mvhf.html
http://www.cebik.com/moxbld.html

all are direct fed with 50 ohm coax and low cost.

walt

Jim wrote:

> hello. I just had a few questions about building 2m antennas.
>
> This will be used indoors. I havent decided if its worth the trouble to
> climb around in the attic or if I should just mount it on the wall. I have
> vinyl siding so hopefully that is a plus.
>
> My first is about the classic ground plane built on a so239 connector. I
> went with #14 wire and soldered the center wire on no problem. My question
> is whats the sturdiest way to stick on the radials? I have a 100 watt iron
> and still can't get a solid connection for the radials.
>
> I was also considering just putting up a vertical dipole on the wall. I've
> heard people say they had better luck with the ground plane but maybe they
> didnt have the coax ran off to the side far enough or just dropped it
> straight down? It seems a little tricky feeding it from the center and
> having the antenna vertical but maybe a few wire tacks can fix that.
>
> As a alternative to the dipole on the wall I also thought about just getting
> a connector and soldering the wire directly to it bent upwards and then
> using some flexible wire for the ground and let it hang below the shelf.
> Would this work ok being connected directly to the radio?
>
> What do you guys suggest?
>
> thanks

3306. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 14:34:12 UTC
From: Jim Leder <k8cxm@fuse.net>
Message-ID: <Dzlvc.2723$pE2.2303@fe37.usenetserver.com>
Source record: 94161

I've made several of these that work well from an SO-239, and coat hangers. Talk about cheap, but they work well anyway. The coat hanger radials are stiff enough to support themselves, and after sandpapering off the paint down to bare metal, they solder OK directly to the SO-239. The radials should be slightly longer than the vertical section and slope down at roughly a 45 degree angle. Of course, if the antenna is outside, it will rust. But if it's indoors, no problem. Also, I soldered a spade lug to the top of the vertical section allowing me to hang it from the center beam of the roof on the inside of my attic.

"Jim noname" <asdf@asdf.com> wrote in message
news:SIfvc.34985$eY2.14267@attbi_s02...
> hello. I just had a few questions about building 2m antennas.
>
> This will be used indoors. I havent decided if its worth the trouble to
> climb around in the attic or if I should just mount it on the wall. I
have
> vinyl siding so hopefully that is a plus.
>
> My first is about the classic ground plane built on a so239 connector. I
> went with #14 wire and soldered the center wire on no problem. My question
> is whats the sturdiest way to stick on the radials? I have a 100 watt
iron
> and still can't get a solid connection for the radials.
>
> I was also considering just putting up a vertical dipole on the wall. I've
> heard people say they had better luck with the ground plane but maybe they
> didnt have the coax ran off to the side far enough or just dropped it
> straight down? It seems a little tricky feeding it from the center and
> having the antenna vertical but maybe a few wire tacks can fix that.
>
> As a alternative to the dipole on the wall I also thought about just
getting
> a connector and soldering the wire directly to it bent upwards and then
> using some flexible wire for the ground and let it hang below the shelf.
> Would this work ok being connected directly to the radio?
>
> What do you guys suggest?
>
> thanks
>
>

3307. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 14:54:55 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <zx8QhaV$oevAFAWj@ifwtech.co.uk>
Source record: 94162

Brian Kelly wrote:
>> I've never been happy with monster irons either, but have had very good
>> results using a hot-air gun as 'pre-heat' for my regular 45W Weller.
>>
>> It's very easy to judge how long to pre-heat the whole connector body.
>> Then the regular small iron has plenty of power to make a good, clean
>> joint in the solder holes. The same technique is also good for fine
>> soldering work on large lumps of metal.
>
>That's clever, I have a heat gun (somewhere), I'll try it. Sounds like
>the method might reduce the total number of BTUs/calories absorbed by
>the dielectric which has always been a concern here. Barbequed coax is
>very annoying.
>
If you prefer your PVC under-cooked, wrap some aluminum foil around
it... and don't point the heat gun that way :-)

>
>> The bonus is that a hot-air gun is much cheaper than a large iron, and
>> you can also use it for other things too, like heat-shrink tubing. (Did
>> somebody mention removing old paint? What's this "paint" stuff? :-)
>>
>> It isn't a technique to use at the top of a tower... but there isn't
>> *any* good way to do heavy soldering under those conditions.
>
>. . . propane torch . .

Yeah, right...

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3308. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 15:32:07 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <UPydnb6Q565lbyDdRVn-hA@comcast.com>
Source record: 94163

"J999w" <j999w@aol.com> wrote in message
news:20040602100513.24870.00000188@mb-m21.aol.com...
> >Don't try to solder the radials on to the connector. Get 4 spade lug or
ring
> >terminals, and solder one to each wire. Fasten to SO239 with the mounting
> >screws.
>
> Bingo, I was going to say the same thing.
>
> It doesn't matter if your radials are droopy or not.

In fact, you want them to droop! About 45 degrees droop will give 50 Ohms
impedance, which you can't get with a dipole.

Tam
>
> That's an excellent antenna for the attic.
>
> jw
> K9RZZ

3309. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 16:27:31 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <40bdfff3$1@news.vallnet.com>
Source record: 94164

"Jim noname" <asdf@asdf.com> wrote in message
news:SIfvc.34985$eY2.14267@attbi_s02...
> hello. I just had a few questions about building 2m antennas.
>
> This will be used indoors. I havent decided if its worth the trouble to
> climb around in the attic or if I should just mount it on the wall. I
have
> vinyl siding so hopefully that is a plus.
>
> My first is about the classic ground plane built on a so239 connector. I
> went with #14 wire and soldered the center wire on no problem. My question
> is whats the sturdiest way to stick on the radials? I have a 100 watt
iron
> and still can't get a solid connection for the radials.
>
> I was also considering just putting up a vertical dipole on the wall. I've
> heard people say they had better luck with the ground plane but maybe they
> didnt have the coax ran off to the side far enough or just dropped it
> straight down? It seems a little tricky feeding it from the center and
> having the antenna vertical but maybe a few wire tacks can fix that.
>
the 'classic' method of doing a vert dipole is to use a copper pipe for the
lower segment, and running the coax up to the antenna through the pipe. I
built a 6 meter vert dipole that way.

My suggestion however is a j-pole , either in the attic, or you can
literally hang it from a wall.

I built one guy one on by hot gluing an 16 gauge bare wire to the back of a
plastic poster holder in the correct dimensions, all you see is the RG-58
coming down out of it. The hardest part was getting the cable supported
properly.

Mine (made from 12 gauge solid copper) is tied onto a support beam in the
attic with nylon wire ties, and the feed line runs off horizontally, the
choke coil supported on the next beam.

3310. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 16:49:09 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <t6urb090t5ssi0r1h2h6in5h7j6v5tgema@4ax.com>
Source record: 94165

On Wed, 02 Jun 2004 08:37:30 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>
>> <Cecil.A.Moore@ieee.org> wrote:
>>>Steve at first said the energy in the canceled waves continues to flow toward the
>>>source without a voltage and current and that interference was not involved. He later
>>>changed his mind. All that should be archived on r.r.a.a on Google for the summer
>>>of 2001. Here's an excerpt. Steve said: "The total forward power increases as a direct
>>>result of the vector superposition of forward voltage and current. This DOES NOT
>>>require a corresponding destructive interference process ..." thus contradicting Hecht
>>>in _Optics_ who says any constructive interference process must be accompanied by
>>>an equal magnitude of destructive interference.
>>
>> Superposition of forward voltage and current?
>
>I'm sure he meant "superposition of forward voltages and superposition of
>forward currents."
>
>> I don't recall Steve ever mentioning current.
>
>I think you are right re his article. The above quote is from an
>r.r.a.a. posting circa Summer 2001.
>
>> What Steve apparently doesn't understand is how the
>> energy direction is reversed when the rearward voltages and currents go to zero.
>
>"How" is not explained in any of the physics references. The closest
>physics reference that explains it is _Optics_, by Hecht where he says
>something like, at a point some distance from a source, constructive
>interference must be balanced by an equal magnitude of destructive interference.
>In a matched system, there is "complete destructive interference" toward the
>source side of the match point and "complete constructive interference" toward
>the load side of the match point. Energy is always displaced from the "complete
>destructive interference" event to the "complete constructive interference"
>event. (That's what you call a "virtual short" or "virtual open" capable of
>re-reflecting the reflected energy.)

Cecil, I explained the 'how', both in Reflections and in QEX. My explantion of 'how' is what Steve is continually stating is incorrect, especially in his last 3-part QEX article. Statements in that article prove he doesn't understand the wave mechanism that reverses the direction of the reflected energy. Evidence of this is that by simply saying the voltages cancel is insufficient description of how the energies reverse direction. In fact, in his Oct 99 ComQuart article he specifically states that both voltages and power cancel. This tell me that he

doesn't understand the wave action he's attempting to teach.

MIT's Slater and Harvard's Alford both explain it brilliantly, but Steve rejects those references as 'irrelevant', and says I mistakenly used them as references in Reflections.

What is really perplexing to me is that several posters on this subject said that Steve's 3-parter is the best and most illuminating article they ever read on the subject. How can they have missed some of the most egregious errors appearing in that paper is unbelievable!

>In s-parameter terms, b1 is the reflected voltage from port 1 toward the source.
>Port 1 is the input to a matched tuner (transmatch). The equation is:
>
>rearward-traveling voltage reflected toward the source b1 = s11(a1) + s12(a2)
>
>For b1 to be zero, i.e. zero reflections toward the source, s11(a1) must be equal
>in magnitude and opposite in phase to s12(a2). That is "complete destructive
>interference". Since there are only two directions, "complete constructive interference"
>must occur in the direction of b2 = s21(a1) + s22(a2) toward the load which is the
>opposite direction from b1.

Cecil, if s11(a1) is equal in magnitude but in opposite phase with s12(a2) this constitutes a short circuit. Assume two generators delivering harmonically related output voltages equal to the two 's' voltages. When the generators are connected with their output terminals reversed, causing their voltages to be 180 degrees out of phase--this configuration is a SHORT CIRCUIT. What I've been trying to say is that this is the same condition as when the reflected waves of voltage and current from a mismatched termination are of equal magnitude and opposite phase with the voltage and current waves reflected by a matching device such as a stub, the opposing voltages in those two sets of waves constitute a short circuit the same as the voltages delivered by the two opposing generators.

>s11 is the port 1 reflection coefficient. a1 is the port 1 incident voltage.
>s21 is the port 2 to port 1 transmission coefficient. a2 is the voltage
>reflected from the load that is incident upon port 2.
>
> Match-Point
> Port1 Port2
>Source------Z01--------x------------Z02------------load
> a1--> <--a2
> <--b1 b2-->
>
>> The only dissipative resistance in the amp is that which heats
>> the plate. That dissipation is the only dissipation in the source--the other
>> dissipation is only in the load.
>
>Why isn't the source impedance a negative resistance, i.e. a source
>of power Vs a positive resistance, a sink of power?

Cecil, the source impedance is often correctly referred to as a negative resistance. But it must be remembered that the source resistance of Class B and C amps is non-dissipative, and thus totally re-reflect incident reflected power. By this I mean that the dissipative resistance that heats the plate is entirely separate from the output resistance represented by the load line. Remember, the DC power goes to only two places: that which is dissipated as heat, and that which is delivered to the load. The reflected power incident on the output terminals of the tank has no effect on the power dissipated as heat.

Here's an example. First, adjust an amp to deliver 100 watts into a 50-ohm resistive load. Second, change the load to a reactive 50 + j50 load and readjust the pi-network to again deliver 100 watts into the new load. The plate current will be exactly as in the first case, and the heat dissipated will be the same. The difference is that in the first case the output impedance of the amp was 50 + j0, while in the second case the output impedance is 50 - j50, due to readjusting the reactive components in the pi-network to match the 50 + j50-ohm load. Whether one likes it or not, this constitutes a conjugate match.

As for the plate temperature remaining the same in both cases, first, the readjustment of the pi-network returned the input resistance of the network to the same value as in the first case. Thus the plates saw no different condition between the two cases. And second, Eric Nichols, KL7AJ, has measured calorimetrically the temperature of the water cooling the tubes of megawatt transmitters with greatly differing values of reflected power incident on the xmtr. He has shown that the water temperature remains constant whatever the value of the reflected power.

Since you mentioned earlier that some posters would like my opinion on the nature of the source resistance in rf amps I'll put a paragraph or two together with measurement data to support my opinion.

Walt

3311. Re: Thoughts on odd behaviour of 10m vertical

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 16:59:06 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <uHnvc.4088$tH1.94285@twister.southeast.rr.com>
Source record: 94166

"Arfa Daily" <monitech@freeuk.com> wrote in message
news:Xns94FAFF716E35arfadailyitsalljustb@62.253.162.203...
> Hi all
>
> I have an odd situation with a Solarcon Ground Zero antenna operating on
> 10m. I am short of space, and dont have room to erect a traditional
> silver rod type vertical, or anything with a large radial system, so I
> cast around for something that would fit the bill and go on my existing
> mast. I came up with this Solarcon antenna. It is a continuously loaded -
> ie helically wound - monopole, about 4 feet long. It claims to be a
> groundplane-less electrical half wave, with voltage feed at the base, via
> what they call their patented " sidekicker unit ", which appears to be
> some kind of clamp mounted ferrite balun. It is able to be moved up and
> down a small section of the antenna to facilitate VSWR adjustment. It
> claims to be ok for use on fibreglass truck cabs etc, and does not
> require a conducting mount. I only wanted it for fairly short range local
> FM chit chat at 29Megs, and access to my local 10m repeater about 6 miles
> away. So far, so good.
>
> Initial trials were carried out indoors, with the antenna fixed in a
> chemistry clampstand, about a foot above a bench, and fed with about 10
> feet of coax. The VSWR set up PERFECTLY at 29.5MHz, and a < 2:1 VSWR was
> maintained over a couple hundred kHz. The repeater could be accessed with
> only a few watts, and a good signal was received from it.
>
> I then mounted the antenna at the end of a 4 foot 1.5 inch diameter
> duralumin pole, and clamped this to my main 2.5 inch diameter station
> mast, at a height of about 4 feet above ground, and ran the full final
> length of coax back to the transmitter. I then carried out some final
> VSWR tweaks and repeated the tests with the repeater. Again, results were
> good. I also ran some simplex tests with a friend located near the
> repeater receive site, and again, results were good.
>
> I then moved the antenna up the mast to what I hoped would be its final
> installation position at around 15 feet above ground - and here's where
> it all went wrong. A recheck of the VSWR at this point revealed that it
> had not changed, so the antenna was not being detuned in any way.
> However, the performance was now absolute crap. I needed over 20 watts to
> access the repeater, and the returned signal was 5 S points down. My
> friend could no longer pull me out of the noise below 5 watts. Several
> hours of tests then followed, and the upshot of these was that the lower
> I brought the antenna, the better it worked.
>
> I am now at a total loss to explain this. As an electrical half wave, the

> antenna should not require a ground system to work against, and this
> would seem to be the case, as it tunes up so well. I thought maybe the
> radiation angle was rather high, although again, it shouldn't be for a
> half wave. If it were, maybe the ground was having an effect on this, and
> pulling the radiation angle down. I'm loathe to believe this though, as
> the antenna is originally designed as a groundplane-less type for CB use,
> and this is primarily a short range band requiring a good ground wave.
>
> Does anyone have any thoughts on what is going on here, and whether
> anything can be done to improve the situation? I have also considered
> using a Boomerang instead, as this can be centre mounted and is designed
> to work stood off from a pole similar to my situation.Again, any thoughts
> ?
>
> I would appreciate any replies direct to
>
> monitech@freeuk.com
>
> Thanks Geoff G7RTC
>

I would try to get the antenna up even higher and see what happens. You
could be in a bad spot for quite a few different reasons.

3312. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 17:11:33 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <da2sb0dkfcegf8ov9brq258immk8krno3f@4ax.com>
Source record: 94167

On Wed, 02 Jun 2004 16:49:09 GMT, Walter Maxwell <w2du@iag.net> wrote:

>On Wed, 02 Jun 2004 08:37:30 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>
>>Walter Maxwell wrote:
>>
>>> <Cecil.A.Moore@ieee.org> wrote:
>>>>Steve at first said the energy in the canceled waves continues to flow toward the
>>>>source without a voltage and current and that interference was not involved. He later
>>>>changed his mind. All that should be archived on r.r.a.a on Google for the summer
>>>>of 2001. Here's an excerpt. Steve said: "The total forward power increases as a direct
>>>>result of the vector superposition of forward voltage and current. This DOES NOT
>>>>require a corresponding destructive interference process ..." thus contradicting Hecht
>>>>in _Optics_ who says any constructive interference process must be accompanied by
>>>>an equal magnitude of destructive interference.
>>>
>>> Superposition of forward voltage and current?
>>
>>I'm sure he meant "superposition of forward voltages and superposition of
>>forward currents."
>>
>>> I don't recall Steve ever mentioning current.
>>
>>I think you are right re his article. The above quote is from an
>>r.r.a.a. posting circa Summer 2001.
>>
>>> What Steve apparently doesn't understand is how the
>>> energy direction is reversed when the rearward voltages and currents go to zero.
>>
>>"How" is not explained in any of the physics references. The closest
>>physics reference that explains it is _Optics_, by Hecht where he says
>>something like, at a point some distance from a source, constructive
>>interference must be balanced by an equal magnitude of destructive interference.
>>In a matched system, there is "complete destructive interference" toward the
>>source side of the match point and "complete constructive interference" toward
>>the load side of the match point. Energy is always displaced from the "complete
>>destructive interference" event to the "complete constructive interference"
>>event. (That's what you call a "virtual short" or "virtual open" capable of
>>re-reflecting the reflected energy.)
>
>Cecil, I explained the 'how', both in Reflections and in QEX. My explantion of
>'how' is what Steve is continually stating is incorrect, especially in his last
>3-part QEX article. Statements in that article prove he doesn't understand the
>wave mechanism that reverses the direction of the reflected energy. Evidence of

>this is that by simply saying the voltages cancel is insufficient description of
>how the energies reverse direction. In fact, in his Oct 99 ComQuart article he
>specifically states that both voltages and power cancel. This tell me that he
>doesn't understand the wave action he's attempting to teach.
>
>MIT's Slater and Harvard's Alford both explain it brilliantly, but Steve rejects
>those references as 'irrelevant', and says I mistakenly used them as references
>in Reflections.
>
>What is really perplexing to me is that several posters on this subject said
>that Steve's 3-parter is the best and most illuminating article they ever read
>on the subject. How can they have missed some of the most egregious errors
>appearing in that paper is unbelievable!

snip

Cecil, the following is a direct quote from Steve's Comm Quart Article, Oct
1999:
"For the impedance matching network to 'work', this analysis must demonstrate
that the steady-state traveling backward power developed at the matching network
input is equal in magnitude but 180 degrees out of phase with the initial power
reflected at the matching network input. For this to occur Vback must be the
negative of VR. In this case ALL POWER TRAVELING BACKWARD TOWARDS THE
TRANSMISTTER WILL BE CANCELED, resulting in the steady-state matched condition."

Emphasis mine.

Walt

3313. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 17:44:28 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2i6i00FjksscU1@uni-berlin.de>
Source record: 94168

"Wes Stewart" <n7ws@_arrl.net> wrote in message
news:iejmb05hsnu2h3tucheu3es7i5ej3ul63c@4ax.com...
> On Mon, 31 May 2004 15:59:31 +0100, "Richard"
> <nearlynews_email@ntlworld.com> wrote:
>
> |I'm just about getting around to making my 5 or 6 element marine band
yagi,
> |covering 156 - 162 Mhz RECEIVE ONLY. Do I have to employ a folded dipole
>
> No.
>
> |or
> |can I use just a simple hertz dipole as the "driven" element? I'm trying
to
> |get away from using a folded dipole if I can. Any wideband designs out
there
> |that use a simple hertz dipole that I can scale? I'm looking, but if you
> |have some links aready. TIA.
>
> All dimensions in inches
>
> X Y Z X Y Z Dia
>
> 0.000 -18.553 0.000 0.000 18.553 0.000 0.187
> 9.275 -18.368 0.000 9.275 18.368 0.000 0.312
> 12.250 -17.077 0.000 12.250 17.077 0.000 0.187
> 23.800 -16.672 0.000 23.800 16.672 0.000 0.187
> 34.213 -16.672 0.000 34.213 16.672 0.000 0.187
> 47.211 -16.229 0.000 47.211 16.229 0.000 0.187

IOW:
X Y Z Dia

REF End 1 0.000 -18.553 0.000 0.187
End2 0.000 18.553 0.000

DE End1 9.275 -18.368 0.000 0.312
End2 9.275 18.368 0.000

DIR1 End1 12.250 -17.077 0.000 0.187
End2 12.250 17.077 0.000

DIR2 End1 23.800 -16.672 0.000 0.187
End2 23.800 16.672 0.000

DIR4 End1 34.213 -16.672 0.000 0.187
End2 34.213 16.672 0.000

DIR5 End1 47.211 -16.229 0.000 0.187
End2 47.211 16.229 0.000

I'll see how I get along with the 4Nec2 program.

What is the DE,just a regular hertz dipole? Is DE specified as to what it is (hertz, folded) somewhere in 4nec2?

In the Geometry Edit I see "Radius" for wire diameter I suppose. Do I calculate the radius from the dia given in the table above? TIA.

3314. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 18:41:57 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BE1F75.957F6E53@uci.edu>
Source record: 94169

Cecil Moore wrote:
> OTOH, all I am asking from you is one measly example out of the
> multitudes of your postings in which examples have been alluded.
> If I paid you $100, would you please produce such an example?

You know, you could save yourself and everyone else a lot of grief if you would actually try to find even a single example of where I ever said forward and reverse waves don't produce a standing wave. Why would I say that, Cecil? Why do YOU make this claim? Why do you insist on putting words in my mouth? It's the one thing you and I have always agreed on - that, and interference in general. For cryin' out loud, man. We've got some issues for sure, but that ain't one of 'em.

73, Jim AC6XG

3315. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 19:58:06 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <n6csb0ljs5q80e6php9nmmm8pbgrejuobq@4ax.com>
Source record: 94170

On Wed, 02 Jun 2004 11:41:57 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:
>> If I paid you $100, would you please produce such an example?
Asking to prove a negative?
>We've got some issues for sure, but that ain't one of 'em.
Trying to prove a negative?

3316. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 20:51:48 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BE3DE4.7C716AC6@uci.edu>
Source record: 94071

Richard Clark wrote:
>
> On Wed, 02 Jun 2004 11:41:57 -0700, Jim Kelley <jwkelley@uci.edu>
> wrote:
> >> If I paid you $100, would you please produce such an example?
> Asking to prove a negative?
> >We've got some issues for sure, but that ain't one of 'em.
> Trying to prove a negative?

Prove the impossible.

The deal is to replace someone's remarks with a ludicrous claim that you invent. Then challenge that person to prove the invented claim. It's impossible, so in a completely fabricated, fictitious and trivial sort of way, you win! It's as if a need to win had taken precedence over integrity.

73, ac6xg

3317. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 21:15:14 UTC
From: Old Ed <eXseniorsDeleteThisAndTheX@earthlink.net>
Message-ID: <Crrvc.20858$be.5016@newsread2.news.pas.earthlink.net>
Source record: 94072
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

It is perhaps worth noting that all the cute comments about cheap
materials and labor would apply equally well to nearly all the products
we buy these days. Who here makes all his own clothes and shoes,
for example?

As to cables, some sources (e.g., Cable Experts) seem to pride
themselves on good quality. And it would be a sad state of affairs if
they (and other professional cable makers), couldn't install connectors
much faster AND better than the typical ham with his motley hand tools.

Some exotic cable types are not even spec'ed for user-installed
connectors, by the way--even if said user is a competent electronics
house. Such cable types REQUIRE factory-installed connectors.
(This is NOT stuff needed by the average ham, fortunately.)

Notwithstanding all this, there are undeniably some junky, Chinese
ready-made cables out there. I bought a few from HRO, and about 20%
turned out to be bad. So now I will buy only the relatively upmarket
ready-mades (like Cable Experts). I notice that our local HRO seems
to be phasing out the no-name ready-mades; so I suspect I wasn't the
only one to have problems with them.

73, Ed

"Gary S." <Idontwantspam@net> wrote in message
news:96smb0h0lt3sg59qdegjngvtu6i997phj1@4ax.com...
> On Mon, 31 May 2004 12:37:31 -0500, Cecil Moore
> <Cecil.A.Moore@ieee.org> wrote:
>
> >Gary V. Deutschmann, Sr. wrote:
> >> And, do you want to trust factory installed cheap connectors?
> >
> >Installed by minimum wage workers?
> >
> Who are judged by speed, not quality?
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

3318. Cable Experts = "Cable X-Perts" (nt)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 21:33:25 UTC
From: Old Ed <eXseniorsDeleteThisAndTheX@earthlink.net>
Message-ID: <FIrvc.20887$be.7593@newsread2.news.pas.earthlink.net>
Source record: 94073
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

(nt)

3319. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 21:59:53 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <7PadnQ2rIuN80CPdRVn-gQ@ctc.net>
Source record: 94074

> I have a assortment of antenna that I can use for listening .The one
> that I get the best Reception on is a 5/8 wave groundplane, feed with
> RG-59. I put my MFJ antena analszer on it and and the SWR was nearly
> flat all the way across (123 Mhz to 172 Mhz) this year I have things

If you have an antenna with a swr that is flat over that large of a
frequency range , you are loosing much of signal in the coax. You can
probably take off the antenna and have about the same swr. If that is your
best antenna, you have much work to do on all your antennas.

3320. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-02 23:00:16 UTC
From: tdonaly@aol.com
Message-ID: <20040602190016.05486.00000366@mb-m17.aol.com>
Source record: 94075

Jim wrote,
>
>Richard Clark wrote:
>>
>> On Wed, 02 Jun 2004 11:41:57 -0700, Jim Kelley <jwkelley@uci.edu>
>> wrote:
>> >> If I paid you $100, would you please produce such an example?
>> Asking to prove a negative?
>> >We've got some issues for sure, but that ain't one of 'em.
>> Trying to prove a negative?
>
>Prove the impossible.
>
>The deal is to replace someone's remarks with a ludicrous claim that you
>invent. Then challenge that person to prove the invented claim. It's
>impossible, so in a completely fabricated, fictitious and trivial sort
>of way, you win! It's as if a need to win had taken precedence over
>integrity.
>
>73, ac6xg
>

Yep, that's one of Cecil's techniques, all right. It isn't used solely to win,
though.
It's more a means of making your opponent look ridiculous to those who haven't
been following the arguments. It's a dumb stunt that usually backfires, but,
hey!,
that's Cecil.
73,
Tom Donaly, KA6RUH

3321. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 00:23:35 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <Xredna3Lzt0V8iPdRVn-tw@comcast.com>
Source record: 94076
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Old Ed" <eXseniorsDeleteThisAndTheX@earthlink.net> wrote in message
news:Crrvc.20858$be.5016@newsread2.news.pas.earthlink.net...
>.....
> Notwithstanding all this, there are undeniably some junky, Chinese
> ready-made cables out there. I bought a few from HRO, and about 20%
> turned out to be bad. So now I will buy only the relatively upmarket
> ready-mades (like Cable Experts). I notice that our local HRO seems
> to be phasing out the no-name ready-mades; so I suspect I wasn't the
> only one to have problems with them.
>
> 73, Ed
>
It's also worthwhile seeing what the cable looks like. A couple of years ago
I bought 100 feet of generic (Carol?) RG8 foam. Looked OK. Next time I
bought a 25 foot piece of the same brand with connectors. Well, when the
connector came off, I saw it was not the same cable; next to no shield.

Tam/WB2TT

3322. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 00:41:11 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <lsuvc.6722$Y21.4836@lakeread02>
Source record: 94078

"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:7PadnQ2rIuN80CPdRVn-gQ@ctc.net...
> > I have a assortment of antenna that I can use for listening .The one
> > that I get the best Reception on is a 5/8 wave groundplane, feed with
> > RG-59. I put my MFJ antena analszer on it and and the SWR was nearly
> > flat all the way across (123 Mhz to 172 Mhz) this year I have things
>
> If you have an antenna with a swr that is flat over that large of a
> frequency range , you are loosing much of signal in the coax. You can
> probably take off the antenna and have about the same swr. If that is
your
> best antenna, you have much work to do on all your antennas.

Ralph, that was a pretty funny way of saying that RG-59 is suitable for 3' test leads only, never for transmission or receiving ;- 0 The differences realizable with RG-8U or 9913 would be amazing. For anything as high as high as 225-400mhz, hobbyists split hairs over a 1/2 db, and can never tolerate a 75ohm dummy load as a feedline. Down around 123 mhz, there would be slightly less difference. But a coat hanger fed with 9913 might do as well as a Yagi with RG-59! In order to operate during inclement weather, I had to add the losses from two connectors (with lightning arrestor) I didn't have when I used to disconnect and short to the ground bus. That had a noteable effect on vhf and uhf dx-reception. I have not tested dx-transmit since that installation.

Jack Painter
Virginia Beach, Va

3323. Re: Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 01:35:39 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <Zmuvc.2007$KG2.3036@reggie.win.bright.net>
Source record: 94077

Yes, you are probably getting RF'ed to death. I would try to use the lowest power necessary to carry on a QSO if you are using an indoor antenna. This is a common occurance with modern equipment with electronics in it. You might want to get the RF Exposure book from ARRL to assess your exposure to RF fields.

Scott
N0EDV

Dan wrote:
> I have a dipole in the attic tuned to around 14Mhz. Whenever I
> transmit at full power, the laptop sitting next to my rig goes crazy
> and the light in the next room turns on (its hooked up to a clapper).
> When on 80 meters, if I transmit at full power and use my antenna
> tuner to tune near perfect SWR, the treadmill in back of me turns on.
> Is this normal? Should I worry about excessive radiation?
>
> Thanks,
> Dan

3324. Re: indoor 2m antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 01:49:05 UTC
From: Jim noname <asdf@asdf.com>
Message-ID: <ksvvc.3269$uY.1869@attbi_s53>
Source record: 94079

those ring terminals worked perfectly

thanks!

3325. Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 06:14:33 UTC
From: Eric Schumacher <WB6KCN@pacbell.net>
Message-ID: <dlzvc.78294$Dl5.62224@newssvr25.news.prodigy.com>
Source record: 94080

Hi Group

Can anyone give me a brief explanation of the theory of operation of a commerical FM broadcast antenna. Specfically the Jampro JMPC (picture at)http://www.jampro.com/fma/jampjmpc.htm It looks to me like a couple of 1/2 wave dipoles each folded into V and fed in phase using two gamma matches. If this is true I am puzzled by the tap point chosen. It seems further along the dipole than I am used to seeing, even considering that the feed for the dipole is likely 100 ohm. The feed must be very inductive. Polarization is stated as RH circular. How is this controlled?
WB6KCN
Eric

3326. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 06:16:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10btgiab3pnn0a0@corp.supernews.com>
Source record: 94081

Ian,

Thanks very much for the correction and additional information. Like a lot of other folks, I learn a lot from this newsgroup.

Roy Lewallen, W7EL

3327. Re: Theory vs Reality

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 07:13:38 UTC
From: kashe@sonic.net
Message-ID: <6ojtb09t7qm712mcgdge4kpg8nchmes8ca@4ax.com>
Source record: 94082

On Tue, 01 Jun 2004 11:18:25 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:

>kashe@sonic.net wrote:
>
>> Cecil's prior response does nothing to prove your overused,
>> childish hammer/nail aphorism. In any case it would only be true for
>> those sufficiently dim-witted as to see only a single use for a
>> hammer.
>
>Among whom you can count yourself.

I see plenty of uses for a hammer. What's your point.

>Congratulations on another finely crafted flame. I guess everybody
>needs to be good at something.

What are you good at? I'm good at a lot of things. Come back
when you have a better response then the "You, too" that you learned
on the playground.

3328. Re: Wideband VHF Yagi - Do I have to use a folded dipole configuration?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 14:43:16 UTC
From: Wes Stewart <n7ws@_arrl.net>
Message-ID: <i6dub09ua66aubn8971u21n8s1jvdaqbp7@4ax.com>
Source record: 94083

On Wed, 2 Jun 2004 18:44:28 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

|IOW:
yes

|I'll see how I get along with the 4Nec2 program.
|
|What is the DE,just a regular hertz dipole? Is DE specified as to what it is
|(hertz, folded) somewhere in 4nec2?

No, it's not specified as such. Modeling programs assume straight
"wires" so to model a FD you have to "construct" one from straight
wires. This is not trivial however, so don't try it until you
understand the pitfalls of "closely-spaced wires."

I strongly recommend that you download Roy's EZNEC demo, if for no
other reason than to get the excellent "Help" section.

|In the Geometry Edit I see "Radius" for wire diameter I suppose. Do I
|calculate the radius from the dia given in the table above? TIA.

Yes.

Also, when you get to building the real antenna, you have the problem
of how to feed the DE. The design in question offers a nice 50 ohm
impedance, but just opening the center and feeding directly with coax
is going to be problematic. In the Arizona desert where I live I've
gotten away with pigtailing the coax and using ferrite sleeve baluns.
Since this is a marine band antenna, I assume there's water around
someplace and that may be unsatisfactory for you.

What did you have planned?

3329. Re: Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 15:06:06 UTC
From: dan_hoffard@hailmail.net
Message-ID: <648fff84.0406030706.293c7f0d@posting.google.com>
Source record: 94084

Thanks everyone for all the responses. Would using a surge protector
on the devices being RF'd to death help?

Thanks,
Dan

Scott <acepilot@bloomer.net> wrote in message
news:<Zmuvc.2007$KG2.3036@reggie.win.bright.net>...
> Yes, you are probably getting RF'ed to death. I would try to use the
> lowest power necessary to carry on a QSO if you are using an indoor
> antenna. This is a common occurance with modern equipment with
> electronics in it. You might want to get the RF Exposure book from ARRL
> to assess your exposure to RF fields.
>
> Scott
> N0EDV
>
>
> Dan wrote:
> > I have a dipole in the attic tuned to around 14Mhz. Whenever I
> > transmit at full power, the laptop sitting next to my rig goes crazy
> > and the light in the next room turns on (its hooked up to a clapper).
> > When on 80 meters, if I transmit at full power and use my antenna
> > tuner to tune near perfect SWR, the treadmill in back of me turns on.
> > Is this normal? Should I worry about excessive radiation?
> >
> > Thanks,
> > Dan

3330. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 15:37:45 UTC
From: w2rac <w2rac@bellsouth.net>
Message-ID: <7ehub01l74ov8v01ic27cuarhn9jsimp6c@4ax.com>
Source record: 94086
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

I have some andrews 1 5/8 coax, a 75 and 110 piece. No ends just the
coax.
Any takers. I am in Daytona FL.
Say $100 and $150 for them.

On Wed, 2 Jun 2004 20:23:35 -0400, "Tam/WB2TT" <t-tammaru@c0mca$t.net>
wrote:

>
>"Old Ed" <eXseniorsDeleteThisAndTheX@earthlink.net> wrote in message
>news:Crrvc.20858$be.5016@newsread2.news.pas.earthlink.net...
>>.....
>> Notwithstanding all this, there are undeniably some junky, Chinese
>> ready-made cables out there. I bought a few from HRO, and about 20%
>> turned out to be bad. So now I will buy only the relatively upmarket
>> ready-mades (like Cable Experts). I notice that our local HRO seems
>> to be phasing out the no-name ready-mades; so I suspect I wasn't the
>> only one to have problems with them.
>>
>> 73, Ed
>>
>It's also worthwhile seeing what the cable looks like. A couple of years ago
>I bought 100 feet of generic (Carol?) RG8 foam. Looked OK. Next time I
>bought a 25 foot piece of the same brand with connectors. Well, when the
>connector came off, I saw it was not the same cable; next to no shield.
>
>Tam/WB2TT
>

3331. Re: Jbeam antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 15:53:59 UTC
From: Bob Dixon <dixon.8@osu.edu>
Message-ID: <dixon.8-E4C5D0.11535903062004@charm.magnus.acs.ohio-state.edu>
Source record: 94085

I have 2 of the 8 element dual-slot J beams (total of 4 yagis).
Free to anyone who will actually use them.

Bob W8ERD

In article <682b4bfc.0406011351.5f907912@posting.google.com>,
franktodd@comcast.net (Frank) wrote:

> Can anyone tell me if Jbeam is still making amateur antennas out of the UK?
>
> 73 Frank K3EKO

3332. Re: Jbeam antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 17:26:14 UTC
From: mike <n0qfv@stic.net>
Message-ID: <40bf5f30$0$15835$39cecf19@news.twtelecom.net>
Source record: 94087

Bob Dixon wrote:
> I have 2 of the 8 element dual-slot J beams (total of 4 yagis).
> Free to anyone who will actually use them.
>
>
> Bob W8ERD
>
> In article <682b4bfc.0406011351.5f907912@posting.google.com>,
> franktodd@comcast.net (Frank) wrote:
>
>
>>Can anyone tell me if Jbeam is still making amateur antennas out of the UK?
>>
>>73 Frank K3EKO
Would you ship them Frank or would that be too expensive in your
estimation. If you would ship and the cost wasn't to great I might be
interested. If you would prefer local P/U thanks any way.

Mike N0QFV

3333. Re: Stacking Distance Question. More Information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 17:53:34 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <yAJvc.6749$2o2.466275@twister.southeast.rr.com>
Source record: 94088

"ab5mm" <ab5mm@9plus.net> wrote in message
news:c9cibl0l7o@enews2.newsguy.com...
> Thanks to Tom, Dave and the rest of you that answered my question so
> quickly.
>
> I thought I should give a little more pertinent info on this project. A
> elderly ham friend of mine is putting together a 70cm fast scan TV
> station. He chose the quad because of its wide band characteristics. His
> tower is Rohn 45 at 73 feet. It has a Glen Martin "Voyager" trolley/tram
> system. The steel mast is above the bearing plate about 14 feet. Out the
> top of the steel mast is 6 feet of thick wall fiberglass tubing. The two
> 70cm quads will be on a fiberglass cantilever arm that is approximately
> 48" long. It slips over the fiberglass mast and bolts into place. (arm
> required to clear the tower when cranking antenna system down) This arm
> will have two, 1 1/4" diameter post sticking up vertically to mount the
> quads. Here is where the question arose about how far apart the quads
> should be.
>
> I don't think I could/should push the cantilever arm out any further.
> The system, all together, could probably withstand a little longer arm
> if required. ?? Three 1/2 wavelengths would be ~39 inches.
>
> The quads are 7 1/2 feet long with 12 elements each and weigh 3.5 pounds.
>
> We have no modeling software, just a desire to do it right the first time.
>
> Thanks again & 73,
>
> Steve
> ab5mm
>

Several years ago some friends and I tried mking some gain measurements on
quads. Found that more than about six elements did not help the gain of the
antenna to any useful degree. I would go with quads with fewer elements but
more antennas in your array.

3334. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 17:59:47 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <nGJvc.6783$2o2.466731@twister.southeast.rr.com>
Source record: 94089

Yepper, When I was in college some friends dumped 5 gal of gasoline in a storm drain the threw in a piece of sodium. Blew off all the manhole covers for 3 blocks.
"John Bachtel" <lilburn.ga.30047@att.net> wrote in message
news:Jnsuc.12097$_k3.281058@bgtnsc05-news.ops.worldnet.att.net...
A lump of sodium might make one eligible for a Darwin Award
jrb de nr4jb

AB2RC wrote:

On 2004-05-25, cva <bn@art.com> wrote:

.

absolutely nothing....

but asked the following question in the subject header
"Where can I get a lump of Sodium?"

I don't even want to know why you would want a lump of soduim, but look here

http://www.labdepotinc.com/chemical_details~pid~S1100.aspx

--
. . . . . .
. Note: Address modified to avoid so-called "spam". To reply via .
. e-mail, delete "the .30047" from address! tnx/jrb .
. . . . . .

3335. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 18:19:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf6a9b$2_3@127.0.0.1>
Source record: 94090

Jim Kelley wrote:
> You know, you could save yourself and everyone else a lot of grief if
> you would actually try to find even a single example of where I ever
> said forward and reverse waves don't produce a standing wave.

Where did I go wrong in the following logic? You have said there is
no energy in those reverse-traveling waves. Waves cannot exist without
energy. Therefore, reflected waves don't exist. Since they don't exist,
they cannot cause standing waves.
--
73, Cecil http://www.qsl.net/w5dxp

3336. Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 18:19:40 UTC
From: Gary Boyer <gboyer@columbus.rr.com>
Message-ID: <0ZJvc.20287$DG4.13504@fe2.columbus.rr.com>
Source record: 94091

I have two ground rods I am thinking about moving to another location, is this practical or would it be easier to just poundem in the ground and buy new rods....does anyone have an easy method for taking the rods out of the ground...I am not interested in building any equipment to do this removal project...please advise..thanks..Gary, K8BY

3337. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 18:29:46 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf6cf7$1_3@127.0.0.1>
Source record: 94092

Tdonaly wrote:
> Yep, that's one of Cecil's techniques, all right. It isn't used solely to win,
> though.

It is often the result of me confusing the postings of
two people with similar names. It is also often the result
of logical deduction. For instance: Someone says, "Reflected
waves contain no energy moving past a point." Since waves cannot
exist without energy moving past a point, we can deduce that the
person has strongly implied that reflected waves don't exist.
--
73, Cecil http://www.qsl.net/w5dxp

3338. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 18:31:05 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ogrub05vfiqskfol1nnoo2iu86eutvjb47@4ax.com>
Source record: 94093

On Thu, 03 Jun 2004 18:19:40 GMT, "Gary Boyer"
<gboyer@columbus.rr.com> wrote:
>I have two ground rods I am thinking about moving to another location, is
>this practical or would it be easier to just poundem in the ground and buy
>new rods

Hi Gary,

Leave them alone and add new ones.

73's
Richard Clark, KB7QHC

3339. Re: Looking for a bnc male with base - any such animal? (correction - female connector)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 18:35:59 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c9nr6i$j0t$1@newshost.mot.com>
Source record: 94095

If I understand what you want:
you don't want the ones that say "isolated" those are for Ethernet &/or
video.

http://www.videopatch.com/videopatch/pmbc.html

http://www.surplussales.com/Connectors/BNC-4.html

http://www.surplussales.com/Connectors/BNC-5.html

This one has a neat one with a female on both sides, but one is recessed
http://www.canare.com.hk/50%20ohm_BNC_Connectors.htm

http://www.hyperlinktech.com/web/connectors/connectors_bnc.php

Bulkhead Jack a way down:
http://www.bomarinterconnect.com/bncproducts.htm

Fig 20 about 75% of the way down 0 flange mount:
http://www.hdcom.com/bncconn50ohm.html

--
Steve N, K,9;d, c. i My email has no u's.

"Mark" <me@privacy.net> wrote in message
news:jtoub01p908hon9d05u8dkbgqgb53m937q@4ax.com...
> Duh. I meant female connector, not male.
>
> On Thu, 03 Jun 2004 13:39:51 -0400, Mark <me@privacy.net> wrote:
>
> >I want to put my 'rubber duck' antenna on a base mount (mag is fine) that
has
> >a bnc connector on it. A web search isn't showing me much.
> >
> >Do they exist, or is it time to get creative ?
>

3340. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 18:38:31 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <c9nr77$2bb$1@mail.specsol.com>
Source record: 94094

Gary Boyer <gboyer@columbus.rr.com> wrote:
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY

Highly depends on the rods and what you have access to.

One method that may work for you is a bumper jack and a piece of chain
to the rods; if you can secure the chain to the rod, you can usually
jack them out far enough you can pull them by hand.

Usually its easier to just pound them down.

--
Jim Pennino

Remove -spam-sux to reply.

3341. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 18:45:52 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BF71E0.21CF1261@uci.edu>
Source record: 94096

Cecil Moore wrote:

> Where did I go wrong in the following logic? You have said there is
> no energy in those reverse-traveling waves. Waves cannot exist without
> energy. Therefore, reflected waves don't exist. Since they don't exist,
> they cannot cause standing waves.

You went wrong in the first sentence. That statement is false. The second sentence is an over-simplification, and is logically dependent upon the first sentence being true. As a result the third sentence also has a faulty premise.

73, Jim AC6XG

3342. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:03:26 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf74db$1_3@127.0.0.1>
Source record: 94097

Walter Maxwell wrote:

> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>>"How" is not explained in any of the physics references.
>
> Cecil, I explained the 'how', both in Reflections and in QEX.

Yes, I know you did, Walt. By "physics references" above, I meant
books like college physics textbooks, e.g. _Optics_, by Hecht.

> What is really perplexing to me is that several posters on this subject said
> that Steve's 3-parter is the best and most illuminating article they ever read
> on the subject. How can they have missed some of the most egregious errors
> appearing in that paper is unbelievable!

Not recognizing his power equations as classical EM physics interference
terms was a pretty huge mistake in Part 3. But alleged gurus on this
newsgroup have done the same thing. Apparently, power is simply ignored
in present-day transmission line theory.

> Cecil, if s11(a1) is equal in magnitude but in opposite phase with s12(a2) this
> constitutes a short circuit.

I agree it constitutes a "short circuit" for superposed rearward-
traveling voltages. But exactly the same thing happens to the current
as happens to the voltage. And an "open circuit" is what causes the
rearward-traveling currents to superpose to zero.

The two rearward-traveling superposing voltages might be:
(100v at zero degrees) superposed with (100v at 180 degrees)
The superposed sum of the two rearward-traveling voltages is zero.
This indeed acts like a short where voltages go to zero.

The two corresponding rearward-traveling superposing currents might be:
(2a at 180 degrees) superposed with (2a at zero degrees)
The superposed sum of the two rearward-traveling currents is zero.
This acts like an open where currents go to zero.

Or if you prefer, both the E-fields and the H-fields cancel to
zero when complete destructive interference occurs. In a transmission
line, it causes a surge of constructive interference energy in the
opposite direction, something you have called "re-reflection from a
virtual short".
--
73, Cecil http://www.qsl.net/w5dxp

3343. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:09:19 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf763d_3@127.0.0.1>
Source record: 94098

Walter Maxwell wrote:
> Cecil, the following is a direct quote from Steve's Comm Quart Article, Oct
> 1999:
> "For the impedance matching network to 'work', this analysis must demonstrate
> that the steady-state traveling backward power developed at the matching network
> input is equal in magnitude but 180 degrees out of phase with the initial power
> reflected at the matching network input. For this to occur Vback must be the
> negative of VR. In this case ALL POWER TRAVELING BACKWARD TOWARDS THE
> TRANSMISTTER WILL BE CANCELED, resulting in the steady-state matched condition."

Joules/sec possesses phase? Joules/sec can be canceled?
--
73, Cecil http://www.qsl.net/w5dxp

3344. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:10:39 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BF77AF.174D1A02@uci.edu>
Source record: 94100

Cecil Moore wrote:

> Since waves cannot
> exist without energy moving past a point, we can deduce that the
> person has strongly implied that reflected waves don't exist.

100 watt rf generator driving an open, lossless transmission line. How much energy do you think moves past a given point along the line every second? 100 Joules, 200 Joules, or zero Joules?

73, Jim AC6XG

3345. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:16:30 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf77eb$1_3@127.0.0.1>
Source record: 94099

Jim Kelley wrote:

> Cecil Moore wrote:
>>Where did I go wrong in the following logic? You have said there is
>>no energy in those reverse-traveling waves. Waves cannot exist without
>>energy. Therefore, reflected waves don't exist. Since they don't exist,
>>they cannot cause standing waves.
>
> You went wrong in the first sentence. That statement is false.

So you are saying that there is energy in those reverse-traveling waves?
--
73, Cecil http://www.qsl.net/w5dxp

3346. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:29:55 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BF7C33.E74C6CBA@uci.edu>
Source record: 94102

Cecil Moore wrote:
>
> Jim Kelley wrote:
>
> > Cecil Moore wrote:
> >>Where did I go wrong in the following logic? You have said there is
> >>no energy in those reverse-traveling waves. Waves cannot exist without
> >>energy. Therefore, reflected waves don't exist. Since they don't exist,
> >>they cannot cause standing waves.
> >
> > You went wrong in the first sentence. That statement is false.
>
> So you are saying that there is energy in those reverse-traveling waves?

What does "energy in" waves mean? Energy is required in order to generate EM waves. Energy can be transferred from one place to another by EM waves (if a conversion in form takes place at both places, or there is otherwise a change in the total energy at both places). And standing EM waves can store energy. But to infer that energy is being transferred from one place to another from the mere presence of waves could lead one to some wrong conclusions.

73, Jim AC6XG

3347. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:38:30 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40BF7E3F.362FA868@shaw.ca>
Source record: 94101

Gary Boyer wrote:
>
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY

Tie a piece of chain around them and pull them loose with a car jack. Works
like a charm. You normally just have to get them a little loose and the
rest is easy. I've done it a few times with 10 ft copper clad steel rods.

Irv VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3348. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:44:10 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BF7F8A.B4AA2B3C@uci.edu>
Source record: 94104

Cecil Moore wrote:
>
> Walter Maxwell wrote:
> > Cecil, the following is a direct quote from Steve's Comm Quart Article, Oct
> > 1999:
> > "For the impedance matching network to 'work', this analysis must demonstrate
> > that the steady-state traveling backward power developed at the matching network
> > input is equal in magnitude but 180 degrees out of phase with the initial power
> > reflected at the matching network input. For this to occur Vback must be the
> > negative of VR. In this case ALL POWER TRAVELING BACKWARD TOWARDS THE
> > TRANSMISTTER WILL BE CANCELED, resulting in the steady-state matched condition."
>
> Joules/sec possesses phase? Joules/sec can be canceled?

Therein lies part of the problem with thinking that the unit
(Joules/sec) moves along a transmission line. Energy in Joules moves.
(Joules/sec) of power does not.

73, Jim AC6XG

3349. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:45:19 UTC
From: Allan Butler <ka0ies@hotmail.com>
Message-ID: <jdLvc.1838$Sw.219@attbi_s51>
Source record: 94103

What the other people have suggested sound like good ideas for pulling a ground rod. Something that might make it a little bit easier before pulling them with the chain and jack is to put a pipe wrench on the rod and turn it in the ground a few times. That way the bond between the dirt and the rod is broken and it should pull up a little bit easier. In fact, while you are turning the rod, you might try pulling up on it a little bit at the same time like you are unscrewing it from the ground.

3350. Re: Looking for a bnc male with base - any such animal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:51:03 UTC
From: dplatt@radagast.org
Message-ID: <10bv097qtctoqb6@corp.supernews.com>
Source record: 94105

>I want to put my 'rubber duck' antenna on a base mount (mag is fine) that has
>a bnc connector on it. A web search isn't showing me much.

>Do they exist, or is it time to get creative ?

They do exist. I picked up a Larsen mag-mount base with a BNC
connector on it, at a local electronics store's parking lot sale last
year. I don't know what band it was originally intended for
(commercial FM band data-radio application, I suspect), but it handles
2-meter operation just fine with an HT rubber duck.

Getting creative (e.g. with a BNC bulkhead connector and a small metal
case) would also be fine.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3351. Re: Looking for a bnc male with base - any such animal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:51:34 UTC
From: mike <n0qfv@stic.net>
Message-ID: <40bf813f$0$15829$39cecf19@news.twtelecom.net>
Source record: 94106

Mark wrote:
> I want to put my 'rubber duck' antenna on a base mount (mag is fine) that has
> a bnc connector on it. A web search isn't showing me much.
>
> Do they exist, or is it time to get creative ?
Simply get a magnetic mount that has a "UHF" style base and use a
"UHF/BNC" adapter.

Mike N0QFV

3352. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:54:24 UTC
From: mike <n0qfv@stic.net>
Message-ID: <40bf81e9$0$15829$39cecf19@news.twtelecom.net>
Source record: 94107

Gary Boyer wrote:

> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY
>
>
Showing my Ham age here. . . in the late 60's early 70's was suggested
that you an old style car jack. Figure some way to latch the ground rod
to the lifting lip of the jack and start cranking.

Mike N0QFV

3353. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 19:57:28 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <qevub0tr6rnlo4eoce2ocvp8n5dbh3lvmq@4ax.com>
Source record: 94108

On Thu, 03 Jun 2004 14:03:26 -0500, Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
wrote:

>Walter Maxwell wrote:
>
>> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>>>"How" is not explained in any of the physics references.
>>
>> Cecil, I explained the 'how', both in Reflections and in QEX.
>
>Yes, I know you did, Walt. By "physics references" above, I meant
>books like college physics textbooks, e.g. _Optics_, by Hecht.
>
>> What is really perplexing to me is that several posters on this subject said
>> that Steve's 3-parter is the best and most illuminating article they ever read
>> on the subject. How can they have missed some of the most egregious errors
>> appearing in that paper is unbelievable!
>
>Not recognizing his power equations as classical EM physics interference
>terms was a pretty huge mistake in Part 3. But alleged gurus on this
>newsgroup have done the same thing. Apparently, power is simply ignored
>in present-day transmission line theory.
>
>> Cecil, if s11(a1) is equal in magnitude but in opposite phase with s12(a2) this
>> constitutes a short circuit.
>
>I agree it constitutes a "short circuit" for superposed rearward-
>traveling voltages. But exactly the same thing happens to the current
>as happens to the voltage. And an "open circuit" is what causes the
>rearward-traveling currents to superpose to zero.
>
>The two rearward-traveling superposing voltages might be:
>(100v at zero degrees) superposed with (100v at 180 degrees)
>The superposed sum of the two rearward-traveling voltages is zero.
>This indeed acts like a short where voltages go to zero.

Cecil, this is exactly what I've been trying to persuade you of, but always said
no, there is no short developed. But you must also agree that under this
condition the current doubles.

>The two corresponding rearward-traveling superposing currents might be:
>(2a at 180 degrees) superposed with (2a at zero degrees)
>The superposed sum of the two rearward-traveling currents is zero.
>This acts like an open where currents go to zero.

Of course, but the voltage doubles.

>Or if you prefer, both the E-fields and the H-fields cancel to
>zero when complete destructive interference occurs. In a transmission
>line, it causes a surge of constructive interference energy in the
>opposite direction, something you have called "re-reflection from a
>virtual short".

Well, Cecil, here's where we part company to a degree. Unlike voltage and current that can go to zero simultaneously only in the rearward direction, E and H fields can never go to zero simultaneously. At a short circuit the E field collaples to zero, but its energy temporarily merges with the H field, making the H field double it normal value. But the changing H field immediately reestablishes the E field, both now traveling in the forward direction. And yes, this is called re-reflection.

If Steve understands the action of the fields in the EM wave it's hard to understand why he finds it so erroneous to associate voltage and current with the their respective fields in impedance matching. Apparently he can't conceive that the voltages and currents in reflected waves can be considered to have been delivered by separate generators connected with opposing polarities.

Walt

3354. A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:07:33 UTC
From: hello <hello@nospam.com>
Message-ID: <SxLvc.49522$zm5.25179@nntpserver.swip.net>
Source record: 94109

HI
I want to put a dipole for 20m in my garden.
A tree and the home roof will be ok to fix the extremity.
My problem is the feed point : If IA center feed it , the feed line will just hang at the center of the garden, something not acceptable by the YL :-)

So I'm looking for a way to feed it by one "side".
I could endfeed it, but impedance matching is not so easy at such a high impedance.
Then, after reading lots of post in this newsgroup, I read about the sleeve antenna : generaly a vertical dipole where one leg is a sleeve. Coax enter in the sleeve to the center feed point.
I think this antenna could work horizontaly and for HF and solve my problem. Now, hanging horizontaly a 5m long metallic sleeve is surely not a good idea, but at HF , I thing that man could replace the sleeve by some wire cage.
So I end up with the idea of a cage or biconic dipole , with the coax entering horizontaly in the middle of the cage to the center.

What do you think of this idea ?
How many wire for the cage 2 (a bowtie), 3, more ?
Do you have a better one for my particular constrains ?

Lots of questions, but I'm sure you will have lots of answers !

Thanks in advance

Thierry
F4DWV

3355. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:08:49 UTC
From: see sea oh ecks at you aitch see dot comm <spammers@bugger.off.invalid>
Message-ID: <c9o0ghvgc2@gabriel.uhc.com>
Source record: 94110

Roger Halstead <Delete-Invallid.groups@tm.net> wrote:
> In high school chem lab we used to get to play with Sodium and
> Phosphorus. Now days they wouldn't even do the demos and as kids we
> were able to do them ourselves.

I remember my chemistry teacher dropping a small piece of sodium, perhaps
1/4" cube, onto his hand.

He was the only teacher I remember hearing swear and/or having flames
coming from his body.
--
Chris Cox, N0UK/G4JEC NIC Handle: CC345
UnitedHealth Technologies, MN013-N300, UNIX Solutions Group
6150 Trenton Lane North, Plymouth, MN 55440 1-763-744-1723
email: ccox@uhc.com (work) chrisc@chris.org (home)
If at first you don't succeed, skydiving is not for you.

3356. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:11:57 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <t81vb0dmbft2s3ud6vm2mr6minl26jluqp@4ax.com>
Source record: 94111

Cecil, H. Adam Stevens sent you an email earlier today, with a cc to me. I replied to all, but the copy to you came back host unknown. But your address appeared as ...@ieee.ONEDOT.org. What's the ONEDOT? I now see it in your return address on the rraa.

What's going on?

Walt

3357. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:21:51 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf873c_3@127.0.0.1>
Source record: 94112

Jim Kelley wrote:

> Cecil Moore wrote:
>>Since waves cannot
>>exist without energy moving past a point, we can deduce that the
>>person has strongly implied that reflected waves don't exist.
>
> 100 watt rf generator driving an open, lossless transmission line. How
> much energy do you think moves past a given point along the line every
> second? 100 Joules, 200 Joules, or zero Joules?

Equip the RF generator with a perfect circulator plus load and it is
easy to measure 100 watts out of the generator and 100 watts dissipated
by the circulator load. The 100 watts dissipated by the circulator load
makes a round trip to the open end of the transmission line and back
as can be proven using TV ghosting or a TDR. A Bird directional wattmeter
will read 100 watts in either direction.

So, to answer your question: There is 100 watts forward power and 100
watts of reflected power anywhere along that line. The *NET* power
flow is, of course, zero. I believe this is all explained in Johnson's
textbook under "forward power flow vector" and "reverse power flow
vector". I'm at work and don't have my references handy.
--
73, Cecil http://www.qsl.net/w5dxp

3358. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:24:08 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <sh1vb09ock3ge7aus1mbvqcm9pouavfh6r@4ax.com>
Source record: 94113

On Thu, 03 Jun 2004 12:44:10 -0700, Jim Kelley <jwkelley@uci.edu> wrote:

>
>
>Cecil Moore wrote:
>>
>> Walter Maxwell wrote:
>> > Cecil, the following is a direct quote from Steve's Comm Quart Article, Oct
>> > 1999:
>> > "For the impedance matching network to 'work', this analysis must demonstrate
>> > that the steady-state traveling backward power developed at the matching network
>> > input is equal in magnitude but 180 degrees out of phase with the initial power
>> > reflected at the matching network input. For this to occur Vback must be the
>> > negative of VR. In this case ALL POWER TRAVELING BACKWARD TOWARDS THE
>> > TRANSMISTTER WILL BE CANCELED, resulting in the steady-state matched condition."
>>
>> Joules/sec possesses phase? Joules/sec can be canceled?
>
Hi Jim,

Of course you're right, but that's not the point. The point is that reflected energy is not canceled, nor does it disappear at the matching point, instead it is re-reflected into the forward direction. This is the point that Steve apparently doesn't understand. And this is the reason his power budget is incorrect in his 3-part article, he ignored the energy appearing at the match point, assuming that it disappeared, though his word is 'canceled'.

I thought my emphasis with capitalization would contain the necessary info, but I can see now that I should have made the emphasis show that the 'canceled energy' was erroneous, because energy cannot be canceled. In this case it is re-reflected, a concept Steve ignores.

>Therein lies part of the problem with thinking that the unit
>(Joules/sec) moves along a transmission line. Energy in Joules moves.
>(Joules/sec) of power does not.
>
>73, Jim AC6XG

Sorry, Jim, I put my response in the wrong place.

Walt

3359. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:24:45 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BF890D.42BC0B72@uci.edu>
Source record: 94114

Cecil Moore wrote:
>
> Jim Kelley wrote:
>
> > Cecil Moore wrote:
> >>Since waves cannot
> >>exist without energy moving past a point, we can deduce that the
> >>person has strongly implied that reflected waves don't exist.
> >
> > 100 watt rf generator driving an open, lossless transmission line. How
> > much energy do you think moves past a given point along the line every
> > second? 100 Joules, 200 Joules, or zero Joules?
>
> Equip the RF generator with a perfect circulator plus load and it is
> easy to measure 100 watts out of the generator and 100 watts dissipated
> by the circulator load. The 100 watts dissipated by the circulator load
> makes a round trip to the open end of the transmission line and back
> as can be proven using TV ghosting or a TDR. A Bird directional wattmeter
> will read 100 watts in either direction.

What do you think the Bird actually measuring?

Instead of posing and then solving a different problem, why not just
answer the question I asked?

73, Jim AC6XG

3360. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:41:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf8bbd$1_3@127.0.0.1>
Source record: 94115

Jim Kelley wrote:
> But to infer that energy is being
> transferred from one place to another from the mere presence of waves
> could lead one to some wrong conclusions.

All EM waves contain moving energy and cannot stand
still. To argue otherwise is just denying reality.
--
73, Cecil http://www.qsl.net/w5dxp

3361. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:41:20 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40BF8CFA.7D699169@shaw.ca>
Source record: 94116

hello wrote:
>
> HI
> I want to put a dipole for 20m in my garden.
> A tree and the home roof will be ok to fix the extremity.
> My problem is the feed point : If IA center feed it , the feed line will
> just hang at the center of the garden, something not acceptable by the
> YL :-)
>
> So I'm looking for a way to feed it by one "side".
> I could endfeed it, but impedance matching is not so easy at such a high
> impedance.
> Then, after reading lots of post in this newsgroup, I read about the
> sleeve antenna : generaly a vertical dipole where one leg is a sleeve.
> Coax enter in the sleeve to the center feed point.
> I think this antenna could work horizontaly and for HF and solve my
> problem. Now, hanging horizontaly a 5m long metallic sleeve is surely
> not a good idea, but at HF , I thing that man could replace the sleeve
> by some wire cage.
> So I end up with the idea of a cage or biconic dipole , with the coax
> entering horizontaly in the middle of the cage to the center.
>
> What do you think of this idea ?
> How many wire for the cage 2 (a bowtie), 3, more ?
> Do you have a better one for my particular constrains ?
>
> Lots of questions, but I'm sure you will have lots of answers !
>
> Thanks in advance
>
> Thierry
> F4DWV

Use two pieces of copper tubing for the elements. Connect one to the
center of the coax, the other to the braid. Bring the coax out through
the lower piece. This is also known as a coaxial-sleeve and a few other
variations on the name.
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3362. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:46:14 UTC
From: Kyle2 <kyle@gtx.net>
Message-ID: <h%Mvc.746$b%1.385@newsfe1-gui.server.ntli.net>
Source record: 94117

Use your common sense and buy some new ones. How does anyone else know if
YOUR earth rods will be difficult to remove!

"Gary Boyer" <gboyer@columbus.rr.com> wrote in message
news:0ZJvc.20287$DG4.13504@fe2.columbus.rr.com...
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.698 / Virus Database: 455 - Release Date: 02/06/2004

3363. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:46:48 UTC
From: Dave <noone@nowhere.com>
Message-ID: <7aydnUqMqaPeEyLd4p2dnA@crocker.com>
Source record: 94118

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:40BF890D.42BC0B72@uci.edu...
>
>
> Cecil Moore wrote:
> >
> > Jim Kelley wrote:
> >
> > > Cecil Moore wrote:
> > >>Since waves cannot
> > >>exist without energy moving past a point, we can deduce that the
> > >>person has strongly implied that reflected waves don't exist.
> > >
> > > 100 watt rf generator driving an open, lossless transmission line.
How
> > > much energy do you think moves past a given point along the line every
> > > second? 100 Joules, 200 Joules, or zero Joules?
> >
> > Equip the RF generator with a perfect circulator plus load and it is
> > easy to measure 100 watts out of the generator and 100 watts dissipated
> > by the circulator load. The 100 watts dissipated by the circulator load
> > makes a round trip to the open end of the transmission line and back
> > as can be proven using TV ghosting or a TDR. A Bird directional
wattmeter
> > will read 100 watts in either direction.
>
> What do you think the Bird actually measuring?
>
> Instead of posing and then solving a different problem, why not just
> answer the question I asked?
>
> 73, Jim AC6XG

because that is not cecil's way, he will restate whatever is posed so that
he can answer it with his favorite discussion topics. any discussion like
this on here ends the same way with the same 3 or 4 combatants each stating
their viewpoint, all of which kind of say the same thing in different terms,
and none of them able to acknowledge that the other ones may be right...
either that or one of them who is outright wrong will persist and keep
redirecting the thread until he wins by default. its nothing but a big game
that confuses everyone until they catch on. on a cold winter day it can be
fun, take one of the examples and solve it a different way (i prefer
sinusoidal steady state) and watch them all pull apart the obvious correct
answer with their own methods... it can keep you laughing for weeks!

3364. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:51:11 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BF8F3F.F8790091@uci.edu>
Source record: 94021

Cecil Moore wrote:
> All EM waves contain moving energy and cannot stand
> still. To argue otherwise is just denying reality.

I understand your point. But arguing that energy changes direction without reflection, dispersion, or diffraction is an attempt at inventing reality.

73, Jim AC6XG

3365. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:52:01 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf8e4e$1_3@127.0.0.1>
Source record: 94119

Jim Kelley wrote:
> Therein lies part of the problem with thinking that the unit
> (Joules/sec) moves along a transmission line. Energy in Joules moves.
> (Joules/sec) of power does not.

What about the Poynting Vector and Power Flow Vectors?
What about the 60 Hz "power generation" and "power
distribution" system?

Are you saying that the trailing edge of an ExH wave
is not moving? Are you saying that the ExB power in
the light from Alpha Centauri didn't come from Alpha
Centauri?
--
73, Cecil http://www.qsl.net/w5dxp

3366. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 20:53:36 UTC
From: Dave <noone@nowhere.com>
Message-ID: <uKydnX7aB-RBEiLdRVn-hg@crocker.com>
Source record: 94120

buying new ones may be easier.

but if you really want to get them out and if your soil isn't too rocky try soaking them with a hose for an hour or so, just a slow trickle, don't flood the yard. then grab the top with two pipe wrenches so that you can grab one with each hand while bending over the rod and turn the rod both ways... work it back and forth a bit while lifting up, if your back doesn't give out first the rod should slowly pull up. you can also attach a strong rope or cable to it with a couple clamps and pull it out with an old car bumper jack or a long pry bar, but this often takes several lifts, each time moving the clamps down a bit more on the rod.

"Kyle2" <kyle@gtx.net> wrote in message
news:h%Mvc.746$b%1.385@newsfe1-gui.server.ntli.net...
> Use your common sense and buy some new ones. How does anyone else know if
> YOUR earth rods will be difficult to remove!
>
> "Gary Boyer" <gboyer@columbus.rr.com> wrote in message
> news:0ZJvc.20287$DG4.13504@fe2.columbus.rr.com...
> > I have two ground rods I am thinking about moving to another location,
is
> > this practical or would it be easier to just poundem in the ground and
buy
> > new rods....does anyone have an easy method for taking the rods out of
the
> > ground...I am not interested in building any equipment to do this
removal
> > project...please advise..thanks..Gary, K8BY
> >
> >
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.698 / Virus Database: 455 - Release Date: 02/06/2004
>
>

3367. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 21:17:43 UTC
From: Jim Justus <jimjus04@adelphia.net>
Message-ID: <yuKdnZUNnqTaCCLdRVn-sw@adelphia.com>
Source record: 94023

"Allan Butler" <ka0ies@hotmail.com> wrote in message
news:jdLvc.1838$Sw.219@attbi_s51...
> What the other people have suggested sound like good ideas for pulling a
> ground rod. Something that might make it a little bit easier before
pulling
> them with the chain and jack is to put a pipe wrench on the rod and turn
it
> in the ground a few times. That way the bond between the dirt and the rod
> is broken and it should pull up a little bit easier. In fact, while you
are
> turning the rod, you might try pulling up on it a little bit at the same
> time like you are unscrewing it from the ground.

This works! Have did it for years, never had a problem.

Jim

3368. Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 21:18:36 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf9489$2_3@127.0.0.1>
Source record: 94022

Walter Maxwell wrote:
> Cecil, this is exactly what I've been trying to persuade you of, but always said
> no, there is no short developed. But you must also agree that under this
> condition the current doubles.

Nope, for complete destructive interference, both the E-field and
H-field associated with the two interfering waves collapse to zero.
For the resulting complete constructive interference, the ratio of
the E-field to the H-field equals the characteristic impedance of
the medium.

>>The two corresponding rearward-traveling superposing currents might be:
>>(2a at 180 degrees) superposed with (2a at zero degrees)
>>The superposed sum of the two rearward-traveling currents is zero.
>>This acts like an open where currents go to zero.
>
> Of course, but the voltage doubles.

Nope, again here are the two sets of reflected waves.

#1 100v at zero degrees and 2a at 180 degrees = 200W

#2 100v at 180 degrees and 2a at zero degrees = 200W

Superposing those two reflected waves yields zero volts and
zero amps.

> Well, Cecil, here's where we part company to a degree. Unlike voltage and
> current that can go to zero simultaneously only in the rearward direction, E and
> H fields can never go to zero simultaneously.

For "complete destructive interference" as explained in _Optics_, by
Hecht, the E-field and B-field (H-field) indeed do go to zero
simultaneously. That is what causes a completely dark ring in a
set of interference rings. Of course, a resulting corresponding
complete constructive interference causes the brightest of rings.

> If Steve understands the action of the fields in the EM wave it's hard to
> understand why he finds it so erroneous to associate voltage and current with
> the their respective fields in impedance matching. Apparently he can't conceive
> that the voltages and currents in reflected waves can be considered to have been
> delivered by separate generators connected with opposing polarities.

He pretty much ignored current. His power equations are exact copies of
the light irradiance interference equations from optics, but he apparently
didn't realize it until I pointed it out to him.
--

73, Cecil http://www.qsl.net/w5dxp

3369. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 21:24:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf95f2$1_3@127.0.0.1>
Source record: 94024

Walter Maxwell wrote:
> Cecil, H. Adam Stevens sent you an email earlier today, with a cc to me. I
> replied to all, but the copy to you came back host unknown. But your address
> appeared as ...@ieee.ONEDOT.org. What's the ONEDOT? I now see it in your return
> address on the rraa.
>
> What's going on?

It's a spam preventative, Walt. Change '.ONEDOT.' to '.'
to get Cecil.A.Moore@ieee.org

3370. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 21:31:13 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf977e$2_3@127.0.0.1>
Source record: 94025

Jim Kelley wrote:
> What do you think the Bird actually measuring?

It is phasor-adding/subtracting a voltage proportional to the
RF voltage to/from a voltage proportional to the RF current.

> Instead of posing and then solving a different problem, why not just
> answer the question I asked?

I did. I'm sorry you didn't like it. I'm not going to get involved in
a pi$$ing contest over the impedance of a transmitter and what happens
to reflected waves incident upon it.
--
73, Cecil http://www.qsl.net/w5dxp

3371. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 21:37:46 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BF9A2A.31D2BAC9@uci.edu>
Source record: 94027

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > Therein lies part of the problem with thinking that the unit
> > (Joules/sec) moves along a transmission line. Energy in Joules moves.
> > (Joules/sec) of power does not.
>
> What about the Poynting Vector and Power Flow Vectors?

What about them?

> What about the 60 Hz "power generation" and "power
> distribution" system?

What are you trying to imply about power generation?

"Power distribution system" is really a misnomer. In the present day
venacular it would be called exactly what it is - an "energy
distribution system".

> Are you saying that the trailing edge of an ExH wave
> is not moving?

I don't recall ever expressing the opinion that traveling waves don't
travel.
However mathematical formulas do not propagate along transmission
lines. Fields do, but there is no such thing as an ExB "field".

73, Jim AC6XG

3372. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 21:40:41 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40bf99b6_3@127.0.0.1>
Source record: 94026

Jim Kelley wrote:

> Cecil Moore wrote:
>>All EM waves contain moving energy and cannot stand
>>still. To argue otherwise is just denying reality.
>
> I understand your point. But arguing that energy changes direction
> without reflection, dispersion, or diffraction is an attempt at
> inventing reality.

I'm not arguing that at all. In a transmission line, destructive
interference causes an energy reflection in which the ratio of
the E-field to H-field is transformed from one characteristic
impedance to another. It's all described on the Melles-Groit
web page. They don't call it an energy reflection but that's
what it is.
--
73, Cecil http://www.qsl.net/w5dxp

3373. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 21:42:15 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BF9B37.7B244A9E@uci.edu>
Source record: 94029

Cecil Moore wrote:
>
> Jim Kelley wrote:
>
> > Cecil Moore wrote:
> >>All EM waves contain moving energy and cannot stand
> >>still. To argue otherwise is just denying reality.
> >
> > I understand your point. But arguing that energy changes direction
> > without reflection, dispersion, or diffraction is an attempt at
> > inventing reality.
>
> I'm not arguing that at all. In a transmission line, destructive
> interference causes an energy reflection in which the ratio of
> the E-field to H-field is transformed from one characteristic
> impedance to another. It's all described on the Melles-Groit
> web page. They don't call it an energy reflection but that's
> what it is.

Really? It doesn't act like a reflection. There isn't a reflective surface. The amplitude of the "reflection" seems unrelated to any "reflection" coefficient. If it were a reflection, I think it would be much easier to understand - much less controversial. Don't you agree?

73, Jim AC6XG

3374. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 21:43:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mk6vb0l24p8iac8dm0nb38tug86rp6d82u@4ax.com>
Source record: 94028

On Thu, 03 Jun 2004 15:41:04 -0500, Cecil Moore
<Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>All EM waves contain moving energy and cannot stand
>still.
To you, they appear to be moving, but that is only the illusion of a perception-limited neanderthalic legacy of low bandwidth comprehension.

>To argue otherwise is just denying reality.
op. cit. ;-)

3375. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 22:00:29 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40BF9F7D.2839B9DE@uci.edu>
Source record: 94031

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > What do you think the Bird actually measuring?
>
> It is phasor-adding/subtracting a voltage proportional to the
> RF voltage to/from a voltage proportional to the RF current.

Voltage, correct. What other physical parameter(s) of the EM wave
besides voltage and/or current could an in-line meter directly measure?
Why?

> > Instead of posing and then solving a different problem, why not just
> > answer the question I asked?

> I did.

Actually, you didn't. It's a multiple choice question.

How much energy passes a point on that open transmission line in one
second? The choices again are 100 Joules, 200 Joules, or zero Joules.
Please indicate the correct answer from the list of choices.

73, Jim AC6XG

3376. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 22:06:47 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <bo7vb0h630mi52k2onq37h4i742j29p5hc@4ax.com>
Source record: 94030

On Thu, 03 Jun 2004 16:18:36 -0500, Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
wrote:

>Walter Maxwell wrote:
>> Cecil, this is exactly what I've been trying to persuade you of, but always said
>> no, there is no short developed. But you must also agree that under this
>> condition the current doubles.
>
>Nope, for complete destructive interference, both the E-field and
>H-field associated with the two interfering waves collapse to zero.
>For the resulting complete constructive interference, the ratio of
>the E-field to the H-field equals the characteristic impedance of
>the medium.
>
>>>The two corresponding rearward-traveling superposing currents might be:
>>>(2a at 180 degrees) superposed with (2a at zero degrees)
>>>The superposed sum of the two rearward-traveling currents is zero.
>>>This acts like an open where currents go to zero.
>>
>> Of course, but the voltage doubles.
>
>Nope, again here are the two sets of reflected waves.
>
>#1 100v at zero degrees and 2a at 180 degrees = 200W
>
>#2 100v at 180 degrees and 2a at zero degrees = 200W
>
>Superposing those two reflected waves yields zero volts and
>zero amps.
>
>> Well, Cecil, here's where we part company to a degree. Unlike voltage and
>> current that can go to zero simultaneously only in the rearward direction, E and
>> H fields can never go to zero simultaneously.
>
>For "complete destructive interference" as explained in _Optics_, by
>Hecht, the E-field and B-field (H-field) indeed do go to zero
>simultaneously. That is what causes a completely dark ring in a
>set of interference rings. Of course, a resulting corresponding
>complete constructive interference causes the brightest of rings.
>
>> If Steve understands the action of the fields in the EM wave it's hard to
>> understand why he finds it so erroneous to associate voltage and current with
>> the their respective fields in impedance matching. Apparently he can't conceive
>> that the voltages and currents in reflected waves can be considered to have been

>> delivered by separate generators connected with opposing polarities.
>
>He pretty much ignored current. His power equations are exact copies of
>the light irradiance interference equations from optics, but he apparently
>didn't realize it until I pointed it out to him.

Well, Cecil, perhaps I don't understand Melles-Griot. However, when an EM wave encounters a short circuit the E field goes to zero, but in its change from normal level to zero, that changing field develops a corresponding H field that adds to its original value, causing it to double--the H field does NOT go to zero. But as it returns to its normal value that change in turn develops a new E field propagating in the opposite direction. From there on the EM field reconstitutes itself with normal E and H fields of equal value, each supporting one half of the propagating energy.

This sequence must also prevail in optics--are you sure you are interpreting your double zero at the correct point in the circles?

Walt

3377. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 22:10:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <p58vb051oq0t5da8eleqh02t75ulj2bcok@4ax.com>
Source record: 94032

On Thu, 03 Jun 2004 16:40:41 -0500, Cecil Moore
<Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>destructive interference causes an energy reflection
:-)

3378. New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 22:21:49 UTC
From: "Chuck...K1KW" <cdoneal@comcast.net>
Message-ID: <0wNvc.39192$3x.31853@attbi_s54>
Source record: 94033

Anyone know anything about the "technology" in the article below?

http://www.uri.edu/news/releases/?id=2659

Chuck...K1KW

Article text below

Department of Communications/News Bureau
22 Davis Hall, 10 Lippitt Road, Kingston, RI 02881
Phone: 401-874-2116 Fax: 401-874-7872

URI physics employee invents new antenna technology
Media Contact: Jan Wenzel, 401-874-2116

KINGSTON, R.I. -- June 2, 2004 -- Rob Vincent, an employee in the University of Rhode Island's Physics Department, proves the adage that necessity is the mother of invention.

An amateur radio operator since he was 14, Vincent has always lived in houses situated on small lots. Because he couldn't erect a large antenna on a confined property, he has been continually challenged over the years to find a way to get better reception.

"I was always tinkering in the basement. Thank goodness, my parents were tolerant. I can still remember my poor father driving up our driveway after a hard day's work to see wires wrapped around the house," Vincent recalls.

"The Holy Grail of antenna technology is to create a small antenna with high efficiency and wide bandwidth," explains Vincent. "According to current theory, you have to give up one of the three-size, efficiency, or bandwidth-to achieve any one of the other two."

After decades of experimentation, combined with a 30-year engineering career and Yankee ingenuity, Vincent has invented a revolutionary antenna technology. The distributed loaded monopole antennas are smaller, produce high efficiency, and retain good to excellent bandwidth. And they have multiple applications.

With this technology it will be possible to double, at minimum, the range of walkie-talkies used by police, fire, and other municipal personnel. Naval ships, baby monitors, and portable antennas for military use are other applications. An antenna could be mounted on a chip in a cell phone and be applied to wireless local area networks. Another application deals with radio frequency identification, which is expected someday to replace the

barcode system.

"It could even make the Dick Tracy wrist radio with all the features, such as Internet access, a possibility," Vincent says.

The inventor pursued his quest to build a better antenna in earnest eight years ago when he and his significant other moved into a house situated on a 50-foot by 100-foot lot in Warwick. There was nothing on the commercial market that could fit the lot that would provide the performance Vincent needed to be heard in distant lands and that would be acceptable to his neighbors. All the small antennas being sold were inefficient and lacked bandwidth, which resulted in low performance and high frustration.

Vincent looked at the techniques that were currently used to reduce antenna size and realized something was missing in the way everyone was approaching the problem.

He began to model various combinations into a computer program called MathCad. His first attempt produced a 21 MHz band antenna that was 18 inches high. Normally, antennas for this band are 12 to 24 feet high.

Vincent installed the antenna in his back yard. The legal limit that amateurs can operate is 1,000 watts with the norm being 100 watts. The amateur radio operator experimented with 5 to 10 watts. He reached a station in Chile and made contacts in various European countries. Meanwhile he kept adding power until it reached 100 watts. That's when things suddenly went bad. Walking outside in the backyard, he understood why. The antenna had melted.

After examining the molten matter, Vincent wasn't discouraged. This was only a small model and not designed to handle much power. The part of the antenna that failed proved to be the key to the design. After analyzing the failure, Vincent realized that he was able to transform a lot of current along the antenna with even relatively low power.

"Antennas radiate by setting up large amounts of current flow through various parts of their structure," he says. "The larger the current the more radiation and the better the output of the antenna."

Vincent went back to the drawing board and continued to improve the technology. Relying on his nearly 30 years at Raytheon Co. and at KVH Industries in Middletown R.I which provided him with a diversified background in electronics and electronic systems, Vincent overcame a myriad of problems and succeeded.

He established three test sites for various prototypes. Antennas were placed in Westport, Mass. in a salt marsh, the best ground for transmission and reception. Another set of antennas were placed on rocky ground in Cumberland, R.I., the worst kind of site, and at a Warwick site which is in between the two. The antennas, which resemble flagpoles, worked well at all locations.

Tests confirmed that Vincent has created antennas at one third to one ninth of their full size counterparts. Normally smaller antennas are only 8 to 15 percent efficient. Vincent's antennas achieved 80 to 100 percent efficiency as compared to the larger antennas.

A patent is pending on Vincent's technology. The inventor has made the University of Rhode Island and its Physics Department partners that will benefit from any revenue his invention earns. "The University and its Physics Department has been very supportive and given me time and space to work on this project," says Vincent who was recently presented the 2004 Outstanding Intellectual Property Award by URI's Research Office. "I couldn' t have done this without the University's support. It's only fair that it share in the profits."

3379. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 22:31:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <zaGdnb8DGK4iOyLdRVn-jg@crocker.com>
Source record: 94034

another loaded vertical. more details are required to see if its another
EH, CFA, or some other variation of a standard loading arrangement.

"Chuck...K1KW" <cdoneal@comcast.net> wrote in message
news:0wNvc.39192$3x.31853@attbi_s54...
> Anyone know anything about the "technology" in the article below?
>
> http://www.uri.edu/news/releases/?id=2659
>
> Chuck...K1KW
>
> Article text below
>
>
> --
> Department of Communications/News Bureau
> 22 Davis Hall, 10 Lippitt Road, Kingston, RI 02881
> Phone: 401-874-2116 Fax: 401-874-7872
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> walkie-talkies used by police, fire, and other municipal personnel. Naval
> ships, baby monitors, and portable antennas for military use are other
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> work on this project," says Vincent who was recently presented the 2004
> Outstanding Intellectual Property Award by URI's Research Office. "I
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> t have done this without the University's support. It's only fair that it
> share in the profits."

>
>

3380. Antenna mounting recommendations for flat roof academic building

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 22:33:14 UTC
From: Bill Blum <billdotblum@mousepotato.net>
Message-ID: <KGNvc.5074$n65.3079@newssvr33.news.prodigy.com>
Source record: 94035

Hi there--

We've been given permission to mount a few antennas on the roof of one of the buildings at school, with the only caveat being "don't make holes in the roof."

We're looking at some yagis (LPDA, about 12 feet long) for VHF work, and just need to get the things about 10-20 feet above the roof if possible.

Does anybody have any recommendations/tips on how to handle this? At work, I've seen large steel mast mounts than lay flat on a roof to support lightweight/low crosssection antennas... (yes, they're weighted down with concrete blocks.) Where would I find such a beast? Our facility manager has NO idea when these mast mounts wound up on the roof at work.

Thanks.
-bill

(Replies to the group please)

3381. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 23:13:11 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <u8Ovc.434$Oc4.87@bignews1.bellsouth.net>
Source record: 94036
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:ZNXaeoBQOXvAFABF@ifwtech.co.uk...
> Hal Rosser wrote:
> >I've used it with success - recently. 450-ohm window-line (has
> >copper-clad steel conductors, so its tuff) then on each end: a
> >combination to match impedence - a 75-ohm 1/4-wave stub (goes from 50
> >to 112.5 ohm) then a half-wave u-bent setup (112.5 to 450 ohm) see page
> >165 of Antenna Compendium vol 6 for a better description - I wrote that
> >article back in 1999 or so. I've also used similar setups and 300-ohm
> >belden twinlead. It may be a myth from the olden days, but 2+2 still
> >equals 4 - just like the old days. And its not a myth - it really does
work.
> >
> What frequency? What length? What loss did you measure? Was it raining?

freq= 2m band
length = approx 200 ft (up and accross the yard to the top of a TALL TREE)
loss ---- what loss did you measure w/ rg58 (which would have been the
<other> affordable line)
ie: I did not "measure" it - but my signal reports from others were 'much
improved' over the same antenna on the roof.

Raining? - rain, shine, - didn't matter - the run was in free air... I ran
about 10 ft coax out of the house - then switched to twinlead - then back
again near the antenna..
a wives tale - probably so - but I still feel better after eating chicken
soup if I have a cold.
but dogone it - it was fun - I did it - I'm proud of it - and I'll probably
do it again. - It was a good exercise in matching impedences --- I was a new
ham, and wanted to experiment...
I used it because it was light weight and low-loss (per the specs in the
belden catalog) - I don't have the catalog in front of me - but to get the
same <low-loss-ness> I could not afford the hard-line. - and the weight of
that run would have prevented the setup I had in mind.
Plus - I used it as a weather instrument:
if it was wet - rain : it was was swaying - windy, etc.

I understand the limitations of twin-lead and ladder-line, etc - and the
fact that rain and other objects may reduce its effectiveness, etc - but
even if the loss was half as good, it still beat the best coax I could
afford.
Oh - and I used a tree rather than a tower to hold the antenna. - Trees are
kind of old-fashion too, compared with the modern towers.
>

> Of course twin-lead can "work" in a wide range of applications.
>
> The myth is that it can beat a modern coax cable at VHF, on a long run
> with practical installation difficulties, and in the rain.
>
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> http://www.ifwtech.co.uk/g3sek

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 5/22/2004

3382. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 23:47:08 UTC
From: jgboyles@aol.com
Message-ID: <20040603194708.02231.00000342@mb-m14.aol.com>
Source record: 94037

>Anyone know anything about the "technology" in the article below?
>
>http://www.uri.edu/news/releases/?id=2659

No, they do not explain the "new" technology. This is the way the CFA and EH got started. Vincent has created a revolutionary antenna technology using Yankee ingenuity. Sorry, being from the South, I don't care for Yankees. More details are needed, but the antenna will be about like the CFA and EH. Build it (when you find out how). It will not work, just like the CFA and EH.
73 Gary N4AST

3383. Re: Antenna mounting recommendations for flat roof academic building

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-03 23:54:26 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40bfbca2_2@news1.prserv.net>
Source record: 94038

We've always built our own, or rather had the welder do it. Steel tubing, wall thickness determined by loading, weld an H and put the mast in the middle of the cross bar. Lots of good outdoor enamel, and 4 or 8 unopened sacks of ready mix for weights. It conforms to the tubing and roof surface, and won't slide off like cinder blocks have been known to do. After a few months in the weather they are solid blocks with just the right shape. Some of our masts are 20 feet tall, but those are guyed to the tips of the "H".

--
Crazy George
Remove N O and S P A M imbedded in return address
"Bill Blum" <billdotblum@mousepotato.net> wrote in message
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> support lightweight/low crosssection antennas... (yes, they're weighted
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> facility manager has NO idea when these mast mounts wound up on the roof
> at work.
>
>
>
> Thanks.
> -bill
>
> (Replies to the group please)

3384. Re: Looking for a bnc male with base - any such animal?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 00:01:42 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40bfbecf_1@news1.prserv.net>
Source record: 94039

Larsen model BNC-MM-BNC

$30 List in 1987 (first Larsen catalog I found)

--
Crazy George
Remove N O and S P A M imbedded in return address
"Mark" <me@privacy.net> wrote in message
news:tgoub0hp1jtns8dq0m07ri41r6q61qoren@4ax.com...
> I want to put my 'rubber duck' antenna on a base mount (mag is fine) that
has
> a bnc connector on it. A web search isn't showing me much.
>
> Do they exist, or is it time to get creative ?

3385. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 01:00:56 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <UZadnTmQAdxaVCLd4p2dnA@comcast.com>
Source record: 94040

"william ewald" <wewald@bellsouth.net> wrote in message
news:06hvb0tpgsvce9pgnjg34l0oved0tcr1kd@4ax.com...
> On 03 Jun 2004 23:47:08 GMT, jgboyles@aol.com (JGBOYLES) wrote:
>
> >>Anyone know anything about the "technology" in the article below?
> >>
> >>http://www.uri.edu/news/releases/?id=2659
> >
> >No, they do not explain the "new" technology. This is the way the CFA
and EH
> >got started. Vincent has created a revolutionary antenna technology
using
> >Yankee ingenuity. Sorry, being from the South, I don't care for Yankees.
More
> >details are needed, but the antenna will be about like the CFA and EH.
Build
> >it (when you find out how). It will not work, just like the CFA and EH.
> >73 Gary N4AST
>
> "The University and its Physics Department has been very supportive
> and given me time and space to work on this project," says Vincent
> <http://www.phys.uri.edu/people/rob.html> who was recently presented
> the 2004 Outstanding Intellectual Property Award by URI's Research
> Office. "I couldn't have done this without the University's support.
> It's only fair that it share in the profits."
>
> Profits? What profits?
>
An antenna that melts with 100W of RF going to it seems to be at odds with
its claim of high efficiency.

Tam/WB2TT

3386. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 01:13:30 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <_0Qvc.41795$eY2.40857@attbi_s02>
Source record: 94041

When I moved from Massachusetts to NH I just pounded them into the
ground about 2 to 3 inches below earth level.

Gary Boyer wrote:
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY
>
>

3387. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 01:34:38 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40bfd1b8$0$441$5cbedd26@news.real-time.com>
Source record: 94042

Oh come on, he said it's revolutionary! You are being way too judgemental.

The melting probably had nothing to do with losses. I mean, it could
have burst into flames due to corona igniting the revolutionary
materials it was made of, and that's what melted it. Yeah, that's the
ticket.

tom
K0TAR

Tam/WB2TT wrote:

>
> An antenna that melts with 100W of RF going to it seems to be at odds with
> its claim of high efficiency.
>
> Tam/WB2TT
>
>

3388. Re: Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 01:41:24 UTC
From: K7JEB <k7jeb@no_spam.qsl.net>
Message-ID: <GrQvc.45743$mm1.6092@fed1read06>
Source record: 94043

I was hoping someone else would jump in and answer, but
here goes anyway...

Eric Schumacher, WB6KCN, asked:

> Can anyone give me a brief explanation of the theory
> of operation of a commercial FM broadcast antenna.
> Specifically the Jampro JMPC. Picture at:

http://www.jampro.com/fma/jampjmpc.htm

> It looks to me like a couple of 1/2 wave dipoles
> each folded into V and fed in phase using two gamma
> matches. If this is true I am puzzled by the tap
> point chosen. It seems further along the dipole
> than I am used to seeing, even considering that the
> feed for the dipole is likely 100 ohm. The feed
> must be very inductive.

When the ends of a dipole are folded back, the radiation
resistance decreases and matching schemes have to become
more extreme. The Jampro antenna does not look that
exceptional to me. You're probably right about a certain
amount of reactance accompanying the feedpoint resistance.
This could be tuned out by a matching network hidden in
the feedline/support pipe.

> Polarization is stated as RH circular. How is this controlled?

To my way of thinking, the circular polarization is due to
the horizontal spacing between the horizontal and vertical
dipoles and the phasing of their excitations. If that is
done in a certain way, the far-field radiations from the
vertical and horizontal dipoles will be in time-quadrature
at all azimuthal bearings, the necessary condition for circular
polarization.

If I look at this antenna in a certain way, it looks like
a highly truncated, half-wave section of a bifilar helical
antenna radiating in the radial mode with the two dipoles
simulating the currents flowing in a small segment of such
a structure.

My guess is that getting this antenna to produce good
circular polarization and a good match and uniform
azimuth coverage were the end results of a hell of a lot
of tweaking on the antenna range.

Jim Bromley, K7JEB
Glendale, AZ

3389. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 01:52:12 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bfd6d3_4@corp.newsgroups.com>
Source record: 94044

Jim Kelley wrote:
> ... there is no such thing as an ExB "field".

Good grief, Jim, ExB is proportional to the irradiance of a light beam.
I'm sorry if my ASCII-limited character set hairlips you.
--
73, Cecil http://www.qsl.net/w5dxp

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3390. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 01:58:47 UTC
From: HUMBUG <humbug@bit.bucket>
Message-ID: <nj15p1-v9s.ln1@deep.bit.bucket>
Source record: 94046

On Thu, 3 Jun 2004 21:00:56 -0400, Tam/WB2TT <t-tammaru@c0mca$t.net> Wrote :
<snip>
>>
> An antenna that melts with 100W of RF going to it seems to be at odds with
> its claim of high efficiency.

Stand by for a "Revolutionary Antenna Cooling System". Then again, perhaps
we're still thinking too far inside the box. What if this antenna is meant
to radiate HEAT ? Hmmm doesn't do that all that well either - I know
cover the thing in fins like a '60s car...:-)

--

Humbug

3391. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 02:09:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bfdad4_4@corp.newsgroups.com>
Source record: 94045

Jim Kelley wrote:

> Cecil Moore wrote:
>>I'm not arguing that at all. In a transmission line, destructive
>>interference causes an energy reflection in which the ratio of
>>the E-field to H-field is transformed from one characteristic
>>impedance to another. It's all described on the Melles-Groit
>>web page. They don't call it an energy reflection but that's
>>what it is.
>
> Really? It doesn't act like a reflection. There isn't a reflective
> surface.

Of course, it acts like a reflection and of course there is a reflective surface if it is non-glare glass or a point if it is in a transmission line. It is exactly what Walt has dubbed a "virtual short" and it is a short for voltage, but not for current. Walt and my disagreements are really minor.

> The amplitude of the "reflection" seems unrelated to any
> "reflection" coefficient.

It is *exactly* related to the reflection/transmission coefficients. You cannot possibly be ignorant of that fact so you are merely being unethical.

> If it were a reflection, I think it would be
> much easier to understand - much less controversial. Don't you agree?

It *IS* a reflection. Any of your statements to the contrary is just obfuscation (something in which you seem to have a master's degree).
--
73, Cecil http://www.qsl.net/w5dxp

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3392. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 02:11:42 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bfdb62$1_4@corp.newsgroups.com>
Source record: 94047

Richard Clark wrote:

> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>>All EM waves contain moving energy and cannot stand
>>still.
>
> To you, they appear to be moving, but that is only the illusion of a
> perception-limited neanderthalic legacy of low bandwidth
> comprehension.

OK, Richard, here's a challenge for you: Please prove that
photons can stand still.
--
73, Cecil http://www.qsl.net/w5dxp

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3393. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 02:20:46 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bfdd83_4@corp.newsgroups.com>
Source record: 94048

Jim Kelley wrote:
> How much energy passes a point on that open transmission line in one
> second? The choices again are 100 Joules, 200 Joules, or zero Joules.
> Please indicate the correct answer from the list of choices.

I did, Jim. Hint: One must assume either component energies or
NET energy. Knowing you, I assumed *NET* energy and answered
that the *NET* energy is zero. You couldn't possibly have missed
that answer.
--
73, Cecil http://www.qsl.net/w5dxp

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3394. Re: Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 02:25:30 UTC
From: fractenna@aol.com
Message-ID: <20040603222530.29967.00000272@mb-m22.aol.com>
Source record: 94049

>My guess is that getting this antenna to produce good
>circular polarization and a good match and uniform
>azimuth coverage were the end results of a hell of a lot
>of tweaking on the antenna range.
>
>Jim Bromley, K7JEB
>Glendale, AZ
>

Heck, Jim;

That's most of the fun:-)

73,
Chip N1IR

3395. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 02:40:02 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bfe207$1_4@corp.newsgroups.com>
Source record: 94050

Walter Maxwell wrote:
> Well, Cecil, perhaps I don't understand Melles-Griot. However, when an EM wave
> encounters a short circuit the E field goes to zero, but in its change from
> normal level to zero, that changing field develops a corresponding H field that
> adds to its original value, causing it to double--the H field does NOT go to
> zero. But as it returns to its normal value that change in turn develops a new E
> field propagating in the opposite direction. From there on the EM field
> reconstitutes itself with normal E and H fields of equal value, each supporting
> one half of the propagating energy.

I absolutely agree, Walt, "when an EM wave encounters a short circuit ...".
But when "complete destructive interference" occurs, something else happens.
The E-field goes to zero AND the H-field (B-field) goes to zero at the same
time. If you concentrate on the voltage, it looks like a short. If you
concentrate on the current, it looks like an open. It is both or neither.

Complete destructive interference requires that both fields go to zero
simultaneously and emerge as constructive interference in the opposite
direction obeying the rule that E/H=V/I=Z0. It is an energy reflection
that is also an impedance transformation at an impedance discontinuity.

Let's assume that 100v at zero degrees with a current of 2a at 180 degrees
encounters another wave traveling in the same rearward direction of 100v
at 180 degrees with a current of 2a at zero degrees. These two waves cancel.
The voltage goes to zero AND the current goes to zero. Each wave was associated
with 200 watts. So a total of 400 watts reverses directions. Assuming the
destructive interference occurred in a 50 ohm environment and the resulting
constructive interference occurred in a 300 ohm environment, the reflected
wave would be 346 volts at 1.16 amps. It's pretty simple math.

346*1.16 = 400 watts 346/1.16 = 300 ohms

The above quantities represent the destructive/constructive interference.
These quantities must be added to the other voltages and currents that are
present to obtain the net voltage and net current.
--
73, Cecil http://www.qsl.net/w5dxp

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3396. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 02:47:05 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40bfe3ae$1_4@corp.newsgroups.com>
Source record: 94051

Richard Clark wrote:

> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>>destructive interference causes an energy reflection
>
> :-)

Seems you don't understand the Melles-Groit web page. What it it about
"In the absence of absorption or scatter, the principle of conservation
of energy indicates all "lost" reflected intensity will appear as enhanced
intensity in the transmitted beam."

Richard, can you explain how the above occurs without the energy changing
directions, i.e. being reflected?
--
73, Cecil http://www.qsl.net/w5dxp

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3397. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 03:27:47 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <s86dnSBNbeqscSLdRVn-gw@comcast.com>
Source record: 94052

"Tom Ring" <news0000@taring.org> wrote in message
news:40bfd1b8$0$441$5cbedd26@news.real-time.com...
> Oh come on, he said it's revolutionary! You are being way too
judgemental.
>
> The melting probably had nothing to do with losses. I mean, it could
> have burst into flames due to corona igniting the revolutionary
> materials it was made of, and that's what melted it. Yeah, that's the
> ticket.

You mean like a helical carbon filament?

Tam
>
> tom
> K0TAR
>
> Tam/WB2TT wrote:
>
> >
> > An antenna that melts with 100W of RF going to it seems to be at odds
with
> > its claim of high efficiency.
> >
> > Tam/WB2TT
> >
> >
>

3398. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 04:28:48 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40BFFA8A.E867A59C@shaw.ca>
Source record: 94053

Dave Shrader wrote:
>
> When I moved from Massachusetts to NH I just pounded them into the
> ground about 2 to 3 inches below earth level.
>
I'm too cheap to give up my copper clad steel ground rods! Removal is
really simple using a car jack and a piece of chain. To hook the chain
on the rod, just put a clamp on the rod temporarily. It's actually very
simple and I'm surprised at all the discussion.

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3399. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 04:36:32 UTC
From: B Ghostrider <Barryufp@hotmail.com>
Message-ID: <shuvb0pfjv3p6cm5l830j21e6c29j38bvn@4ax.com>
Source record: 94054

OK ok
I went back and tested the antena again and heres what I got
138.000 mhz = swr of 2
140.00O mhz = 1.7
142.000 mhz = 1.8
144.000 mhz = 1.5
146.000 mhz = 1.2
148.000 mhz = 1.1
150.00 mhz =1.9
152.00 mhz = 2.5
154.000 mhz = 2.4
156.00 mhz = 2.5
n Wed, 02 Jun 2004 00:29:17 -0700, B Ghostrider <Barryufp@hotmail.com>
wrote:

>I have a assortment of antenna that I can use for listening .The one
>that I get the best Reception on is a 5/8 wave groundplane, feed with
>RG-59. I put my MFJ antena analszer on it and and the SWR was nearly
>flat all the way across (123 Mhz to 172 Mhz) this year I have things
>set up o I can hook two scanners on to the one antena. One thing I
>would advise, If you are gonig to cooper in your construction, give it
>a coat of trimcald. I ended up doing some high level repairs to my
>antena . The groundplane element had a a greenish ttimg to them after
>on one year of being exposed to the elemts(weather).
>
> On Mon, 31 May 2004 22:05:17 +0100, "Richard"
><nearlynews_email@ntlworld.com> wrote:
>
>>Whenever I think about a simple VHF wideband omnidirectional vertical
>>antenna for my marine band listening, I'm always thinking folded dipole. I
>>think I've got folded dipole on the brain. But wait - isn't it better to
>>make J-pole. Constructionaly simpler I think, and you can feed with
>>unbalanced coax. Are J-poles wideband antennas? I want any antenna to cover
>>156-162 MHZ (6Mhz bandwidth) - RECEICE ONLY. Would a J-Pole do here,
>>bandwidth-wise?TIA.

3400. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 05:45:35 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <u030c0lfqtos5htafdi34mhq456lcf8dmp@4ax.com>
Source record: 94055

On Thu, 03 Jun 2004 21:47:05 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>Richard Clark wrote:
>
>> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>>>destructive interference causes an energy reflection
>>
>> :-)
>
>Richard, can you explain how the above occurs without the energy changing
>directions, i.e. being reflected?
:-)

3401. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 05:55:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <h530c0tff90u7576e006ed9h2r4vj1umbm@4ax.com>
Source record: 94056

On Fri, 04 Jun 2004 04:28:48 GMT, Irv Finkleman <finkirv@shaw.ca>
wrote:
> It's actually very
>simple and I'm surprised at all the discussion.

Hi Irv,

You must've forgotten all the elaborate discussion from Reggie about how much time the rod needs to become intimate with the surrounding mud (the same mud whose carefully crafted RF recipe remains a secret hidden beneath his apron).

Strangely enough, the topic bears all the mystique of the aging of wine in charcoal casks. Can you imagine the argument turning on if you disturb the bottle - er - ground rod, it could stir up the sediment or make the vintage go corky? Ever try to decant a bottle with a loop of chain and a bumper jack? (Actually I think we tried that with a jug of Sangria along the Russian River north of 'Frisco back in '69.)

73's
Richard Clark, KB7QHC

3402. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 06:17:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <nn30c0le3pd4tpoeq3qc6e45hvt7oi053k@4ax.com>
Source record: 94057

On Thu, 03 Jun 2004 21:11:42 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>OK, Richard, here's a challenge for you: Please prove that
>photons can stand still.
from your narrow confines of perspective this illusion of perception,
religion, is not very interesting. However, such cartoon panels from
your comic book of science continue to amuse a few. :-)

3403. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 06:26:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <aa50c05vsh39ts8dt1892f6utjoi5u1803@4ax.com>
Source record: 94058

On Thu, 03 Jun 2004 20:54:05 -0400, william ewald
<wewald@bellsouth.net> wrote:

>Profits? What profits?

Hi Bill,

You can name that tune: From the litigation extortion royalties
acquired by rights of patents pending.

73's
Richard Clark, KB7QHC

3404. Re: Antenna mounting recommendations for flat roof academic building

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 06:31:45 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0406032231.6b8497b0@posting.google.com>
Source record: 94059

Bill Blum <billdotblum@mousepotato.net> wrote in message
news:<KGNvc.5074$n65.3079@newssvr33.news.prodigy.com>...
> Hi there--
>
> We've been given permission to mount a few antennas on the roof of one
> of the buildings at school, with the only caveat being "don't make holes
> in the roof." ...
Hi Bill,
some hams use an old tyre as the base. They lay it flat on the roof. A
lumber or sheet-metal circle fills the center of the tyre. An approx.
0,5 m (2 ft) long tube is attached vertically in its center. (Do not
forget a small hole for rain water dripping.) The tyre is filled with
concrete then. When the concrete hardens, you have a heavy and sturdy
base for a tube mast. Only the rubber tyre is in contact with the
roof, so no damage should be done. You can roll the tyre on the roof
if you have to move it.
If you need a bigger mounting, use a tyre from a truck or several
smaller tyres. The same tyre base adopted for a rope or wire can be
used for attaching guy wires / ropes.

73 Ivan OK1SIP

3405. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 06:37:07 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <nMUvc.17143$x9.11706@nwrddc02.gnilink.net>
Source record: 94060

This post below makes me think of the remarkable miniature "plastic apple" antenna. The requirement that the apple must be located far away from the radio and conected to it with a copper wire, is important.

"Chuck...K1KW" <cdoneal@comcast.net> wrote in message news:0wNvc.39192$3x.31853@attbi_s54...
> Anyone know anything about the "technology" in the article below?
>
> http://www.uri.edu/news/releases/?id=2659
>
> Chuck...K1KW
>
> Article text below
>
>
> --
> Department of Communications/News Bureau
> 22 Davis Hall, 10 Lippitt Road, Kingston, RI 02881
> Phone: 401-874-2116 Fax: 401-874-7872
> --
--
> ----
> URI physics employee invents new antenna technology
> Media Contact: Jan Wenzel, 401-874-2116
>
> KINGSTON, R.I. -- June 2, 2004 -- Rob Vincent, an employee in the University
> of Rhode Island's Physics Department, proves the adage that necessity is the
> mother of invention.
>
> An amateur radio operator since he was 14, Vincent has always lived in
> houses situated on small lots. Because he couldn't erect a large antenna on
> a confined property, he has been continually challenged over the years to
> find a way to get better reception.
>
> "I was always tinkering in the basement. Thank goodness, my parents were
> tolerant. I can still remember my poor father driving up our driveway after
> a hard day's work to see wires wrapped around the house," Vincent recalls.
>
> "The Holy Grail of antenna technology is to create a small antenna with high

> efficiency and wide bandwidth," explains Vincent. "According to current
> theory, you have to give up one of the three-size, efficiency, or
> bandwidth-to achieve any one of the other two."
>
> After decades of experimentation, combined with a 30-year engineering
career
> and Yankee ingenuity, Vincent has invented a revolutionary antenna
> technology. The distributed loaded monopole antennas are smaller, produce
> high efficiency, and retain good to excellent bandwidth. And they have
> multiple applications.
>
> With this technology it will be possible to double, at minimum, the range
of
> walkie-talkies used by police, fire, and other municipal personnel. Naval
> ships, baby monitors, and portable antennas for military use are other
> applications. An antenna could be mounted on a chip in a cell phone and be
> applied to wireless local area networks. Another application deals with
> radio frequency identification, which is expected someday to replace the
> barcode system.
>
> "It could even make the Dick Tracy wrist radio with all the features, such
> as Internet access, a possibility," Vincent says.
>
> The inventor pursued his quest to build a better antenna in earnest eight
> years ago when he and his significant other moved into a house situated on
a
> 50-foot by 100-foot lot in Warwick. There was nothing on the commercial
> market that could fit the lot that would provide the performance Vincent
> needed to be heard in distant lands and that would be acceptable to his
> neighbors. All the small antennas being sold were inefficient and lacked
> bandwidth, which resulted in low performance and high frustration.
>
> Vincent looked at the techniques that were currently used to reduce
antenna
> size and realized something was missing in the way everyone was
approaching
> the problem.
>
> He began to model various combinations into a computer program called
> MathCad. His first attempt produced a 21 MHz band antenna that was 18
inches
> high. Normally, antennas for this band are 12 to 24 feet high.
>
> Vincent installed the antenna in his back yard. The legal limit that
> amateurs can operate is 1,000 watts with the norm being 100 watts. The
> amateur radio operator experimented with 5 to 10 watts. He reached a
station
> in Chile and made contacts in various European countries. Meanwhile he
kept
> adding power until it reached 100 watts. That's when things suddenly went

> bad. Walking outside in the backyard, he understood why. The antenna had
> melted.
>
> After examining the molten matter, Vincent wasn't discouraged. This was
only
> a small model and not designed to handle much power. The part of the
antenna
> that failed proved to be the key to the design. After analyzing the
failure,
> Vincent realized that he was able to transform a lot of current along the
> antenna with even relatively low power.
>
> "Antennas radiate by setting up large amounts of current flow through
> various parts of their structure," he says. "The larger the current the
more
> radiation and the better the output of the antenna."
>
> Vincent went back to the drawing board and continued to improve the
> technology. Relying on his nearly 30 years at Raytheon Co. and at KVH
> Industries in Middletown R.I which provided him with a diversified
> background in electronics and electronic systems, Vincent overcame a
myriad
> of problems and succeeded.
>
> He established three test sites for various prototypes. Antennas were
placed
> in Westport, Mass. in a salt marsh, the best ground for transmission and
> reception. Another set of antennas were placed on rocky ground in
> Cumberland, R.I., the worst kind of site, and at a Warwick site which is
in
> between the two. The antennas, which resemble flagpoles, worked well at
all
> locations.
>
> Tests confirmed that Vincent has created antennas at one third to one
ninth
> of their full size counterparts. Normally smaller antennas are only 8 to
15
> percent efficient. Vincent's antennas achieved 80 to 100 percent
efficiency
> as compared to the larger antennas.
>
> A patent is pending on Vincent's technology. The inventor has made the
> University of Rhode Island and its Physics Department partners that will
> benefit from any revenue his invention earns. "The University and its
> Physics Department has been very supportive and given me time and space to
> work on this project," says Vincent who was recently presented the 2004
> Outstanding Intellectual Property Award by URI's Research Office. "I
couldn'
> t have done this without the University's support. It's only fair that it

> share in the profits."
>
>

3406. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 07:43:19 UTC
From: Hans Sundkvist <hmjs@spray.se>
Message-ID: <rKVvc.94568$dP1.304009@newsc.telia.net>
Source record: 94061

Hi Thierry.

A simple way to do this is to use a coax as ts the sleeve.

Just cut the coax to a 1/4-wave, connect a 1/4 wire to the inner
conductor at one end of this coax, and feed the other end of the coax
through a choke balun, and there you have it: A simple inexpensive
coax-sleeve antenna.

73 de Hans, SM3PXG
Östersund
Sweden

hello wrote:
>
> HI
> I want to put a dipole for 20m in my garden.
> A tree and the home roof will be ok to fix the extremity.
> My problem is the feed point : If IA center feed it , the feed line will
> just hang at the center of the garden, something not acceptable by the
> YL :-)
>
> So I'm looking for a way to feed it by one "side".
> I could endfeed it, but impedance matching is not so easy at such a high
> impedance.
> Then, after reading lots of post in this newsgroup, I read about the
> sleeve antenna : generaly a vertical dipole where one leg is a sleeve.
> Coax enter in the sleeve to the center feed point.
> I think this antenna could work horizontaly and for HF and solve my
> problem. Now, hanging horizontaly a 5m long metallic sleeve is surely
> not a good idea, but at HF , I thing that man could replace the sleeve
> by some wire cage.
> So I end up with the idea of a cage or biconic dipole , with the coax
> entering horizontaly in the middle of the cage to the center.
>
> What do you think of this idea ?
> How many wire for the cage 2 (a bowtie), 3, more ?
> Do you have a better one for my particular constrains ?
>
> Lots of questions, but I'm sure you will have lots of answers !
>
> Thanks in advance
>
> Thierry
> F4DWV

3407. Re: Needed: Recommendations for coax for VHF and UHF work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 09:23:36 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <obK2LvJY+DwAFA+X@ifwtech.co.uk>
Source record: 94062
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna

Hal Rosser wrote:

>> What frequency? What length? What loss did you measure? Was it raining?
>
>freq= 2m band
>length = approx 200 ft (up and accross the yard to the top of a TALL TREE)
>loss ---- what loss did you measure w/ rg58 (which would have been the
><other> affordable line)
>ie: I did not "measure" it - but my signal reports from others were 'much
>improved' over the same antenna on the roof.
>
The improvement clearly came from the extra antenna height. If you could keep the extra feedline losses within reasonable limits, you were sure to come out ahead on the deal.

>Raining? - rain, shine, - didn't matter - the run was in free air... I ran
>about 10 ft coax out of the house - then switched to twinlead - then back
>again near the antenna..

Fair enough. If the only other affordable way to get the feedline to the top of that tree would have been 200ft+ of RG-fifty8 (at least 15dB book loss), then direct twin-lead route definitely was the better choice.

>I understand the limitations of twin-lead and ladder-line, etc - and
>the fact that rain and other objects may reduce its effectiveness, etc

You do have the whole picture, Hal, and I respect that.

My problem is with the hams who only know half the story - the claimed advantages. Somehow, it's always the warnings and limitations that get lost... must be "selective fading".

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3408. B & W BWD-65

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 10:08:52 UTC
From: Drew Squires <asquires@bigpond.net.au>
Message-ID: <USXvc.5381$rz4.3769@news-server.bigpond.net.au>
Source record: 94063

Anyone out there have a BWD-65? if so what is the VSWR like at 3.55 MHz?
I will have problems fitting the BWD_90 into my back yard so a BWD_65 would
be better but would like to use it on the VK 80 metre band.
with thanks Andy VK3AS and VK3DTO
replys can come to squires@bigpond.com thanks!

3409. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 10:23:52 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <uZ-dndxrGMtc0F3dRVn-vg@ctc.net>
Source record: 94064

"B Ghostrider" <Barryufp@hotmail.com> wrote in message
news:shuvb0pfjv3p6cm5l830j21e6c29j38bvn@4ax.com...
> OK ok
> I went back and tested the antena again and heres what I got
> 138.000 mhz = swr of 2
> 140.00O mhz = 1.7
> 142.000 mhz = 1.8
> 144.000 mhz = 1.5
> 146.000 mhz = 1.2
> 148.000 mhz = 1.1
> 150.00 mhz =1.9
> 152.00 mhz = 2.5
> 154.000 mhz = 2.4
> 156.00 mhz = 2.5

HOw many feet of the rg-59 coax is bwtween the antenna and where you
measured the swr ?
With about 75 to 100 feet of coax you will only see about 3:1 with an open
or shorted coax on the far end.

3410. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 11:24:24 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <10c0n526odk3v28@corp.supernews.com>
Source record: 94065

It didn't bounce.
hmmmmm
I use spam filters.
Oh well, ... takes all kinds.
73

BTW Walt, I've had one of your baluns for almost 20 years.
Damn thing just won't die.
H.

"Walter Maxwell" <w2du@iag.net> wrote in message
news:t81vb0dmbft2s3ud6vm2mr6minl26jluqp@4ax.com...
> Cecil, H. Adam Stevens sent you an email earlier today, with a cc to me. I
> replied to all, but the copy to you came back host unknown. But your
address
> appeared as ...@ieee.ONEDOT.org. What's the ONEDOT? I now see it in your
return
> address on the rraa.
>
> What's going on?
>
> Walt

3411. Anything less than 1/2" ? [In UK]

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 11:36:10 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ib54kFl20hfU1@uni-berlin.de>
Source record: 94066

Two places now (Sandpiper Aerials and JB Television Services) where I've made enquiries about dipole center peices and the only thing offered is for 1/2" tube. Small sample I know, but what, nobody makes dipole peices for 1/4" and 3/8" tube anymore?

3412. Azden Antenna information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 11:41:37 UTC
From: Nevermind <nospam>
Message-ID: <40c05fe5$0$8988$afc38c87@news.optusnet.com.au>
Source record: 94067

I bought 2 Azden antennas, one for 70cm and one for 2 meters. They were both new in the box but I cannot finf any information on the company called Azden. Did they go out of business? Any info appreciated.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.693 / Virus Database: 454 - Release Date: 31/05/2004

3413. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 11:49:13 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <10c0og7pt69ja34@corp.supernews.com>
Source record: 94068

If you use 5/8 inch garden hose, just slip the hose over the top of the rod and turn on the water. As the flowing water digs around the rod, keep pushing the hose farther down along the rod (and into the ground). After you have about 4 feet of hose into the ground, the rod can be lifted out by hand.
--
-larry
K8UT
"Gary Boyer" <gboyer@columbus.rr.com> wrote in message
news:0ZJvc.20287$DG4.13504@fe2.columbus.rr.com...
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY
>
>

3414. Re: Azden Antenna information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 12:22:16 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <18q0c05p4j8locooj00vkhk814shnqgqdh@4ax.com>
Source record: 94069

On Fri, 4 Jun 2004 21:41:37 +1000, "Nevermind" <nospam> wrote:

>
>I bought 2 Azden antennas, one for 70cm and one for 2 meters. They were both
>new in the box but I cannot finf any information on the company called
>Azden. Did they go out of business? Any info appreciated.

They were around in the '80s and made a line of nice vhf/uhf
transceivers. Long out of biz, as far as I know.

Bob
k5qwg

>
>
>
>---
>Outgoing mail is certified Virus Free.
>Checked by AVG anti-virus system (http://www.grisoft.com).
>Version: 6.0.693 / Virus Database: 454 - Release Date: 31/05/2004
>

3415. Re: Anything less than 1/2" ? [In UK]

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 13:05:51 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ibacnFl59m8U1@uni-berlin.de>
Source record: 94070

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2ib54kFl20hfU1@uni-berlin.de...
> Two places now (Sandpiper Aerials and JB Television Services) where I've
> made enquiries about dipole center peices and the only thing offered is
for
> 1/2" tube. Small sample I know, but what, nobody makes dipole peices for
> 1/4" and 3/8" tube anymore?

I could always make sleeves I guess.

3416. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 14:47:03 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c9q259$1vd$1@newshost.mot.com>
Source record: 93974

Yea...That's the ticket. Well, I figure he looked at the melted part and said: "Gee, if I can keep this from melting..oh no... _WHY_ is it melting? ...perhaps high current. Yea, that's the ticket. There's high current in this part. I'll make it less lossy and it'll heat less and then the antenna'll be more efficient.....

New technology, yea (;-). You can work Chile with a light bulb. As I say; "You need iron in the sky." PUBLISH and let the experts poke at it.

My lot is 50' x 150' [155m x 460m outside the US] and I _very_ easily fit a 40M inverted Vee @35'. Work the world - several bands.

There's a never ending quest for a number of physically unrealizable things including, but not limited to: a small, directive, high efficency antenna -- free power -- the "best" route to work -- the ideal mate...Yadda, Yadda

I'll believe when...
--
Steve N, K,9;d, c. i My email has no u's.

"Tom Ring" <news0000@taring.org> wrote in message news:40bfd1b8$0$441$5cbedd26@news.real-time.com...
> Oh come on, he said it's revolutionary! You are being way too judgemental.
>
> The melting probably had nothing to do with losses. I mean, it could
> have burst into flames due to corona igniting the revolutionary
> materials it was made of, and that's what melted it. Yeah, that's the
> ticket.
>
> tom
> K0TAR
>
> Tam/WB2TT wrote:
>
> >
> > An antenna that melts with 100W of RF going to it seems to be at odds with
> > its claim of high efficiency.
> >
> > Tam/WB2TT
> >
> >
>

3417. Re: Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 14:52:26 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c9q2fc$20n$1@newshost.mot.com>
Source record: 93973

"K7JEB" <k7jeb@no_spam.qsl.net> wrote in message
news:GrQvc.45743$mm1.6092@fed1read06...
> I was hoping someone else would jump in and answer, but
> here goes anyway...
>
> Eric Schumacher, WB6KCN, asked:
>
> > Can anyone give me a brief explanation of the theory
> > of operation of a commercial FM broadcast antenna.
> > Specifically the Jampro JMPC. Picture at:
>
> http://www.jampro.com/fma/jampjmpc.htm
>
> > It looks to me like a couple of 1/2 wave dipoles
> > each folded into V and fed in phase using two gamma
> > matches. If this is true I am puzzled by the tap
> > point chosen. It seems further along the dipole
> > than I am used to seeing, even considering that the
> > feed for the dipole is likely 100 ohm. The feed
> > must be very inductive.
>
> When the ends of a dipole are folded back, the radiation
> resistance decreases and matching schemes have to become
> more extreme. The Jampro antenna does not look that
> exceptional to me. You're probably right about a certain
> amount of reactance accompanying the feedpoint resistance.
> This could be tuned out by a matching network hidden in
> the feedline/support pipe.

Given the above analysis: Also note that one of the elements is quite
close to the supporting structure nearest its high current center.
--
Steve N, K,9;d, c. i My email has no u's.

3418. Re: J pole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 14:54:58 UTC
From: B Ghostrider <Barryufp@hotmail.com>
Message-ID: <h731c0p9vc3kv0bo6m7aoa6n9clkorg4v9@4ax.com>
Source record: 93971

no more than 15 feet
On Fri, 4 Jun 2004 06:23:52 -0400, "Ralph Mowery" <rmowery@ctc.net>
wrote:

>
>"B Ghostrider" <Barryufp@hotmail.com> wrote in message
>news:shuvb0pfjv3p6cm5l830j21e6c29j38bvn@4ax.com...
>> OK ok
>> I went back and tested the antena again and heres what I got
>> 138.000 mhz = swr of 2
>> 140.00O mhz = 1.7
>> 142.000 mhz = 1.8
>> 144.000 mhz = 1.5
>> 146.000 mhz = 1.2
>> 148.000 mhz = 1.1
>> 150.00 mhz =1.9
>> 152.00 mhz = 2.5
>> 154.000 mhz = 2.4
>> 156.00 mhz = 2.5
>
>HOw many feet of the rg-59 coax is bwtween the antenna and where you
>measured the swr ?
>With about 75 to 100 feet of coax you will only see about 3:1 with an open
>or shorted coax on the far end.
>
>

3419. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 14:57:55 UTC
From: Rick Karlquist N6RK <richard@karlquist.removethis.com>
Message-ID: <T50wc.493$HG.98@attbi_s53>
Source record: 93972

Just wanted to mention that at N6RK in the CA central
valley, we have "cemented hard pan". Like regular hard
pan, only it's water proof. It will stall a D9 Cat if you
try to plow it. We tried all the techniques for rod removal
suggested including soaking it with drip irrigation for
2 weeks. A pipe wrench simply twists the rod, like
a torsion bar. The bottom part doesn't budge. Anyway,
around here, once they're in, they ain't coming out. BTW,
to get it in, it goes in 1/16 of an inch for each hit of a
T-post driver, if you're lucky.

Rick

"Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET> wrote in message
news:10c0og7pt69ja34@corp.supernews.com...
> If you use 5/8 inch garden hose, just slip the hose over the top of the
rod
> and turn on the water. As the flowing water digs around the rod, keep
> pushing the hose farther down along the rod (and into the ground). After
you
> have about 4 feet of hose into the ground, the rod can be lifted out by
> hand.
> --
> -larry
> K8UT
> "Gary Boyer" <gboyer@columbus.rr.com> wrote in message
> news:0ZJvc.20287$DG4.13504@fe2.columbus.rr.com...
> > I have two ground rods I am thinking about moving to another location,
is
> > this practical or would it be easier to just poundem in the ground and
buy
> > new rods....does anyone have an easy method for taking the rods out of
the
> > ground...I am not interested in building any equipment to do this
removal
> > project...please advise..thanks..Gary, K8BY
> >
> >
>
>

3420. MFJ993 auto tuner balun?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 15:38:58 UTC
From: denton <denton@oregontrail.net>
Message-ID: <c9q4gt$8q2$1@news.oregontrail.net>
Source record: 93975

I have ordered an MFJ993 and am wondering if the internal balun will hold up to barefoot digitial modes. If not, I will homebrew an external balun. It will be interesting to see how well this unit fares compared to my venerable Johnson Matchboxes!

3421. Re: Jbeam antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 16:16:14 UTC
From: Bob Dixon <dixon.8@osu.edu>
Message-ID: <dixon.8-831F1A.12161404062004@charm.magnus.acs.ohio-state.edu>
Source record: 93976

Sorry I don't have time to deal with shipping them. They are here if
someone would like to come and get them. These are the 2 meter versions.

Bob

In article <40bf5f30$0$15835$39cecf19@news.twtelecom.net>,
mike <n0qfv@stic.net> wrote:

> Bob Dixon wrote:
> > I have 2 of the 8 element dual-slot J beams (total of 4 yagis).
> > Free to anyone who will actually use them.
> >
> >
> > Bob W8ERD
> >
> > In article <682b4bfc.0406011351.5f907912@posting.google.com>,
> > franktodd@comcast.net (Frank) wrote:
> >
> >
> >>Can anyone tell me if Jbeam is still making amateur antennas out of the UK?
> >>
> >>73 Frank K3EKO
> Would you ship them Frank or would that be too expensive in your
> estimation. If you would ship and the cost wasn't to great I might be
> interested. If you would prefer local P/U thanks any way.
>
> Mike N0QFV

3422. Re: Stacking Distance Question. More Information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 16:20:42 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <uj1wc.13879$tH1.344842@twister.southeast.rr.com>
Source record: 93977

"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:yAJvc.6749$2o2.466275@twister.southeast.rr.com...
>
> "ab5mm" <ab5mm@9plus.net> wrote in message
> news:c9cibl0l7o@enews2.newsguy.com...
> > Thanks to Tom, Dave and the rest of you that answered my question so
> > quickly.
> >
> > I thought I should give a little more pertinent info on this project. A
> > elderly ham friend of mine is putting together a 70cm fast scan TV
> > station. He chose the quad because of its wide band characteristics. His
> > tower is Rohn 45 at 73 feet. It has a Glen Martin "Voyager" trolley/tram
> > system. The steel mast is above the bearing plate about 14 feet. Out the
> > top of the steel mast is 6 feet of thick wall fiberglass tubing. The two
> > 70cm quads will be on a fiberglass cantilever arm that is approximately
> > 48" long. It slips over the fiberglass mast and bolts into place. (arm
> > required to clear the tower when cranking antenna system down) This arm
> > will have two, 1 1/4" diameter post sticking up vertically to mount the
> > quads. Here is where the question arose about how far apart the quads
> > should be.
> >
> > I don't think I could/should push the cantilever arm out any further.
> > The system, all together, could probably withstand a little longer arm
> > if required. ?? Three 1/2 wavelengths would be ~39 inches.
> >
> > The quads are 7 1/2 feet long with 12 elements each and weigh 3.5
pounds.
> >
> > We have no modeling software, just a desire to do it right the first
time.
> >
> > Thanks again & 73,
> >
> > Steve
> > ab5mm
> >
>
> Several years ago some friends and I tried mking some gain measurements on
> quads. Found that more than about six elements did not help the gain of
the
> antenna to any useful degree. I would go with quads with fewer elements
but
> more antennas in your array.
>

>
This tends to give me doubts about the ethics of those who manufactor the
long quads.

3423. Re: Antenna mounting recommendations for flat roof academic building

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 16:23:50 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <qm1wc.13880$tH1.345445@twister.southeast.rr.com>
Source record: 93978

If your school has a vo-tech department fabricating such mounts should be a
no-brainer for them.

"Bill Blum" <billdotblum@mousepotato.net> wrote in message
news:KGNvc.5074$n65.3079@newssvr33.news.prodigy.com...
> Hi there--
>
> We've been given permission to mount a few antennas on the roof of one
> of the buildings at school, with the only caveat being "don't make holes
> in the roof."
>
> We're looking at some yagis (LPDA, about 12 feet long) for VHF work,
> and just need to get the things about 10-20 feet above the roof if
possible.
>
> Does anybody have any recommendations/tips on how to handle this? At
> work, I've seen large steel mast mounts than lay flat on a roof to
> support lightweight/low crosssection antennas... (yes, they're weighted
> down with concrete blocks.) Where would I find such a beast? Our
> facility manager has NO idea when these mast mounts wound up on the roof
> at work.
>
>
>
> Thanks.
> -bill
>
> (Replies to the group please)

3424. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 16:52:10 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C0A8BA.39DB0D56@uci.edu>
Source record: 93979

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > How much energy passes a point on that open transmission line in one
> > second? The choices again are 100 Joules, 200 Joules, or zero Joules.
> > Please indicate the correct answer from the list of choices.
>
> I did, Jim. Hint: One must assume either component energies or
> *NET* energy.

It's a distinction without a difference. So your answer is?

73, Jim AC6XG

3425. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 16:55:56 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C0A99C.C66FFDC6@uci.edu>
Source record: 93980

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > ... there is no such thing as an ExB "field".
>
> Good grief, Jim, ExB is proportional to the irradiance of a light beam.

Good grief, Cecil, irradiance isn't a field and doesn't propagates
either!

73, Jim AC6XG

3426. use of wire nuts in antenna construction

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 17:16:15 UTC
From: John Shadle <shadle@email.unc.edu>
Message-ID: <Pine.A41.4.44+UNC.0406041312240.44956-100000@login3.isis.unc.edu>
Source record: 93981

Hi. I was thinking about building a 2m five-element quad using the format of KD6GLF (see QST, Jan. 1995) and was wondering about alternative ways to connect the AWG #12 wire to itself on the directors, driven element, and reflectors other than soldering.

I was wondering if any property of the antenna would be changed by using wire nuts instead of soldering the wire together. Has anyone had any experience using wire nuts (on twisted wire) in antenna building?

Thanks for your help,
-john, W4PAH

3427. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 17:44:01 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406040944.4ff6d72b@posting.google.com>
Source record: 93982

"Chuck...K1KW" <cdoneal@comcast.net> wrote in message
news:<0wNvc.39192$3x.31853@attbi_s54>...
> Anyone know anything about the "technology" in the article below?
>
> http://www.uri.edu/news/releases/?id=2659
>
> Chuck...K1KW
>
> Article text below
>
>
> --
> Department of Communications/News Bureau
> 22 Davis Hall, 10 Lippitt Road, Kingston, RI 02881
> Phone: 401-874-2116 Fax: 401-874-7872
> --
> ----
> URI physics employee invents new antenna technology
> Media Contact: Jan Wenzel, 401-874-2116
>
> KINGSTON, R.I. -- June 2, 2004 -- Rob Vincent, an employee in the University
> of Rhode Island's Physics Department, proves the adage that necessity is the
> mother of invention.
>
snip

"According to current
> theory, you have to give up one of the three-size, efficiency, or
> bandwidth-to achieve any one of the other two."
>
snip

Is the above statement correct ?

Regards
Art5

3428. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 17:49:59 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40c0b527$1_3@127.0.0.1>
Source record: 93983

Jim Kelley wrote:
>
> Cecil Moore wrote:
>>I did, Jim. Hint: One must assume either component energies or
>>*NET* energy.
>
> It's a distinction without a difference.

The fact that transmission lines with high SWRs suffer more
losses than transmission lines with low SWRs proves your
statement to be incorrect. RF energy cannot stand still.
In a transmission line, there are only two possible directions
for energy to travel. There is simply more energy flowing back
and forth in a line with a high SWR than in a flat line. Until
you admit that fact of physics, this discussion cannot progress.
--
73, Cecil http://www.qsl.net/w5dxp

3429. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 17:51:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9pc1c0hu96pveebk10lc3luuuejfen8231@4ax.com>
Source record: 93984

On Fri, 04 Jun 2004 09:55:56 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:
>Cecil Moore wrote:
>> Good grief, Jim, ExB is proportional to the irradiance of a light beam.
>
>Good grief, Cecil, irradiance isn't a field and doesn't propagates
>either!

Hi Jim,

Nearly every posting that Cecil pens with his rustic understanding of
Optics suffers from the obvious lack of experience.

There is a certain amount of pretense in this irradiance (an archaic
radiometric term used incorrectly for photometrics in an argument that
calls for luminous flux), much like quoting Iï¿½R and not knowing what
Ohms or Amperes are.

He's lucky there are so very few that appreciate the gaffs of his
unintended humor.

73's
Richard Clark, KB7QHC

3430. Re: use of wire nuts in antenna construction

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 17:56:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4md1c0t10hfumeo5oce32tubu33lbtug0e@4ax.com>
Source record: 93986

On Fri, 4 Jun 2004 13:16:15 -0400, John Shadle <shadle@email.unc.edu>
wrote:
>Has anyone had any
>experience using wire nuts (on twisted wire) in antenna building?

Hi John,

As a splice that is not under tension, should work fine. However, it
does offer the prospect of having to tune slightly differently because
of minimal addition of stray capacitance and inductance - depends on
the size of the nut and the pig-tail it creates. Chances are you
probably would notice the difference because there are so many other
more compelling factors to pay attention to.

73's
Richard Clark, KB7QHC

3431. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 17:59:02 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40c0b73f_3@127.0.0.1>
Source record: 93985

Jim Kelley wrote:
> Good grief, Cecil, irradiance isn't a field and doesn't propagates
> either!

As I said earlier, irradiance is proportional to the cross product
of the E-field and B-field. Why do you think we call them fields
if they are not fields?

Exactly how does the irradiance from Alpha Centauri get to
us without propagating? Methinks you are playing word games.
--
73, Cecil http://www.qsl.net/w5dxp

3432. Re: use of wire nuts in antenna construction

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 18:01:05 UTC
From: Dave <noone@nowhere.com>
Message-ID: <bp6dnf0FoM1-JV3dRVn-gQ@crocker.com>
Source record: 93987

for a weekend like field day it is fine. go much longer and corrosion sets in and can cause all sorts of possible problems. also remember that for a quad those connections may need mechanical strength which you don't get with wire nuts. either solder them or use the brass (or are they bronze?) split bolt clamps.

"John Shadle" <shadle@email.unc.edu> wrote in message news:Pine.A41.4.44+UNC.0406041312240.44956-100000@login3.isis.unc.edu...
> Hi. I was thinking about building a 2m five-element quad using the format
> of KD6GLF (see QST, Jan. 1995) and was wondering about alternative ways to
> connect the AWG #12 wire to itself on the directors, driven element,
> and reflectors other than soldering.
>
> I was wondering if any property of the antenna would be changed by using
> wire nuts instead of soldering the wire together. Has anyone had any
> experience using wire nuts (on twisted wire) in antenna building?
>
> Thanks for your help,
> -john, W4PAH
>
>

3433. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 18:11:55 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40c0ba43$1_3@127.0.0.1>
Source record: 93988

Richard Clark wrote:
> Nearly every posting that Cecil pens with his rustic understanding of
> Optics suffers from the obvious lack of experience.

Everything I write about light/optics comes straight from
Optics, by Hecht. I assume he is more of an expert than
you are and he uses the term "irradiance" for the power
contained in a light beam. Hecht's interference equations
involving irradiance are identical in concept to Dr. Best's
power equations in his QEX article.
--
73, Cecil http://www.qsl.net/w5dxp

3434. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 18:21:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <59f1c05bg02bleam5dgduu2tbvb2bmc377@4ax.com>
Source record: 93989

On Fri, 04 Jun 2004 13:11:55 -0500, Cecil Moore
<Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>Everything I write about light/optics comes straight from
A Xerox shows as much precision and no comprehension.

Still enjoy the gaffs tho' Great show! ;-)

3435. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 18:24:36 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6df1c054pckcq085lppk5o39h6ubje8p4j@4ax.com>
Source record: 93990

On Fri, 04 Jun 2004 12:59:02 -0500, Cecil Moore
<Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>Exactly how does the irradiance from Alpha Centauri get to
>us without propagating?

A smile a minute ;-)

How does a money wire transfer get into your account without moving
from the mint? [Hint to the literate: irradiance does not move,
neither does the money in a wire transfer.]

3436. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 18:31:02 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <6kf1c0tjvm4o2f3k4dmtm2jl9ie5bsejmb@4ax.com>
Source record: 93991

On 4 Jun 2004 10:44:01 -0700, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:
>> "According to current
>> theory, you have to give up one of the three-size, efficiency, or
>> bandwidth-to achieve any one of the other two."
>>
> snip
> Is the above statement correct ?

Hi Art,

In a crude and shorthand way, yes. This is why your small 160M
vertical dipole is up to 15 to 17dB below performance in comparison to
a full size one. All common legacy for CFAs, EHs, fractals, and the
rest of this ilk that come down the pike.

73's
Richard Clark, KB7QHC

3437. Re: Azden Antenna information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 18:59:55 UTC
From: jlk@fastnet.net
Message-ID: <0kh1c09hi8nh59r8ukpdnveo2r1hmqkq98@4ax.com>
Source record: 93992

On Fri, 4 Jun 2004 21:41:37 +1000, "Nevermind" <nospam> wrote:

>
>I bought 2 Azden antennas, one for 70cm and one for 2 meters. They were both
>new in the box but I cannot finf any information on the company called
>Azden. Did they go out of business? Any info appreciated.
>
>
>
>---
>Outgoing mail is certified Virus Free.
>Checked by AVG anti-virus system (http://www.grisoft.com).
>Version: 6.0.693 / Virus Database: 454 - Release Date: 31/05/2004
>

Azden as a corporation still exists but they no longer make or support
HAM gear. One of the products they make now are professional audio
wireless microphone systems. The US offices are in NY as I recall.

3438. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 19:09:19 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9qhcv$t3l$1@hercules.btinternet.com>
Source record: 93993

"Cecil Moore" wrote
> The fact that transmission lines with high SWRs suffer more
> losses than transmission lines with low SWRs proves your
> statement to be incorrect.
==========

Cec, you chose the wrong argument! It proves nothing. A 600-ohm open-wire line with high SWR can have a higher loss than even a coaxial line with 1-to-1 SWR.

And loss in the tuner makes the argument even worse.

Reg

3439. Re: use of wire nuts in antenna construction

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 19:12:09 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <7omdnZLD4-0bVF3dRVn-gg@comcast.com>
Source record: 93994

"John Shadle" <shadle@email.unc.edu> wrote in message
news:Pine.A41.4.44+UNC.0406041312240.44956-100000@login3.isis.unc.edu...
> Hi. I was thinking about building a 2m five-element quad using the format
> of KD6GLF (see QST, Jan. 1995) and was wondering about alternative ways to
> connect the AWG #12 wire to itself on the directors, driven element,
> and reflectors other than soldering.
>
> I was wondering if any property of the antenna would be changed by using
> wire nuts instead of soldering the wire together. Has anyone had any
> experience using wire nuts (on twisted wire) in antenna building?
>
> Thanks for your help,
> -john, W4PAH
>
>
John,
I haven't used wire nuts, but I have used 1/8 inch cable clamps. I twist the
wires together end to end (Western Union Splice?) and mash the cable clamp
over that. I was concerned about corrosion, but the splices are still good
after 6 years. Possibly the pressure keeps the contact surfaces clean.

Tam/WB2TT

3440. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 19:31:59 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C0CE2F.6371D134@uci.edu>
Source record: 93995

Richard Clark wrote:
>
> On Fri, 04 Jun 2004 12:59:02 -0500, Cecil Moore
> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
> >Exactly how does the irradiance from Alpha Centauri get to
> >us without propagating?
>
> A smile a minute ;-)
>
> How does a money wire transfer get into your account without moving
> from the mint? [Hint to the literate: irradiance does not move,
> neither does the money in a wire transfer.]

Cecil says that a credit card is money, and presumably so is a wire
transfer.
All things are indeed, equal - apparently.

Amazing analogy though - a power debit from one account, a power credit
at the other - without power (or irradiance) having actually traveled
the distance. All owing to the facility that transfers energy.

73, Jim AC6XG

3441. Re: Stacking Distance Question. More Information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 19:37:04 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <oXE2ogFg9MwAFAuR@ifwtech.co.uk>
Source record: 93996

Jimmy wrote:
>> Several years ago some friends and I tried mking some gain measurements on
>> quads. Found that more than about six elements did not help the gain of
>the
>> antenna to any useful degree.
>>
>>
>This tends to give me doubts about the ethics of those who manufactor
>the long quads.
>

I'm sorry that you and your friends weren't successful... but that
doesn't prove it can't be done.

Microwave operators regularly use long quads (loop yagis) with 20, 30
and even more elements. Range measurements *prove* that they work, about
the same as conventional yagis of the same boom length, but the loop
elements do have some constructional advantages for the low microwave
bands.

As with any yagi-type antenna, you need to add significant numbers of
extra elements and boom length in order to see a significant increase in
gain. If you do it right, the gain will come.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3442. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 19:43:20 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C0D0D8.6500D865@uci.edu>
Source record: 93997

Reg Edwards wrote:
>
> "Cecil Moore" wrote
> > The fact that transmission lines with high SWRs suffer more
> > losses than transmission lines with low SWRs proves your
> > statement to be incorrect.
> ==========
>
> Cec, you chose the wrong argument! It proves nothing. A 600-ohm open-wire
> line with high SWR can have a higher loss than even a coaxial line with
> 1-to-1 SWR.

That was his point, Reg. But it only shows that energy is transferred from the source to the losses at high SWR - not that more energy bounces around. What's Cecil say? I've been seduced by the steady-state, and I don't understand what actually happens? Only people who have opened themselves to the ideals of Reflectology and the Melles-Griot translations, follow the true light.

73, Jim AC6XG

3443. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 19:48:18 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C0D202.36DE91F2@uci.edu>
Source record: 93998

Cecil Moore wrote:
>
> Jim Kelley wrote:
> >
> > Cecil Moore wrote:
> >>I did, Jim. Hint: One must assume either component energies or
> >>*NET* energy.
> >
> > It's a distinction without a difference.

> The fact that transmission lines with high SWRs suffer more
> losses than transmission lines with low SWRs proves your
> statement to be incorrect.

"Net energy" is still the only energy involved. There are no other choices. The 'other one' you refer to is ficticious, hypothetical, rhetorical, useful to illustrate a point perhaps.

> RF energy cannot stand still.

Time and tide wait for no man.

> In a transmission line, there are only two possible directions
> for energy to travel.

One plus one is two, therefore.....

> There is simply more energy flowing back
> and forth in a line with a high SWR than in a flat line.

The truth is even simpler: there is more energy flowing from the source to the losses.

> Until
> you admit that fact of physics, this discussion cannot progress.

If it were a fact of physics we wouldn't be having the discussion. I guess I'll rephrase the question: When the IEEE defines power as energy per unit time, do you think they're talking about a vector quantity?

73, Jim AC6XG

3444. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 20:14:43 UTC
From: hello <hello@nospam.com>
Message-ID: <vK4wc.49706$zm5.25412@nntpserver.swip.net>
Source record: 93999

Irv Finkleman wrote:
> hello wrote:
>
>>HI
>>I want to put a dipole for 20m in my garden.

>>So I end up with the idea of a cage or biconic dipole , with the coax
>>entering horizontaly in the middle of the cage to the center.

>
> Use two pieces of copper tubing for the elements. Connect one to the
> center of the coax, the other to the braid. Bring the coax out through
> the lower piece. This is also known as a coaxial-sleeve and a few other
> variations on the name.

OK, but for 20m , it means 2x5m of tubing. Not so easy to hang over the
garden.

DO you think that a wire cage qith 3 ou 4 wire could have the same
effect than tubing ?

Thierry
F4DWv

3445. Re: Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 20:22:13 UTC
From: hello <hello@nospam.com>
Message-ID: <zR4wc.49708$zm5.25052@nntpserver.swip.net>
Source record: 94000

Eric Schumacher wrote:
> Hi Group
>
> Can anyone give me a brief explanation of the theory of operation of a
> commerical FM broadcast antenna. Specfically the Jampro JMPC (picture
> at)http://www.jampro.com/fma/jampjmpc.htm It looks to me like a couple of
> 1/2 wave dipoles each folded into V and fed in phase using two gamma
> matches.

Looks like a lindenblad antenna
(http://www.amsat.org/amsat/articles/w6shp/lindy.html)
with a original feeding.

Thierry
F4DWV

3446. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 20:57:32 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <ofo1c0dji2i40jkciituju4fbemrudvtkh@4ax.com>
Source record: 94001

On Fri, 4 Jun 2004 06:24:24 -0500, "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
wrote:

>It didn't bounce.
>hmmmmm
>I use spam filters.
>Oh well, ... takes all kinds.
>73
>
>BTW Walt, I've had one of your baluns for almost 20 years.
>Damn thing just won't die.
>H.
>
Thanks, H, I appreciate knowing that.

Walt

3447. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:10:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <uqn1c05gsvngn3155fm3fc4sied0s0nid4@4ax.com>
Source record: 94002

On Fri, 04 Jun 2004 12:31:59 -0700, Jim Kelley <jwkelley@uci.edu>
wrote:
>Richard Clark wrote:
>> On Fri, 04 Jun 2004 12:59:02 -0500, Cecil Moore
>> <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>> >Exactly how does the irradiance from Alpha Centauri get to
>> >us without propagating?
>>
>> A smile a minute ;-)
>>
>> How does a money wire transfer get into your account without moving
>> from the mint? [Hint to the literate: irradiance does not move,
>> neither does the money in a wire transfer.]
>
>Cecil says that a credit card is money, and presumably so is a wire transfer.

It doesn't look like reciprocity would work. Is money a credit card
(promise to pay instead of actual payment)?

>All things are indeed, equal - apparently.

Ah yes, appearance, the bane of bandwidth limited perception.

>Amazing analogy though - a power debit from one account, a power credit
>at the other - without power (or irradiance) having actually traveled
>the distance. All owing to the facility that transfers energy.

The power of analogy can be stretched further. Actually money is the
energy (potential for trade) and is exhausted (power dissipated) when
transferred to a debit account. If you tender more money than
required (mismatch) some is returned to you to dissipate later. If
you tender less than required (mismatch) some is expected from you to
make the economic engine go.

If you start trying to substitute, like say explaining in terms of
optics why your bills are chartreuse where most are green - they push
a small hidden button and you are Abu Ghraib bound.

73's
Richard Clark, KB7QHC

3448. Re: Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:29:06 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c9qpn4$660$1@newshost.mot.com>
Source record: 94008

"hello" <hello@nospam.com> wrote in message
news:zR4wc.49708$zm5.25052@nntpserver.swip.net...
> Eric Schumacher wrote:
> > Hi Group
> >
> > Can anyone give me a brief explanation of the theory of operation of a
> > commerical FM broadcast antenna. Specfically the Jampro JMPC (picture
> > at)http://www.jampro.com/fma/jampjmpc.htm It looks to me like a couple
of
> > 1/2 wave dipoles each folded into V and fed in phase using two gamma
> > matches.
>
> Looks like a lindenblad antenna
> (http://www.amsat.org/amsat/articles/w6shp/lindy.html)
> with a original feeding.
> Thierry F4DWV

Not to me. It looks like the lindenblad elements are fed IN phase, right?

Differences
JMPC Lindenblad
-two bent half waves -four straight half waves
-Elements in two planes -elements in four planes
-symmetry around the -symmetry around the center
center of the two of the four antennas
elements for 180 for every 90 degrees
degrees of rotation of rotation

similarities
circular polarization
Perhaps fed in phase elements
Weird.

--
Steve N, K,9;d, c. i My email has no u's.

3449. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:30:22 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c0eaf5_8@corp.newsgroups.com>
Source record: 94003

Richard Clark wrote:
> [Hint to the literate: irradiance does not move,

I've never said that power flows but a lot of pretty smart
people think it does. The Poynting Vector works just as well
for light as it works for RF. The Power Flow Vector works
just as well for light as it does for RF.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3450. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:32:58 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <c9qpud$66t$1@newshost.mot.com>
Source record: 94007

"hello" <hello@nospam.com> wrote in message
news:vK4wc.49706$zm5.25412@nntpserver.swip.net...
> Irv Finkleman wrote:
> > hello wrote:
> >
> >>HI
> >>I want to put a dipole for 20m in my garden.
>
> >>So I end up with the idea of a cage or biconic dipole , with the coax
> >>entering horizontaly in the middle of the cage to the center.
>
> >
> > Use two pieces of copper tubing for the elements. Connect one to the
> > center of the coax, the other to the braid. Bring the coax out through
> > the lower piece. This is also known as a coaxial-sleeve and a few other
> > variations on the name.
>
> OK, but for 20m , it means 2x5m of tubing. Not so easy to hang over the
> garden.
>
> DO you think that a wire cage qith 3 ou 4 wire could have the same
> effect than tubing ?
> Thierry F4DWv

There was an article within there last year, perhaps last Summers antenna
issue which described a "cage" sleeve vertical.

--
Steve N, K,9;d, c. i My email has no u's.

3451. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:34:41 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c0ebf7$1_8@corp.newsgroups.com>
Source record: 94004

Reg Edwards wrote:

> "Cecil Moore" wrote
>
>>The fact that transmission lines with high SWRs suffer more
>>losses than transmission lines with low SWRs proves your
>>statement to be incorrect.

> Cec, you chose the wrong argument! It proves nothing. A 600-ohm open-wire
> line with high SWR can have a higher loss than even a coaxial line with
> 1-to-1 SWR.

I'm talking about one particular transmission line, Reg.
Given any one particular transmission line, a high SWR
causes more losses than a low SWR. That proves that more
energy is moving in a high SWR environment than in a
low SWR environment. (RF energy cannot stand still.)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3452. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:37:33 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c0eca3_8@corp.newsgroups.com>
Source record: 94005

Jim Kelley wrote:
> Cecil says that a credit card is money, ...

My dictionary says that a credit card is money.
Please channel your objections to Barnes and Noble.
--
73, Cecil http://www.qsl.net/w5dxp

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3453. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:42:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c0edc7_8@corp.newsgroups.com>
Source record: 94006

Jim Kelley wrote:
> That was his point, Reg. But it only shows that energy is transferred
> from the source to the losses at high SWR - not that more energy bounces
> around.

Huh?????? Where do the additional losses come from if not from
additional energy? Sounds like you are on to something, Jim -
additional losses without additional energy. You have just
violated the conservation of energy principle. Maybe you can
patent it.
--
73, Cecil http://www.qsl.net/w5dxp

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3454. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:47:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c0eef4$1_8@corp.newsgroups.com>
Source record: 94009

Jim Kelley wrote:
> "Net energy" is still the only energy involved.

As long as you maintain such an irrational attitude,
rational discussion is impossible. You are still clinging
to the concept that since I live one mile from where I
was born, I have never been anywhere else in my entire life.
--
73, Cecil http://www.qsl.net/w5dxp

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3455. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:51:49 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c0effb$1_8@corp.newsgroups.com>
Source record: 94010

Richard Clark wrote:

> Jim Kelley <jwkelley@uci.edu> wrote:
>>Cecil says that a credit card is money, and presumably so is a wire transfer.
>
> It doesn't look like reciprocity would work.

OTOH, Jim says that since his beginning balance and his ending
balance are the same, that proves that absolutely no transactions
(no debits and no credits) have occurred during the entire month.
What are the chances of that happening in an active account? Zero?
--
73, Cecil http://www.qsl.net/w5dxp

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3456. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 21:59:03 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <Hg6wc.4565$pU1.981@newssvr22.news.prodigy.com>
Source record: 94011

If there's enough sticking up to drive it down about a 1/2" or so that'll loosen it so you jack it out with a bumper jack. If not dig a moat around it to get room. Friction of a small chain wrapped around a few times should hold it, use a small plank if the soil is soft to keep the jack ffrom sinking.. Lubing the moat with water the day before will help.

--
73
Hank WD5JFR

"Gary Boyer" <gboyer@columbus.rr.com> wrote in message news:0ZJvc.20287$DG4.13504@fe2.columbus.rr.com...
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY
>
>

3457. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 22:07:46 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C0F2B2.A436FDE3@uci.edu>
Source record: 94016

Cecil Moore wrote:

> You are still clinging
> to the concept that since I live one mile from where I
> was born, I have never been anywhere else in my entire life.

So has the transmission line/energy discussion now become about me, or
is it still all about you?

73, Jim AC6XG

3458. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 22:11:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jms1c01s9ffftjdjgiip5i6kp1lf1p7tv6@4ax.com>
Source record: 94012

On Fri, 04 Jun 2004 16:51:49 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>OTOH, Jim says that since his beginning balance and his ending
>balance are the same, that proves that absolutely no transactions
>(no debits and no credits) have occurred during the entire month.
>What are the chances of that happening in an active account? Zero?

Gosh, financially illiterate too! I suppose you could quote Keynesian
Economics texts to prove this quaint notion of yours however. ;-)

That's entertainment as they used to say.

3459. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 22:15:15 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sss1c0pbkp8ltmf5ai1q42koarvf48ecv5@4ax.com>
Source record: 94013

On Fri, 04 Jun 2004 16:30:22 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>Richard Clark wrote:
>> [Hint to the literate: irradiance does not move,
>I've never said that power flows but a lot of pretty smart
>people think it does.
A conundrum, does that put you outside the crowd looking in?

There are a lot of things you've never said. Can you prove it?
Definition by negative example is next to worthless.

3460. Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 22:16:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <14t1c0hk73r6pcu4o9ht8gnsdc8vq339b0@4ax.com>
Source record: 94014

On Fri, 04 Jun 2004 16:37:33 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>My dictionary says that a credit card is money.
Try stop payment on a $20 bill you spent yesterday.

3461. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 22:18:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <67t1c0hr7rluotboeohhvsgcm9vkltkquo@4ax.com>
Source record: 94015

On Fri, 04 Jun 2004 16:42:24 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
> Where do the additional losses come from if not from
>additional energy?
:-)
There must be something in the water.... Does it have a head on it?

3462. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 23:04:48 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9qv6glnk1@titan.btinternet.com>
Source record: 94017

"Cecil Moore" wrote
> I'm talking about one particular transmission line,
============================

Cec, you can't talk about one particular transmission line in an argument in favour of anything in general.

Reg.

It's akin to looking for weapons of mass destruction when you know there aren't any. A waste of time - and of lives.

3463. Re: B & W BWD-65

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 23:37:03 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40c10bc9_3@news1.prserv.net>
Source record: 94018

Do a Google search of this NG for B&W and T2FD. Also look at
http://www.cebik.com/radio.html for information on that antenna. On 3.5
MHz, it compares favorably to a dummy load, good VSWR, poor radiation.

--
Crazy George
Remove N O and S P A M imbedded in return address
"Drew Squires" <asquires@bigpond.net.au> wrote in message
news:USXvc.5381$rz4.3769@news-server.bigpond.net.au...
> Anyone out there have a BWD-65? if so what is the VSWR like at 3.55 MHz?
> I will have problems fitting the BWD_90 into my back yard so a BWD_65
would
> be better but would like to use it on the VK 80 metre band.
> with thanks Andy VK3AS and VK3DTO
> replys can come to squires@bigpond.com thanks!
>
>

3464. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-04 23:37:17 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C107AD.FA211582@uci.edu>
Source record: 94019

Cecil Moore wrote:
> > Really? It doesn't act like a reflection. There isn't a reflective
> > surface.
>
> Of course, it acts like a reflection and of course there is a reflective
> surface if it is non-glare glass or a point if it is in a transmission
> line. It is exactly what Walt has dubbed a "virtual short" and it is
> a short for voltage, but not for current.

I remember when you were just as dubious about this as I am. How does something that isn't a real short - and apparently doesn't even act like a real short - cause real reflections? I'm not saying it doesn't. I'm just saying that if you know how, please explain it. Thanks.

73, Jim AC6XG

3465. Re: Stacking Distance Question. More Information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 00:10:00 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40c10f63$0$439$5cbedd26@news.real-time.com>
Source record: 94020

I think one other factor not factored in (sorry, I just had to do that, it's friday), is that no one has written a good optimizer for loop/quad yagis.

I wonder if one could craft a converter that makes equivalent loops out of regular dipole elements, then you could convert optimized yagis to loops yagis. That assumes a lot, of course, like spacing between the 2 types works the same. Probably won't work at all, but if it's possible to do it, I bet I have the way. Same one I gave to Brian to do scaling in YO. :)

tom
K0TAR

Ian White, G3SEK wrote:

> I'm sorry that you and your friends weren't successful... but that
> doesn't prove it can't be done.
>
> Microwave operators regularly use long quads (loop yagis) with 20, 30
> and even more elements. Range measurements *prove* that they work, about
> the same as conventional yagis of the same boom length, but the loop
> elements do have some constructional advantages for the low microwave
> bands.
>
> As with any yagi-type antenna, you need to add significant numbers of
> extra elements and boom length in order to see a significant increase in
> gain. If you do it right, the gain will come.
>
>

3466. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 01:23:00 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <kd9wc.10136$tl4.1343@bignews6.bellsouth.net>
Source record: 93921

How about a 20-meter J-Pole (hear me out) - it is an end-fed half-wave ----
just mount it horizontally
it feeds from one end - so there you go.

Hal
w4pmj

"hello" <hello@nospam.com> wrote in message
news:SxLvc.49522$zm5.25179@nntpserver.swip.net...
>
> HI
> I want to put a dipole for 20m in my garden.
> A tree and the home roof will be ok to fix the extremity.
> My problem is the feed point : If IA center feed it , the feed line will
> just hang at the center of the garden, something not acceptable by the
> YL :-)
>
> So I'm looking for a way to feed it by one "side".
> I could endfeed it, but impedance matching is not so easy at such a high
> impedance.
> Then, after reading lots of post in this newsgroup, I read about the
> sleeve antenna : generaly a vertical dipole where one leg is a sleeve.
> Coax enter in the sleeve to the center feed point.
> I think this antenna could work horizontaly and for HF and solve my
> problem. Now, hanging horizontaly a 5m long metallic sleeve is surely
> not a good idea, but at HF , I thing that man could replace the sleeve
> by some wire cage.
> So I end up with the idea of a cage or biconic dipole , with the coax
> entering horizontaly in the middle of the cage to the center.
>
> What do you think of this idea ?
> How many wire for the cage 2 (a bowtie), 3, more ?
> Do you have a better one for my particular constrains ?
>
> Lots of questions, but I'm sure you will have lots of answers !
>
> Thanks in advance
>
> Thierry
> F4DWV

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3467. Re: Jbeam antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 01:36:50 UTC
From: mike <n0qfv@stic.net>
Message-ID: <40c123a9$0$15830$39cecf19@news.twtelecom.net>
Source record: 93922

Bob Dixon wrote:
> Sorry I don't have time to deal with shipping them. They are here if
> someone would like to come and get them. These are the 2 meter versions.
>
> Bob
>
>Thanks for the reply Bob. Mike

3468. Re: Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 01:54:08 UTC
From: xx <WB6KCN@pacbell.net>
Message-ID: <4J9wc.5613$Ed6.260@newssvr27.news.prodigy.com>
Source record: 93923

Thanks for the insight guys. There were some pearls in there.

Eric

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:c9qpn4$660$1@newshost.mot.com...
>
> "hello" <hello@nospam.com> wrote in message
> news:zR4wc.49708$zm5.25052@nntpserver.swip.net...
> > Eric Schumacher wrote:
> > > Hi Group
> > >
> > > Can anyone give me a brief explanation of the theory of operation of a
> > > commerical FM broadcast antenna. Specfically the Jampro JMPC (picture
> > > at)http://www.jampro.com/fma/jampjmpc.htm It looks to me like a
couple
> of
> > > 1/2 wave dipoles each folded into V and fed in phase using two gamma
> > > matches.
> >
> > Looks like a lindenblad antenna
> > (http://www.amsat.org/amsat/articles/w6shp/lindy.html)
> > with a original feeding.
> > Thierry F4DWV
>
> Not to me. It looks like the lindenblad elements are fed IN phase, right?
>
> Differences
> JMPC Lindenblad
> -two bent half waves -four straight half waves
> -Elements in two planes -elements in four planes
> -symmetry around the -symmetry around the center
> center of the two of the four antennas
> elements for 180 for every 90 degrees
> degrees of rotation of rotation
>
> similarities
> circular polarization
> Perhaps fed in phase elements
> Weird.
>
> --
> Steve N, K,9;d, c. i My email has no u's.
>
>

3469. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 03:01:18 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <9jb2c09noh42edjnth7e5m7jmq6fp6r7g9@4ax.com>
Source record: 93924

On Thu, 03 Jun 2004 21:40:02 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Well, Cecil, perhaps I don't understand Melles-Griot. However, when an EM wave
>> encounters a short circuit the E field goes to zero, but in its change from
>> normal level to zero, that changing field develops a corresponding H field that
>> adds to its original value, causing it to double--the H field does NOT go to
>> zero. But as it returns to its normal value that change in turn develops a new E
>> field propagating in the opposite direction. From there on the EM field
>> reconstitutes itself with normal E and H fields of equal value, each supporting
>> one half of the propagating energy.
>
>I absolutely agree, Walt, "when an EM wave encounters a short circuit ...".
>But when "complete destructive interference" occurs, something else happens.
>The E-field goes to zero AND the H-field (B-field) goes to zero at the same
>time. If you concentrate on the voltage, it looks like a short. If you
>concentrate on the current, it looks like an open. It is both or neither.
>Complete destructive interference requires that both fields go to zero
>simultaneously and emerge as constructive interference in the opposite
>direction obeying the rule that E/H=V/I=Z0. It is an energy reflection
>that is also an impedance transformation at an impedance discontinuity.
>
>Let's assume that 100v at zero degrees with a current of 2a at 180 degrees
>encounters another wave traveling in the same rearward direction of 100v
>at 180 degrees with a current of 2a at zero degrees. These two waves cancel.
>The voltage goes to zero AND the current goes to zero. Each wave was associated
>with 200 watts. So a total of 400 watts reverses directions. Assuming the
>destructive interference occurred in a 50 ohm environment and the resulting
>constructive interference occurred in a 300 ohm environment, the reflected
>wave would be 346 volts at 1.16 amps. It's pretty simple math.
>
>346*1.16 = 400 watts 346/1.16 = 300 ohms
>
>The above quantities represent the destructive/constructive interference.
>These quantities must be added to the other voltages and currents that are
>present to obtain the net voltage and net current.

Cecil, at this point I'm not clear what's happening in your above example. Where
and what is the phase reference for these two waves? It appears to me that the
reference phase must be that of the source wave, because the voltage and current
in both rearward traveling waves are 180 degrees out of phase. Educate me on how
the cancellation takes place and how the energy reverses direction.

It seems to me the out of phase voltage yields a short circuit, while the out of
phase current yields an open circuit. How can both exist simultaneously? And

further, what circuit can produce these two waves simultaneously?

In addition, I believe your example has changed the subject. My discourse concerns what occurs to an EM wave when it encounters a short circuit. In this case you're going to have to prove to me that both E and H fields go to zero. IMO it can't happen. The E field collapses to zero while the H field doubles, because the energy in the changing E field merges into the H field. Before the EM wave encountered the short both fields contained the same energy, thus the E-field energy adding to the original H field energy, doubles it, and while that H field was changing it was developing a new E field that launches a new wave in the opposite direction, the reflected wave.

So my argument with you, Cecil, is that I maintain the H field doubles on encountering a short circuit, while you maintain that both E and H fields go to zero. What's your answer to this dilemma?

Walt
Walt

3470. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 03:27:51 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c13ec0$1_6@corp.newsgroups.com>
Source record: 93925

Reg Edwards wrote:
> "Cecil Moore" wrote
>>I'm talking about one particular transmission line,
>
> Cec, you can't talk about one particular transmission line in an argument in
> favour of anything in general.

Reg, you remind me of the lady at the DMV in California. I told her
that I took my ham plates off my camper and put them on my pickup.
She said I couldn't do that. I told her, sorry, I already did that.
--
73, Cecil http://www.qsl.net/w5dxp

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3471. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 03:42:14 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c14221_6@corp.newsgroups.com>
Source record: 93926

Jim Kelley wrote:
> How does
> something that isn't a real short - and apparently doesn't even act like
> a real short - cause real reflections? I'm not saying it doesn't. I'm
> just saying that if you know how, please explain it. Thanks.

I can't explain how but I certainly can explain why.

There are only two directions of energy flow available in a transmission
line. Since destructive interference occurs in one direction at a match
point, constructive interference must occur in the other direction. It's
all explained on the Melles-Groit web page and in _Optics_, by Hecht.
--
73, Cecil http://www.qsl.net/w5dxp

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3472. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 04:06:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c147c4_6@corp.newsgroups.com>
Source record: 93927

Walter Maxwell wrote:
> Cecil, at this point I'm not clear what's happening in your above example. Where
> and what is the phase reference for these two waves? It appears to me that the
> reference phase must be that of the source wave, because the voltage and current
> in both rearward traveling waves are 180 degrees out of phase. Educate me on how
> the cancellation takes place and how the energy reverses direction.

J. C. Slater explains how the cancellation takes place.
"The method of eliminating reflections is based on the interference
between waves. Two waves half a wavelength apart are in opposite
phases, and the sum of them, if their amplitudes are numerically
equal, is zero. The fundamental principle behind the elimination of
reflections is then to have each reflected wave canceled by another
wave of equal amplitude and opposite phase."

Note that the above applies to both voltage waves and current waves.
Both voltage and current go to zero during complete destructive interference,
i.e. both E-field and H-field go to zero during complete destructive
interference.

> It seems to me the out of phase voltage yields a short circuit, while the out of
> phase current yields an open circuit. How can both exist simultaneously?

They can't, and that's my argument. It's easy to understand. If the two rearward-
traveling voltages are 180 degrees out of phase then the two rearward-traveling
currents MUST also be 180 degrees out of phase, since the reflected current is
ALWAYS 180 degrees out of phase with the reflected voltage. If one looks only
at the voltages, one will say it's a short-circuit. If one looks only at the
currents, one will say it's an open-circuit.

> And further, what circuit can produce these two waves simultaneously?

According to J. C. Slater (and Reflections II, page 23-9) a match point
produces these two waves simultaneously, two reflected voltages 180 degrees
out of phase and two reflected currents 180 degrees out of phase.

> In addition, I believe your example has changed the subject. My discourse
> concerns what occurs to an EM wave when it encounters a short circuit.

There is no argument about what happens at a short circuit. What I am saying
is that a match point is NOT a short circuit.

> In this
> case you're going to have to prove to me that both E and H fields go to zero.
> IMO it can't happen.

J. C. Slater says that's what happens in the above quote. Voltages 1/2WL apart in time cancel to zero. Currents 1/2WL apart in time cancel to zero.

> So my argument with you, Cecil, is that I maintain the H field doubles on
> encountering a short circuit, while you maintain that both E and H fields go to
> zero. What's your answer to this dilemma?

My argument is that it is NOT a short circuit. It is "complete destructive interference" as explained in _Optics_, by Hecht where both the E-field and B-field go to zero. J. C. Slater says that the two rearward-traveling voltages are 180 degrees out of phase and the two rearward-traveling currents are 180 degrees out of phase. So whatever happens to the voltage also happens to the current, i.e. destructive interference takes both voltage and current to zero.
--
73, Cecil http://www.qsl.net/w5dxp

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3473. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 05:14:49 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <o7l2c05gie43f306fnf26ce3fn8hm7drk8@4ax.com>
Source record: 93928

On Fri, 04 Jun 2004 23:06:16 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>> And further, what circuit can produce these two waves simultaneously?
>
>According to J. C. Slater (and Reflections II, page 23-9) a match point
>produces these two waves simultaneously, two reflected voltages 180 degrees
>out of phase and two reflected currents 180 degrees out of phase.
You know, Walt, just like a wave breaking against the reef. The coral
reflects a wave of water, and a wave of salt, and perhaps a wave of
brine shrimp... If you correspond along these lines long enough, you
may rummage up a chowder from Cecil, but I wouldn't expect
Chateï¿½ubriand.

73's
Richard Clark, KB7QHC

3474. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 06:12:56 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <euo2c0do8rode0cj23ii25umfrut9rtjcn@4ax.com>
Source record: 93929

On Sat, 05 Jun 2004 05:14:49 GMT, Richard Clark <kb7qhc@comcast.net> wrote:

>On Fri, 04 Jun 2004 23:06:16 -0500, Cecil Moore
><Cecil.A.Moore@ieee.org> wrote:
>>> And further, what circuit can produce these two waves simultaneously?
>>
>>According to J. C. Slater (and Reflections II, page 23-9) a match point
>>produces these two waves simultaneously, two reflected voltages 180 degrees
>>out of phase and two reflected currents 180 degrees out of phase.
>You know, Walt, just like a wave breaking against the reef. The coral
>reflects a wave of water, and a wave of salt, and perhaps a wave of
>brine shrimp... If you correspond along these lines long enough, you
>may rummage up a chowder from Cecil, but I wouldn't expect
>Chateï¿½ubriand.

>73's
>Richard Clark, KB7QHC

Well, Richard, if I ain't gonna git Chateaubriand I ain't goin'.

Walt

3475. Re: Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 06:13:04 UTC
From: Dave Barnett <davencinNO@SPAMtdl.com>
Message-ID: <qap2c0hndplqpc2atslj3e474l028p8773@4ax.com>
Source record: 93930

On 3 Jun 2004 08:06:06 -0700, dan_hoffard@hailmail.net (Dan) wrote:

>Thanks everyone for all the responses. Would using a surge protector
>on the devices being RF'd to death help?
>
Some of the surge protectors have RF isolation, but most of the
low-cost ones do not. Winding the cords around a ferrite rod might
help, but I'd try connecting your antenna tuner to a good ground, then
follow the advice of someone else here - use only enough power to
maintain communications. Balanced feeder to the antenna line will
probably help also if that's possible in your situation.

Dave B.

3476. If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 07:03:35 UTC
From: yea right <spam@spam.spam>
Message-ID: <pan.2004.06.05.07.04.03.720063@spam.spam>
Source record: 93931
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

If you value radio, this may be the last and only chance to have your voice heard to stop BPL from destroying your hobby. The FCC has extended the comment period for BPL.

It is VERY simple to file a FCC comment. Click the link below and enter

03-104

in box #1 (proceeding number) and fill in the blanks. The simplest way to comment is to type your comment into the box on the bottom of the form.

http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi

If you can't think of any thing to type or wish to make this as painless as possible, you can cut-n-paste the comment I typed below.

/******************************/

In Writing, I wish to persuade the FCC from allowing BPL to be implemented. The destruction or at the least, deterioration of the shortwave bands is not only a violation of ITU laws that protect international broadcasters from interference and jamming, it will be destroying many people's life hobby. Amateur radio will be reduced to users with high-power amplifiers and large antennas. Emergency communications will be hindered to levels directly responsible for the loss of life.

There are many technologies that make BPL unnecessary. BPL will never be able to carry the high bandwidth demands for mass distribution of video much less the up-and-coming HDTV.

Please do not destroy the foundation of radio communication for a unneeded technology that is only a band-aid and hindrance to the advancement of broadband technology.

3477. Re: Stacking Distance Question. More Information

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 07:18:36 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <uNvXeyCMPXwAFAek@ifwtech.co.uk>
Source record: 93932

Tom Ring wrote:

>> Microwave operators regularly use long quads (loop yagis) with 20,
>>30 and even more elements. Range measurements *prove* that they work,
>>about the same as conventional yagis of the same boom length, but the
>>loop elements do have some constructional advantages for the low
>>microwave bands.
>> As with any yagi-type antenna, you need to add significant numbers
>>of extra elements and boom length in order to see a significant
>>increase in gain. If you do it right, the gain will come.
>>
>I think one other factor not factored in (sorry, I just had to do that,
>it's friday), is that no one has written a good optimizer for loop/quad
>yagis.
>
>I wonder if one could craft a converter that makes equivalent loops out
>of regular dipole elements, then you could convert optimized yagis to
>loops yagis.

The practical advantages of loop yagis lie in their element construction, which is a circle rolled from flat strip. Unfortunately, that is a very difficult shape to model with any software I'm aware of.

>That assumes a lot, of course, like spacing between the 2 types works
>the same.

Which it doesn't, because parallel-spaced loops are very obviously different from parallel-spaced rods, and are going to interact in a different way. The general rules for building yagis are the same - progressively shorter loop lengths along the boom; progressively increase the spacing until you reach a certain limit, and then keep it constant - but the details are definitely going to be different. And it's those small details that make the difference between a good, average or poor yagi.

>Probably won't work at all, but if it's possible to do it, I bet I have
>the way. Same one I gave to Brian to do scaling in YO. :)
>
It would certainly be very difficult, but I doubt if it will ever be done. Existing loop yagi designs are already quite close to the theoretical optimum for the boom-length, so the limited rewards wouldn't justify the effort.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3478. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 07:31:23 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <okr2c0l9s77bgq6o7ksil66fgiqobmd62v@4ax.com>
Source record: 93933

On Fri, 04 Jun 2004 23:06:16 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Cecil, at this point I'm not clear what's happening in your above example. Where
>> and what is the phase reference for these two waves? It appears to me that the
>> reference phase must be that of the source wave, because the voltage and current
>> in both rearward traveling waves are 180 degrees out of phase. Educate me on how
>> the cancellation takes place and how the energy reverses direction.

Cecil, your reference below to Chapter 23 in Reflections has re-oriented me and I'm now on your page. This is the case of a 1/4wl matching transformer. I didn't recognize my own writing. Sorry.

>J. C. Slater explains how the cancellation takes place.
>"The method of eliminating reflections is based on the interference
>between waves. Two waves half a wavelength apart are in opposite
>phases, and the sum of them, if their amplitudes are numerically
>equal, is zero. The fundamental principle behind the elimination of
>reflections is then to have each reflected wave canceled by another
>wave of equal amplitude and opposite phase."

Yes, Cecil, this quote is my Ref 35, which I used to support this concept in my QST article in Oct 1974, so I am well familiar with it. And yes, you are correct in that the waves reflected from points A and B in Fig 6 are in the phase you state.

>Note that the above applies to both voltage waves and current waves.
>Both voltage and current go to zero during complete destructive interference,
>i.e. both E-field and H-field go to zero during complete destructive
>interference.

But Cecil, take another look at Fig 6 on page 23-5 to note that those two waves arrive 180 out of phase at point A, which means only that the E and H fields cancel in the rearward direction only, resulting in a Zo match to the source. But what's important (and I inadvertantly omitted this fact in the book, which will be corrected in III) is that when the waves reflected from B reach A they find a discontinuity at A of an open-circuit type condition, because the line Zo now goes from low to high (in the rearward direction). Thus when the waves reflected at B arrive at A the voltage which is already at 360 (0) degrees does not change phase, but the current which is at 180 degrees on arrival changes by 180 due to the open circuit at A to rearward traveling waves. Thus the current is now also at 0 degrees. With both voltage and current at 0 degrees relative to the source, all the power in the waves reflected at B are re-reflected at A and add to the source power.

Consequently, Cecil, both the E and H fields go to zero only in rearward direction at the match point, which is necessary for no reflections to travel rearward of the match point, but the H field goes to zero only temporarily while the E field is doubled temporarily, as they should when encountering an open circuit as they do on arriving at A.

>> It seems to me the out of phase voltage yields a short circuit, while the out of
>> phase current yields an open circuit. How can both exist simultaneously?

I've answered my own dumb question here.

>They can't, and that's my argument. It's easy to understand. If the two rearward-
>traveling voltages are 180 degrees out of phase then the two rearward-traveling
>currents MUST also be 180 degrees out of phase, since the reflected current is
>ALWAYS 180 degrees out of phase with the reflected voltage. If one looks only
>at the voltages, one will say it's a short-circuit. If one looks only at the
>currents, one will say it's an open-circuit.

I think I've addressed this paragraph above.

>> And further, what circuit can produce these two waves simultaneously?

As I embarrassingy discovered it's the 1/4wl transformer--dumb me.

>According to J. C. Slater (and Reflections II, page 23-9) a match point
>produces these two waves simultaneously, two reflected voltages 180 degrees
>out of phase and two reflected currents 180 degrees out of phase.
>
>> In addition, I believe your example has changed the subject. My discourse
>> concerns what occurs to an EM wave when it encounters a short circuit.

I was confused here, Cecil, because you did change the subject from discussing what happens to the E and H fields when encountering a short to the 1/4wl transformer example without my catching on to the change. As I said, dumb me.

>There is no argument about what happens at a short circuit. What I am saying
>is that a match point is NOT a short circuit.

In this case the match point at A is an open circuit.

>> In this
>> case you're going to have to prove to me that both E and H fields go to zero.
>> IMO it can't happen.
>
>J. C. Slater says that's what happens in the above quote. Voltages 1/2WL apart
>in time cancel to zero. Currents 1/2WL apart in time cancel to zero.

Yep, but only in the rearward direction.

>> So my argument with you, Cecil, is that I maintain the H field doubles on
>> encountering a short circuit, while you maintain that both E and H fields go to
>> zero. What's your answer to this dilemma?

We've answered this.

>My argument is that it is NOT a short circuit. It is "complete destructive
>interference" as explained in _Optics_, by Hecht where both the E-field and
>B-field go to zero. J. C. Slater says that the two rearward-traveling voltages
>are 180 degrees out of phase and the two rearward-traveling currents are 180
>degrees out of phase. So whatever happens to the voltage also happens to the
>current, i.e. destructive interference takes both voltage and current to zero.

I'll not argue with the way Hecht describes the phenomena.

G'nite, Cecil, it's 3 :20 AM and I've got to go back to bed.

3479. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 07:54:24 UTC
From: Mike Terry <miketerry73@btinternet.com>
Message-ID: <c9ru7g$55q$1@hercules.btinternet.com>
Source record: 93934
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Excellent - can I copy this to other groups etc?

Mike

"yea right" <spam@spam.spam> wrote in message
news:pan.2004.06.05.07.04.03.720063@spam.spam...
> If you value radio, this may be the last and only chance to have your
> voice heard to stop BPL from destroying your hobby. The FCC has extended
> the comment period for BPL.
>
> It is VERY simple to file a FCC comment. Click the link below and enter
>
> 03-104
>
> in box #1 (proceeding number) and fill in the blanks. The simplest way to
> comment is to type your comment into the box on the bottom of the form.
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
>
>
> If you can't think of any thing to type or wish to make this as painless
> as possible, you can cut-n-paste the comment I typed below.
>
> /******************************/
>
> In Writing, I wish to persuade the FCC from allowing BPL to be
> implemented. The destruction or at the least, deterioration of the
> shortwave bands is not only a violation of ITU laws that protect
> international broadcasters from interference and jamming, it will be
> destroying many people's life hobby. Amateur radio will be reduced to
> users with high-power amplifiers and large antennas. Emergency
> communications will be hindered to levels directly responsible for the
> loss of life.
>
> There are many technologies that make BPL unnecessary. BPL will never be
> able to carry the high bandwidth demands for mass distribution of video
> much less the up-and-coming HDTV.
>
> Please do not destroy the foundation of radio communication for a unneeded
> technology that is only a band-aid and hindrance to the advancement of
> broadband technology.
>
>

3480. Re: Antenna Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 08:15:12 UTC
From: Drew Squires <asquires@bigpond.net.au>
Message-ID: <kifwc.6767$rz4.1802@news-server.bigpond.net.au>
Source record: 93935

Sounds normal to me VK3DTO
"Dan" <dan_hoffard@hailmail.net> wrote in message
news:648fff84.0405311132.2448e399@posting.google.com...
> I have a dipole in the attic tuned to around 14Mhz. Whenever I
> transmit at full power, the laptop sitting next to my rig goes crazy
> and the light in the next room turns on (its hooked up to a clapper).
> When on 80 meters, if I transmit at full power and use my antenna
> tuner to tune near perfect SWR, the treadmill in back of me turns on.
> Is this normal? Should I worry about excessive radiation?
>
> Thanks,
> Dan

3481. VHF yagi element diameter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 10:02:52 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2idk1mFm05hoU1@uni-berlin.de>
Source record: 93936

I've got a design from Wes Stewart (see "Wideband VHF Yagi - Do I have to use a folded dipole configuration?" below) for a 6 element yagi covering 156-162 Mhz. I'm not sure what is, I mean NBS, OWA.-whatever. (Wes, I'd like to know if possible because then I know what I'm dealing with).

Anyway, DE is 5/16" and parasitic elements are 3/16" in this design.

Now not being an antenna buff I have, regarding the element diameters, the following thoughts arise:

1 Better not think about altering any of the element diameters. Advantages: Does not run risk of altering design performance. Disadvantages: If I alter diameters then maybe performance will suffer or I'll have to try to engage in a bit of designing myself to ensure performance does not suffer from any changes.Hey I'm not a designer.

2 Stick with diameters because the element diameters given seem to me to make for a lighter antenna with reduced windload. Why increase element diameters (if you don't feel you have to) if there is no performance advantage, all you are doing is creating a bulkier antenna.

3 Alter element diameter(s) because of the limitations imposed by the materials you can get your hands on. For instance let's say I can buy a commercial dipole center peice that takes 1/2" tube. So, the reasoning is alter DE to 1/2", make any adjustments to maintain performance. And what if you could buy commercial fixings that allow you to fix 3/8" tube, you might then decide to substiutute 3/8" tube for the 3/16" parasitic elements.

As you can see, all these things go thru my mind after being presented with a design, and I get a bit flustered.

You might say that the conserative guy, afraid to risk anything just sticks with the original elemment dimentions no matter what.

The give-it-a-go guy says, don't be afraid, if you feel you want to use 1/2" for DE, and perhaps 3/8" for the parasiticvs, alter that in the 4nec2 programme and see what happens. Or is that going to lead to disaster! The changes being too great.

One thing though, I suppose after makling alterations and before construction, one could pass the new design through the hands of antenna buffs. Dead simple to email the NEC file.

One time most constructors would just be presented with a design and they would stick to it no matter what. Nowadays with these antenna programs people who know little (like me) can seek to mess with the design if for instance one has some tubing to hand that is not the same diameter as in the

design. Perhaps that can be gotten away with. Maybe.

I think there is something to be said for 2. Might mean items are not available off the shelf though.

3482. Re: VHF yagi element diameter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 10:17:47 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2idktiFlegdtU1@uni-berlin.de>
Source record: 93937

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2idk1mFm05hoU1@uni-berlin.de...

> I think there is something to be said for 2. Might mean items are not
> available off the shelf though.

Actually the only issue is the dipole center peice. Getting 3/16"and 5/16"
tubing is no big problem, (although a lot of stockists just have 3/8").

5/16" will fit with sleeving in a dipole center peice meant for 1/2"tube.

I bet I could substitute 5/16" with 3/8" for DE in the design with very
little efect.

That leaves me to mount 3/8" tube in a dipole center peice meant to take
1/2". Simple, sleeving should do.

And then you think, ah, just use 1/2" tubing for DE. Again that won't make
much difference.

3483. Lightweight yagi antennas as a design philosphy

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 10:30:55 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2idlmfFm0dm3U1@uni-berlin.de>
Source record: 93938

Is anyone engaged is a design philosophy that seeks the design of VHF yagi's with the smallest acceptable diameter of elements?

What you are trying to do is to design lighweight VHF yagis, you are seeking how small you can go with element diameters before performance begins to suffer.

3484. Re: VHF yagi element diameter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 11:11:35 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ido2gFkuh0lU1@uni-berlin.de>
Source record: 93939

From G3SEK site:

IMPORTANT WARNING!
If you are copying an existing Yagi design, you must copy:

all the element lengths
all the element diameters
the element mounting method - why?
That means: copy EXACTLY! If you change any of these important details, you are building a new design!

Gosh, just what m I getting myself into here. All I have is an NEC file for a 156-162 Mhz yagi.That's a long way from having a design is it not.

3485. Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 11:37:58 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2idpmbFlrb3tU1@uni-berlin.de>
Source record: 93940

I don't know whether I've got the know-how or the time to design a homebrew VHF yagi for the marine band.

So, is anyone out there interested in providing a service to all marine band DXers/eavesdroppers of designing and producing *full constructional notes* on a range of marine antennas, and then putting the designs up on a website.

All antennas shall principally be for reception.

All antennas should be described as covering 156-162Mhz.

As far as the yagis are concerned, they should range from 2 to 6 elements.

All yagis shall have 4mm (or 3/16") diameter parasitic elements.

All parasitic elements shall be secured to boom by nylon rivets as per G3SEK's notes at:
http://www.ifwtech.co.uk/g3sek/diy-yagi/#Construction

All booms shall consist of either 20mm or 15mm square tubing.

The DE for all yagis shall be 8mm (or 5/16").

The DE for all yagis shall be a regular hertz dipole.

There shall be some kind of balun.

Please, please!

3486. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 11:57:49 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2idqp8Fm3opuU1@uni-berlin.de>
Source record: 93941

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2idpmbFlrb3tU1@uni-berlin.de...

> All yagis shall have 4mm (or 3/16") diameter parasitic elements.

I think this is reasonable. It will keep the antenna lightweight. Why have
bigger if you don't have to.

> The DE for all yagis shall be 8mm (or 5/16").

Possibly this could be 3/8" because this size might generally more easily
available.

> The DE for all yagis shall be a regular hertz dipole.

Why have a folded dipole if you don't have to.

How are you going to mount DE? Are there any commercially availble dipole
centers that take 5/16" or 3/8" tube? Will you have to homebrew the dipole
center peice?

(In UK I can obtain commercial dipole centers that hold 1/2". I've not
sourced any others that take 5/16" or 3/8").

3487. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 12:42:13 UTC
From: Charlie <no@spam.thanks.com>
Message-ID: <HZudney098swIlzdRVn-hw@comcast.com>
Source record: 93942
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Here's the text I entered - feel free to cut / paste / modify, etc.

Dear Commissioners, I wish to express my opposition to Broadband Over Power Line (BPL).

My opposition is based on the interference to the Amateur Radio service and to those listening to shortwave radio.

The Amateur Radio service was a valuable service on 9/11, providing communications backup and helping survivors contact loved ones. Given the current terrorist threat we now face, I believe that it is unreasonable to hamper this valuable - and free - resource with a known source of interference.

Further, it is simply unnecessary. While I'm sure that the power companies are looking for a new profit center, that is insufficient reason to allow them to run roughshod over others who don't have the enormous budgets for political lobbyists. There are other alternatives available for broadband that don't interfere with other services, including cable, DSL and satellites services such as DirectWay.

Thanks you for considering my petition.

Charlie, KS1C

3488. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:00:32 UTC
From: fractenna@aol.com
Message-ID: <20040605090032.06192.00000396@mb-m13.aol.com>
Source record: 93943

>I don't know whether I've got the know-how or the time to design a homebrew
>VHF yagi for the marine band.
>
>So, is anyone out there interested in providing a service to all marine band
>DXers/eavesdroppers of designing and producing *full constructional notes*
>on a range of marine antennas, and then putting the designs up on a website.
>
>All antennas shall principally be for reception.
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>As far as the yagis are concerned, they should range from 2 to 6 elements.
>
>All yagis shall have 4mm (or 3/16") diameter parasitic elements.
>
>All parasitic elements shall be secured to boom by nylon rivets as per
>G3SEK's notes at:
>http://www.ifwtech.co.uk/g3sek/diy-yagi/#Construction
>
>All booms shall consist of either 20mm or 15mm square tubing.
>
>The DE for all yagis shall be 8mm (or 5/16").
>
>The DE for all yagis shall be a regular hertz dipole.
>
>There shall be some kind of balun.
>
>Please, please!
>

Just out of curiousity, why can't these be purchased already from commercial
sources? Note: I am not in the 'lawn furniture in the sky' business.

73,
Chip N1IR

3489. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:04:38 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <spCdnVDhE_Z8WVzdRVn-sw@comcast.com>
Source record: 93944

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2idpmbFlrb3tU1@uni-berlin.de...
> I don't know whether I've got the know-how or the time to design a
homebrew
> VHF yagi for the marine band.
>
> So, is anyone out there interested in providing a service to all marine
band
> DXers/eavesdroppers of designing and producing *full constructional notes*
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>
> The DE for all yagis shall be a regular hertz dipole.
>
> There shall be some kind of balun.
>
> Please, please!
>
If I was going to put up an antenna like that, I would look for a used
CushCraft 2m 7 element antenna, and cut it down. I once bought one for
U$7.00. Several years ago QST had an article on making a VHF TV antenna work
on 2M; Changing that to 156-162 instead should be simple.

Tam/WB2TT

3490. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:06:12 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2idupbFm2b1eU1@uni-berlin.de>
Source record: 93945

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2idpmbFlrb3tU1@uni-berlin.de...

> So, is anyone out there interested in providing a service to all marine
> band DXers/eavesdroppers of designing and producing *full
> constructional notes* on a range of marine antennas, and then
> putting the designs up on a website.

This would probably be the start of your 6 element design:

Parasitic elements 4mm dia rod , DE 8mm or 5/16" tube.

```
------------------|------------------- R 37.106"
| ^ 0.000"
------------------|------------------ DE 36.772"
| ^ 9.275"
------------------|------------------ D1 34.154"
| ^ 12.250"
------------------|------------------ D2 33.34"
| ^ 23.800"
------------------|------------------ D3 33.34"
| ^ 34.213"
------------------|------------------ D4 32.58"
^ 47.211"
```

IOW:
X Y Z Dia"

REF End 1 0.000 -18.553 0.000 0.187
End2 0.000 18.553 0.000

DE End1 9.275 -18.368 0.000 0.312
End2 9.275 18.368 0.000

DIR1 End1 12.250 -17.077 0.000 0.187
End2 12.250 17.077 0.000

DIR2 End1 23.800 -16.672 0.000 0.187
End2 23.800 16.672 0.000

DIR3 End1 34.213 -16.672 0.000 0.187
End2 34.213 16.672 0.000

DIR4 End1 47.211 -16.229 0.000 0.187
End2 47.211 16.229 0.000

Boom 15mm square, 50" long.

Parasitic elements slotted through boom with nylon rivets system.

DE using commercial dipole center peice.

DE hertz dipole with some kind of balun arrangement.

Potential problem?: Parasitics slot through boom because they are held in place (say) by the nylon rivets system, DE will *not* pass through boom but above it. Will that make a difference?

As you see I have some dimensions given me, but I have no skill to take these dimensions (assumimng I stick with them) as a starting point and produce an actual constructional design.

3491. Re: Lightweight yagi antennas as a design philosphy

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:10:45 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <jZKdnTIfgO3MW1zdRVn-uA@comcast.com>
Source record: 93946

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2idlmfFm0dm3U1@uni-berlin.de...
> Is anyone engaged is a design philosophy that seeks the design of VHF
yagi's
> with the smallest acceptable diameter of elements?
>
> What you are trying to do is to design lighweight VHF yagis, you are
seeking
> how small you can go with element diameters before performance begins to
> suffer.
>
Richard,
I think if it is heavy enough to physically support itself, it will be electrically OK. This turns out to be about 1/4 inch (6 mm) tubing at 50 MHz, and 1/8 inch (3mm) hard aluminum rod at 144 MHz and above.

Tam/WB2TT

3492. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:12:16 UTC
From: fractenna@aol.com
Message-ID: <20040605091216.06192.00000397@mb-m13.aol.com>
Source record: 93947

>>So, is anyone out there interested in providing a service to all marine band
>>DXers/eavesdroppers

Why, exactly, is there a need to 'eavesdrop'? Who, in particular, are you trying to 'eavesdrop' on? How many 'eavesdroppers' would seek such 'service'?

I am confused by your motivations and would be better enlightened with more info in this regard. I ususpect I am not alone in this confusion.

Many thanks,

73,
Chip N1IR

3493. Re: VHF yagi element diameter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:17:13 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <9UaDI$KZfcwAFAsP@ifwtech.co.uk>
Source record: 93949

Richard wrote:
>From G3SEK site:
>
>IMPORTANT WARNING!
>If you are copying an existing Yagi design, you must copy:
>
>all the element lengths
>all the element diameters
>the element mounting method - why?
>That means: copy EXACTLY! If you change any of these important details, you
>are building a new design!

That quote is from my 'VHF/UHF Long Yagi Workshop' page - one click from
the home-page link below.

I've just updated that page, and there is now more information about
changing element diameters and mounting methods - including a small
MS-DOS program to do the boring calculations.

(I'm supposed to be painting window-frames, but this is so much more
interesting...)

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3494. Re: use of wire nuts in antenna construction

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:18:11 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040605091811.08258.00000486@mb-m12.aol.com>
Source record: 93948

>As a splice that is not under tension, should work fine. However, it
>does offer the prospect of having to tune slightly differently because
>of minimal addition of stray capacitance and inductance - depends on
>the size of the nut and the pig-tail it creates. Chances are you
>probably would notice the difference because there are so many other
>more compelling factors to pay attention to.
>
>73's
>Richard Clark, KB7QHC
>

Uh, huh..

BUm

3495. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:23:36 UTC
From: mike beauchamp <mbeauchamp@cogeco.ca>
Message-ID: <sPjwc.10780$XY6.1118631@read2.cgocable.net>
Source record: 93950

use a car jack to remove the rod or a holmes wrecker, i have used a bumper jack to pull out rods before , all you do is place the jack under the head of the ground rod and start jacking it up out of the ground and then when the jack runs out of lift simply just lower the jack head down lower and start over and it will lift 4ft at a time.... and use lots of water on the ground rod... it will kinda lubricate the rod.
"Gary Boyer" <gboyer@columbus.rr.com> wrote in message
news:0ZJvc.20287$DG4.13504@fe2.columbus.rr.com...
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY
>
>

3496. Re: Lightweight yagi antennas as a design philosphy

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:24:41 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <RUaIIrLZmcwAFAJx@ifwtech.co.uk>
Source record: 93951

Richard wrote:
>Is anyone engaged is a design philosophy that seeks the design of VHF
>yagi's with the smallest acceptable diameter of elements?
>
>What you are trying to do is to design lighweight VHF yagis, you are
>seeking how small you can go with element diameters before performance
>begins to suffer.
>
You can still buy the old Flexa-Yagis that use very thin, springy
elements made from stainless steel.

Skin losses in the stainless steel cost about 1dB at 144MHz, but no
lower-loss material has the mechanical strength to survive the loading
from ice or optimistic birds.

Very thin elements are also a serious danger to eyes and, er, other body
parts.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3497. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:29:25 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ie051Fm6s37U1@uni-berlin.de>
Source record: 93952

"Fractenna" <fractenna@aol.com> wrote in message
news:20040605091216.06192.00000397@mb-m13.aol.com...
> >>So, is anyone out there interested in providing a service to all marine
band
> >>DXers/eavesdroppers
>
> Why, exactly, is there a need to 'eavesdrop'? Who, in particular, are you
> trying to 'eavesdrop' on? How many 'eavesdroppers' would seek such
'service'?
>
> I am confused by your motivations and would be better enlightened with
more
> info in this regard. I ususpect I am not alone in this confusion.
>
> Many thanks,
>
> 73,
> Chip N1IR

Oh you got me! I've been caught out! I'm listening to the marine band. Shall
I expect the police at my door? Quickly I must hide my apperatus! I think
not.

3498. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:37:05 UTC
From: mike beauchamp <mbeauchamp@cogeco.ca>
Message-ID: <50kwc.10787$XY6.1118626@read2.cgocable.net>
Source record: 93953

you could use a bumper jack or call in a 80 ton crane to pull it out.
"Gary Boyer" <gboyer@columbus.rr.com> wrote in message
news:0ZJvc.20287$DG4.13504@fe2.columbus.rr.com...
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY
>
>

3499. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:42:24 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040605094224.08258.00000488@mb-m12.aol.com>
Source record: 93954

>
>Do you think the technology might be similar to the 160 meter indoor
>antenna called the TeslaVert?
>

What a disservice to the great name of Tesla.
Using loading coild to shorten the antenna and slap Tesla name on it to make "waves" in Antennex (BS) "magazine"?
Yea spherical top is universe "invention". I got the copper toilet bowl float on the top of my vertical to prevent corona and add some top loading and broadbanding.
Brace yourself for more "inventions" to come as we get flooded with more of un-knowledgeable hams.
Hey, maybe there is a room to sell wunderantennas to idiots?
I have 50 ohm DC to light 100% efficient, fits in a pocket miniature antenna for $100. (Secret? it is made by Ohmite) There is another one produced by GE or Phillips in China and it even provides light when power applied to it. You can use it as a lightbulb too.
I will share my profits with US gubermint.

Yuri, www.k3bu.us
www.computeradio.us home of Dream Radio One

3500. Re: Lightweight yagi antennas as a design philosphy

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:46:07 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ie144FItfm6U1@uni-berlin.de>
Source record: 93955

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:jZKdnTIfgO3MW1zdRVn-uA@comcast.com...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:2idlmfFm0dm3U1@uni-berlin.de...
> > Is anyone engaged is a design philosophy that seeks the design of VHF
> yagi's
> > with the smallest acceptable diameter of elements?
> >
> > What you are trying to do is to design lighweight VHF yagis, you are
> seeking
> > how small you can go with element diameters before performance begins to
> > suffer.
> >
> Richard,
> I think if it is heavy enough to physically support itself, it will be
> electrically OK. This turns out to be about 1/4 inch (6 mm) tubing at 50
> MHz, and 1/8 inch (3mm) hard aluminum rod at 144 MHz and above.
>
> Tam/WB2TT

Thanks. Of course over the years I'm used to seeing commercial TV and FM antennas which tend to use 3/8" and greater for elements and because just recently I've been comimg across designs using 4mm tubing it seems odd to me. As if there's just got to be some big losses or compromises on using say 4mm dia rod. But I now see that quite standard of course to use 3 and 4mm elements for high band VHFyagis. All is rather new to me. I should be seeing 4mm rod as the norm for a VHFhigh band yagi.

3501. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:59:35 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ie1tfFlicmkU1@uni-berlin.de>
Source record: 93957

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2idupbFm2b1eU1@uni-berlin.de...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:2idpmbFlrb3tU1@uni-berlin.de...
>
> > So, is anyone out there interested in providing a service to all marine
> > band DXers/eavesdroppers of designing and producing *full
> > constructional notes* on a range of marine antennas, and then
> > putting the designs up on a website.
>
>
> This would probably be the start of your 6 element design:
>
> Parasitic elements 4mm dia rod , DE 8mm or 5/16" tube.

Actually, the figure for the parasitics were given as 0.187" dia. that's
about 4.75mm or nearer 5mm than 4mm.

3502. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 13:59:36 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <10c3kd0qv1lnd1b@corp.supernews.com>
Source record: 93956

Dear Richard - no full name - no call - no location - probably not a real E-mail address:

Let me see if I understand: You have the strange idea that someone who has the experience and skill to craft for you an expensive design (for free) is looking for something to do. Strange indeed.
Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

3503. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 14:20:53 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ie35bFm03qgU1@uni-berlin.de>
Source record: 93958

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:10c3kd0qv1lnd1b@corp.supernews.com...
> Dear Richard - no full name - no call - no location - probably not a
> real E-mail address:
>
> Let me see if I understand: You have the strange idea that someone
> who has the experience and skill to craft for you an expensive design
> (for free) is looking for something to do. Strange indeed.
> Mac N8TT
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net

This is admirable.

Let me understand:

You mean that it takes weeks of constant work and a deep knowledge of antenna theory and design to take an off-the-shelf NEC file (which you can buy for a few bucks, and probably many are freely available) - to end up with a half decent antenna?

If that is the case, then of course my expectations may be unrealistic.

But I was thinking that for someone who knew what they were doing, taking an NEC file as a starting point and then applying adjustments to take into account the actual construction details would be a few hours work. Because antenna programs do all the calculations. You just need to know what you are doing.

I would not want anyone spending much time on something, of course. I just thought for someone who knew what they were doing it would a be a doddle. Heck, the real design work has been done already, it's just a matter of a few small adjustments. So I thought.

But if that is not the case, I stand corrected.

And if so, so I'd have no option but to do everything myself. Because that would practically be unavoidable. I never thought this was the case.

3504. FS: Millen antenna tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 14:30:19 UTC
From: k9sqg@aol.com
Message-ID: <20040605103019.02485.00000491@mb-m01.aol.com>
Source record: 93959

Have a James Millen antenna tuner, 92201. This is the 300 watt model but will take considerably more. 10-80 meters, panel is excellent, and included is the rare (yes, it is rare, hi) original owner's manual. Tuner can also be used between a solid state rig and a linear if the linear doesn't have an input circuit. $105 plus shipping, continental US only, please.

73s,

Evan

3505. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 14:45:28 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ie4jfFltgnoU1@uni-berlin.de>
Source record: 93960

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:10c3kd0qv1lnd1b@corp.supernews.com...
> Dear Richard - no full name - no call - no location - probably not a
> real E-mail address:
>
> Let me see if I understand: You have the strange idea that someone
> who has the experience and skill to craft for you an expensive design
> (for free) is looking for something to do. Strange indeed.
> Mac N8TT
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net
>

I bought some "models" from Mr Cebik.

This is what he says in his notes:

" Although many of the designs may be directly built from the models in this collection, the models themselves are for study purposes. Perfecting the design to a level that permits construction of an antenna that is both electrically and mechanically sound is your responsibility.

L. B. Cebik, W4RNL"

This is my problem and what I was asking for. I can mess around with the models quite freely, but perfecting the design to a level that is both electrically and mechanically sound is right now beyond me. What you are saying is that this task is such a huge one and requires great skill. Not easy then for your regular Joe ham to do much with the models in a practical way. He/she has to become something of an antenna buff for that to transpire. And because the task is so demanding, no antenna buff would ever consider producing an actual contstruction design for anyone, apart from him/herself maybe. And then he/she might condescend to allow others to copy his/her design.

3506. Re: Lightweight yagi antennas as a design philosphy

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 14:50:16 UTC
From: Tyas_MT <tyas_mt@hotplonkmail.com>
Message-ID: <40c1dda8$1@news.vallnet.com>
Source record: 93961

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2idlmfFm0dm3U1@uni-berlin.de...
> Is anyone engaged is a design philosophy that seeks the design of VHF
yagi's
> with the smallest acceptable diameter of elements?
>
> What you are trying to do is to design lighweight VHF yagis, you are
seeking
> how small you can go with element diameters before performance begins to
> suffer.
The performance that suffers (afaik) from smaller antenna elements is a
small lowering of the 'bandwidth' of the antenna, and maybe a small change
in the 1:1 swr tuning point. Mind you I'm not an expert on Yagi antennas

I built, for a 'start from scratch' foxhunt, a 3 element yagi on 2m (~146
mhz) out of magnet wire glued onto a piece of poster board. I used standard
numbers and it worked fine. The hardest part was soldering wire thinner than
my hair to the coax and anchoring the coax to the poster board so it would
get pulled off.
I won the hunt over all the 'body shielded ht' guys, even taking 10min to
build my antenna...

Later that week I used it to call into a net on a local repeater, so it
handled 15 watts without anything melting.

Much more critical on a Yagi are element spacings (directivity and
Front:back ratios) and lengths (resonant frequency).

3507. Re: Lightweight yagi antennas as a design philosphy

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 14:56:47 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <t7-dnd66arG3QlzdRVn-gQ@comcast.com>
Source record: 93962

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2ie144Fltfm6U1@uni-berlin.de...
>
> "Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> news:jZKdnTIfgO3MW1zdRVn-uA@comcast.com...
> >
> > "Richard" <nearlynews_email@ntlworld.com> wrote in message
> > news:2idlmfFm0dm3U1@uni-berlin.de...
> > > Is anyone engaged is a design philosophy that seeks the design of VHF
> > yagi's
> > > with the smallest acceptable diameter of elements?
> > >
> > > What you are trying to do is to design lighweight VHF yagis, you are
> > seeking
> > > how small you can go with element diameters before performance begins
to
> > > suffer.
> > >
> > Richard,
> > I think if it is heavy enough to physically support itself, it will be
> > electrically OK. This turns out to be about 1/4 inch (6 mm) tubing at 50
> > MHz, and 1/8 inch (3mm) hard aluminum rod at 144 MHz and above.
> >
> > Tam/WB2TT
>
> Thanks. Of course over the years I'm used to seeing commercial TV and FM
> antennas which tend to use 3/8" and greater for elements and because just
> recently I've been comimg across designs using 4mm tubing it seems odd to
> me. As if there's just got to be some big losses or compromises on using
> say 4mm dia rod. But I now see that quite standard of course to use 3 and
> 4mm elements for high band VHFyagis. All is rather new to me. I should be
> seeing 4mm rod as the norm for a VHFhigh band yagi.
>
Some of the variation in the size of tubing seems to depend on the quality
of the tubing used. Any ham antenna I have seen uses seamless fairly hard
alloy, whereas some TV antennas use a larger diameter rolled (if that is the
right term) tubing of very thin material.

Tam/WB2TT

3508. Ford Escort Hatchback Antenna Mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 15:08:34 UTC
From: rh3x@erols.com
Message-ID: <r9o3c01oq810i7libse7j4r7cicj9p3khf@4ax.com>
Source record: 93963

Need antenna mount for 1999 Ford Escort hatchback. Would like to
use HF/VHF-UHF with antenna screwin/quick disconnect arrangement.

Thanks

de Rich/N2JR

3509. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 15:14:09 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c1e44c_6@corp.newsgroups.com>
Source record: 93964

Walter Maxwell wrote:
> But Cecil, take another look at Fig 6 on page 23-5 to note that those two waves
> arrive 180 out of phase at point A, which means only that the E and H fields
> cancel in the rearward direction only, resulting in a Zo match to the source.

Yes, and that is exactly my point. EXACTLY the same thing happens to the E-fields and H-fields. That means exactly the same thing that happens to the rearward-traveling voltages also happens to the rearward-traveling currents. Two equal-magnitude/opposite-phase voltages cancel. Two equal-magnitude/opposite-phase currents cancel. That doesn't happen at either an open or a short. If one looks at just the voltages, it looks like a short. If one looks at just the currents, it looks like an open.

> With both voltage and current at 0 degrees relative to
> the source, all the power in the waves reflected at B are re-reflected at A and
> add to the source power.

Reflected waves ALWAYS have the voltage and current 180 degrees out of phase. "With both voltage and current at 0 degrees" implies a forward wave which is the *EFFECT* of re-reflection, i.e. after re-reflection. The rearward-traveling voltage and current CANNOT be in phase before the re-reflection. After the re-reflection, they are no longer rearward-traveling so they are in-phase and forward-traveling. It's a cause and effect thing.

1. Proper adjustment of the tuner/stub/quarter-wave-transformer CAUSES all voltages and currents at the perfect match point to be in-phase or 180 degrees out of phase.

2. Destructive interference between two rearward-traveling waves of equal magnitudes and opposite phases causes the E-field voltage and H-field current to go to zero simultaneously, i.e. the E-fields superpose to zero in the rearward direction and the H-fields superpose to zero in the rearward direction. EXACTLY the same thing happens to the H-fields as happens to the E-fields in the rearward direction. Neither a short nor an open acts like that.

"... reflected wavefronts INTERFERE DESTRUCTIVELY, and overall reflected intensity is a minimum. If the two reflections are of equal amplitude, then this amplitude (and hence intensity) minimum will be ZERO." From the Melles-Groit web page.

3. "... the principle of conservation of energy indicates all "lost" reflected intensity will appear as enhanced intensity in the transmitted beam." Quoted from the Melles Groit web page. They don't say how but they do say why. In a perfectly matched system, all rearward-traveling energy changes direction at the match point and joins the forward wave as constructive interference. That constructive interference energy is equal in magnitude to the energy involved in the destructive interference event. It's a simple conservation of energy

process.

>>There is no argument about what happens at a short circuit. What I am saying
>>is that a match point is NOT a short circuit.
>
> In this case the match point at A is an open circuit.

Destructive interference causes the rearward-traveling voltage to go to zero.
Voltage doesn't go to zero at an open circuit. Exactly the same thing happens
to the rearward-traveling voltages and rearward-traveling currents. Voltage
goes to zero at a short-circuit. Current goes to zero at an open circuit. A
match point causes both to go to zero in the rearward direction. That means
the voltage sees a short-circuit looking rearward and the current sees an
open-circuit looking rearward.

"Consequently, all corresponding voltage and current phasors are 180 degrees
out of phase at the matching point. ... With equal magnitudes and opposite
phase at the (matching) point, the sum of the two waves is zero." _Reflections_II_,
page 23-9. This is true for both step-up or step-down impedance discontinuities.
At a perfectly matched point, the two rearward-traveling voltages are ALWAYS of
equal magnitude and opposite phase. The two rearward-traveling currents are
ALWAYS of equal magnitude and opposite phase. That's the only way complete
destructive interference of rearward-traveling waves can occur.

>>J. C. Slater says that's what happens in the above quote. Voltages 1/2WL apart
>>in time cancel to zero. Currents 1/2WL apart in time cancel to zero.
>
> Yep, but only in the rearward direction.

The rearward direction is what we are talking about. The point is that EXACTLY
the same thing happens to the two rearward-traveling current waves as happens
to the two rearward-traveling voltage waves. A short-circuit doesn't affect
voltages and currents in the same way. An open-circuit doesn't affect
voltages and currents in the same way. A match point affects the rearward-
traveling voltages and rearward-traveling currents in EXACTLY the same way.
The re-reflection at a match point is a conservation of energy reflection where
the rearward destructive interference energy supplies energy to constructive
interference in the opposite direction. For light, the equation are:

Destructive Interference Irradiance = I1 + I2 - 2{SQRT[(I1)(I2)]} (9.16)

Constructive Interference Irradiance = I1 + I2 + 2{SQRT[(I1)(I2)]} (9.15)

Optics, by Hecht, fourth edition, page 388

Note the similarities to equations 13 and 15 in Dr. Best's QEX article,
Part 3.

PFtotal = P1 + P2 - 2{SQRT[(P1)(P2)]} (Eq 15)

PFtotal = P1 + P2 + 2{SQRT[(P1)(P2)]} (Eq 13)

Too bad he didn't label them as Hecht did, as "total destructive interference"
and "total constructive interference" equations.

--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3510. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 16:20:28 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2iea5sFlvnp3U1@uni-berlin.de>
Source record: 93965

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2idpmbFlrb3tU1@uni-berlin.de...
> I don't know whether I've got the know-how or the time to design a
homebrew
> VHF yagi for the marine band.
>
> So, is anyone out there interested in providing a service to all marine
band
> DXers/eavesdroppers of designing and producing *full constructional notes*
> on a range of marine antennas, and then putting the designs up on a
website.

I'm going to look at Enzec help files, I suspect I can do my own work
starting with a model. Producing full constructional notes should not be
difficult.

3511. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 16:42:52 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <WGvpcuPMgfwAFA5r@ifwtech.co.uk>
Source record: 93966

Richard wrote:
>I can mess around with the models quite freely, but perfecting the
>design to a level that is both electrically and mechanically sound is
>right now beyond me. What you are saying is that this task is such a
>huge one and requires great skill. Not easy then for your regular Joe
>ham to do much with the models in a practical way. He/she has to
>become something of an antenna buff for that to transpire.

A few years ago, if any amateur got involved in the esoteric art of antenna modelling, it was because he or she was *already* an advanced antenna buff, with lots of hands-on experience of making antennas work.

After learning about modelling, with all its tricks and traps, the next challenge was to learn how to translate the models back into workable hardware. But at least that was building a bridge between two solid foundations.

Now, it's becoming the other way around - the modelling is more accessible than the hands-on experience. Without that practical experience, translating a model into reality is like building a bridge to nowhere.

It isn't "something for someone [else] to do." Someone else can run models for you, but only the person with the hardware in their hands can work out how to build the real thing.

However, about the worst you can do is cut the elements to the wrong lengths. The program on my website (see earlier posting) will help, and you should also read all three of the links from that same page.

If you come back with a question more like: "I've tried to work out how to do this. Here are the model dimensions, here are my cutting dimensions, and here's why. Does this look reasonable?" then I'm sure you'll get a lot more help.

(Coffee mug's empty... back to the window-frames.)

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3512. Re: Ford Escort Hatchback Antenna Mount?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 17:20:21 UTC
From: Allodoxaphobia <nobody@frontier.net>
Message-ID: <slrncc407g.1ebp.nobody@localhost.config.com>
Source record: 93967

On Sat, 05 Jun 2004 11:08:34 -0400, rh3x@erols.com hath writ:
> Need antenna mount for 1999 Ford Escort hatchback. Would like to
> use HF/VHF-UHF with antenna screwin/quick disconnect arrangement.

See
http://jonz.net/W3DHJ/6mhalo.html

where I decscribe how I built a mobile 6M Halo _and_ a mount for
the thing on a Mercury Tracer -- ought to be close enough to an
Escort....

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

3513. Re: Where can I get a lump of Sodium?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 17:40:28 UTC
From: Roger Halstead <Delete-Invallid.groups@tm.net>
Message-ID: <l114c09ugs7mq2dhs1v5fp1b5cpbfde99l@4ax.com>
Source record: 93968

On Wed, 2 Jun 2004 07:41:15 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Roger Halstead wrote:
>>>The guys who operated the heat exchangers used to
>>>complain about that highly corrosive liquid... but they were talking
>>>about the water.
>>
>>De-ionized water wants ions and it'll take them from any available
>>metal. It's particularly corrosive with brass. We had a series of
>>induction heating units that used high power RF. The tubes and coils
>>were cooled with de ionized water. A brass hose barb would crumble in
>>your hand after only a years exposure to the di water.
>>
>Vicious stuff, that water.
>
>The added problem with tube power amplifiers is that there's usually
>high voltage around. DI water is a good insulator, but if there are
>enough ions in solution the leakage current will cause electrolysis...
>which dissolves more metal ions, and then the whole system goes rapidly
>downhill.
>
I designed and built the monitoring system for the plant. to directly
measure "resistivity" in ohms per cubic centimeter. As far as I know,
they are still using the same monitor over 30 years later.

>According to an article by N6CA (which was in the ARRL Handbooks for
>some years) the secret is to monitor the DC leakage current, and change
>the water when the current starts to creep upward. Modern plastic
>components help a lot, by minimizing the total area of exposed metal.

You actually either measure or convert to ohms per cubic centimeter.
Typically the water is changed out over time, rather than letting the
resistivity drop and then change. They might dump a hundred gallons
a day, a week or what ever and replace with fresh.

Of course there was the time some one dumped a small salt shaker in
the drain. A spoon full of salt is enough to render many thousands of
gallons out of spec. Actually it shut down that part of the
operation.

Roger Halstead (K8RI & ARRL life member)
(N833R, S# CD-2 Worlds oldest Debonair)
www.rogerhalstead.com

3514. FA: Heavy Duty 20m (14mhz) Dipole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 17:46:23 UTC
From: Smog <james@burrill.co.uk>
Message-ID: <c9t0sc$6n6$1@newsg1.svr.pol.co.uk>
Source record: 93969

http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=5703371491

--

Jim Burrill (Smogthemog)
M1BMW
Kiteaholic
www.jbphonetech.info

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.699 / Virus Database: 456 - Release Date: 04/06/2004

3515. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 17:59:52 UTC
From: fractenna@aol.com
Message-ID: <20040605135952.16718.00000480@mb-m29.aol.com>
Source record: 93970

>Oh you got me! I've been caught out! I'm listening to the marine band. Shall
>I expect the police at my door? Quickly I must hide my apperatus! I think
>not.
>

I asked a reasonable question, and did not expect a sarcastic response.
Please: why is there a need, or an interest, to "eavesdrop" (using your
description) on the marine band with a high gain unidirectional antenna?

73,
Chip N1IR

3516. Balun efficiency

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 18:03:45 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9t1u1btv1@hercules.btinternet.com>
Source record: 93871

> There shall be some kind of balun.
>
> Please, please!
>
==========

Why?

What's the percentage current unbalance on the balanced line when there's a
450-ohm to 50-ohm, balanced to unbalanced junction without a balun?

What percentage current unbalance does a typical choke balun reduce
unbalance to -

- - - - with a receiving antenna ?

- - - - with a transmitting antenna ?

if there's any difference.

Reg

3517. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 18:05:18 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c20c6c_4@corp.newsgroups.com>
Source record: 93872

Cecil Moore wrote:

> Walter Maxwell wrote:
>> But Cecil, take another look at Fig 6 on page 23-5 to note that those
>> two waves arrive 180 out of phase at point A, which means only that
>> the E and H fields cancel in the rearward direction only, resulting
>> in a Zo match to the source.
>
> Yes, and that is exactly my point. EXACTLY the same thing happens to the
> E-fields and H-fields. That means exactly the same thing that happens to
> the rearward-traveling voltages also happens to the rearward-traveling
> currents.

In my class in secondary school counseling, I learned a technique that might be helpful here. It's called, "Be the thing." Whatever it is that you are trying to understand, mentally become that thing. In other words, assume that you are the reflected current to find out what you would experience. Obviously, it is just a mental exercise, but one that I have found quite useful throughout the years.

First, assume that you are the reflected voltage from a mismatched load. What do you encounter back at the match point? You encounter another reflected voltage with equal magnitude and opposite phase traveling in the same rearward direction. What happens to you? Your momentum in the rearward direction is reversed and your energy starts flowing toward the load. As a reflected voltage, based on your necessarily limited knowledge, you assume that you must have encountered a virtual short circuit.

Second, assume that you are the reflected current from a mismatched load. What do you encounter back at the match point? You encounter another reflected current with equal magnitude and opposite phase traveling in the same rearward direction. What happens to you? Your momentum in the rearward direction is reversed and your energy starts flowing toward the load. As a reflected current, based on your necessarily limited knowledge, you assume that you must have encountered a virtual open circuit.

There exists an apparent contradiction. A match point cannot simultaneously be a virtual short and a virtual open. How is the apparent contradiction resolved? Is there anything else in physics that can cause a total reflection of energy besides a short, open, or pure reactance? The answer is, "yes", and it happens all the time in the field of optics. In a system with only two directions of energy travel available, total destructive interference in one direction has to result in total constructive interference in the other direction. That's the way perfect non-glare thin-film coated glass works in the presence of a coherent single-frequency laser beam.
--

73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3518. Re: Balun efficiency

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 18:15:48 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c20ee1$1_4@corp.newsgroups.com>
Source record: 93873

Reg Edwards wrote:
> What's the percentage current unbalance on the balanced line when there's a
> 450-ohm to 50-ohm, balanced to unbalanced junction without a balun?

You didn't give enough information for anyone to provide a valid answer,
Reg. What is the impedance from the junction looking back toward system
ground? If it is three ohms, a balun is necessary. If it is 300 ohms,
you can probably get by without a balun.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3519. bt6v 160 meter add on capacitor value

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 19:08:37 UTC
From: rlangevin@interwrx.com
Message-ID: <40C21A35.3060108@interwrx.com>
Source record: 93874

Group
I have been asked to look at a butternut antenna for a fellow ham.
the 160m and the 30m capacitors are broken.
I dug through the archives and found the value of the 30m caps (67pf
7.5KVDC)but I can not find the value of the 160m caps.
I want to look in his junk box before I order new ones from bencher.

Thanks
Rich L
KB7YEB

3520. Re: Balun efficiency

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 19:13:16 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9t60blpl1@hercules.btinternet.com>
Source record: 93875

"Cecil Moore" wrote > Reg Edwards wrote:
> > What's the percentage current unbalance on the balanced line when
there's a
> > 450-ohm to 50-ohm, balanced to unbalanced junction without a balun?
>
> You didn't give enough information for anyone to provide a valid answer,
> Reg. What is the impedance from the junction looking back toward system
> ground? If it is three ohms, a balun is necessary. If it is 300 ohms,
> you can probably get by without a balun.
>
OK, so it's 3 ohms. Wot's the percentage unbalance ?
Just a number is required.

If it's 300 ohms. Wot's the percentage unbalance ?
Just another number is required.

What are the odds on you providing answers ?

Reg

3521. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 19:50:38 UTC
From: Smog <james@burrill.co.uk>
Message-ID: <c9t85brdo1@newsg4.svr.pol.co.uk>
Source record: 93876

"hello" <hello@nospam.com> wrote in message
news:SxLvc.49522$zm5.25179@nntpserver.swip.net...
>
> HI
> I want to put a dipole for 20m in my garden.
> A tree and the home roof will be ok to fix the extremity.
> My problem is the feed point : If IA center feed it , the feed line will
> just hang at the center of the garden, something not acceptable by the
> YL :-)
>
> So I'm looking for a way to feed it by one "side".
> I could endfeed it, but impedance matching is not so easy at such a high
> impedance.
> Then, after reading lots of post in this newsgroup, I read about the
> sleeve antenna : generaly a vertical dipole where one leg is a sleeve.
> Coax enter in the sleeve to the center feed point.
> I think this antenna could work horizontaly and for HF and solve my
> problem. Now, hanging horizontaly a 5m long metallic sleeve is surely
> not a good idea, but at HF , I thing that man could replace the sleeve
> by some wire cage.
> So I end up with the idea of a cage or biconic dipole , with the coax
> entering horizontaly in the middle of the cage to the center.
>
> What do you think of this idea ?
> How many wire for the cage 2 (a bowtie), 3, more ?
> Do you have a better one for my particular constrains ?
>
> Lots of questions, but I'm sure you will have lots of answers !
>
> Thanks in advance
>
> Thierry
> F4DWV

Will this be any good ?
http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=5703371491
--

Jim Burrill (Smogthemog)
M1BMW
Kiteaholic
www.jbphonetech.info

Outgoing mail is certified Virus Free.

Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.699 / Virus Database: 456 - Release Date: 04/06/2004

3522. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 19:54:57 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2iemo3Fmc6blU1@uni-berlin.de>
Source record: 93877

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:WGvpcuPMgfwAFA5r@ifwtech.co.uk...
> Richard wrote:
> >I can mess around with the models quite freely, but perfecting the
> >design to a level that is both electrically and mechanically sound is
> >right now beyond me. What you are saying is that this task is such a
> >huge one and requires great skill. Not easy then for your regular Joe
> >ham to do much with the models in a practical way. He/she has to
> >become something of an antenna buff for that to transpire.
>
> A few years ago, if any amateur got involved in the esoteric art of
> antenna modelling, it was because he or she was *already* an advanced
> antenna buff, with lots of hands-on experience of making antennas work.
>
> After learning about modelling, with all its tricks and traps, the next
> challenge was to learn how to translate the models back into workable
> hardware. But at least that was building a bridge between two solid
> foundations.
>
> Now, it's becoming the other way around - the modelling is more
> accessible than the hands-on experience. Without that practical
> experience, translating a model into reality is like building a bridge
> to nowhere.
>
> It isn't "something for someone [else] to do." Someone else can run
> models for you, but only the person with the hardware in their hands can
> work out how to build the real thing.
>
> However, about the worst you can do is cut the elements to the wrong
> lengths. The program on my website (see earlier posting) will help, and
> you should also read all three of the links from that same page.
>
> If you come back with a question more like: "I've tried to work out how
> to do this. Here are the model dimensions, here are my cutting
> dimensions, and here's why. Does this look reasonable?" then I'm sure
> you'll get a lot more help.
>
>
> (Coffee mug's empty... back to the window-frames.)

Okay, well, I'll do some more work on it and come back.

When I made my post, I'm not just thinking of myself, others too might have
liked to see full constructional notes. That's part of the circumstances
(for those (not you Ian) who perhaps cannot have comprehended that).

3523. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 20:01:34 UTC
From: yea right <spam@spam.spam>
Message-ID: <pan.2004.06.05.20.02.08.940720@spam.spam>
Source record: 93878
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Yes! In great hast please!

On Sat, 05 Jun 2004 07:54:24 +0000, Mike Terry wrote:

> Excellent - can I copy this to other groups etc?
>
> Mike
>
>
> "yea right" <spam@spam.spam> wrote in message
> news:pan.2004.06.05.07.04.03.720063@spam.spam...
>> If you value radio, this may be the last and only chance to have your
>

3524. Re: Jbeam antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 20:05:45 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <rlpwc.55074$Ly.9373@attbi_s01>
Source record: 93879

"Bob Dixon" <dixon.8@osu.edu> wrote in message
news:dixon.8-E4C5D0.11535903062004@charm.magnus.acs.ohio-state.edu...
>I have 2 of the 8 element dual-slot J beams (total of 4 yagis).
> Free to anyone who will actually use them.
>
>
> Bob W8ERD
>

Bob -

I assume these are in the Columbus, OH area?

Greg
w9gb

3525. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 20:06:48 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <5p74c01iimis6il1gbcd1ndkit1bciunfb@4ax.com>
Source record: 93880

On Sat, 05 Jun 2004 13:05:18 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Cecil Moore wrote:
>
>> Walter Maxwell wrote:
>>> But Cecil, take another look at Fig 6 on page 23-5 to note that those
>>> two waves arrive 180 out of phase at point A, which means only that
> >> the E and H fields cancel in the rearward direction only, resulting
> >> in a Zo match to the source.
>>
>> Yes, and that is exactly my point. EXACTLY the same thing happens to the
>> E-fields and H-fields. That means exactly the same thing that happens to
> > the rearward-traveling voltages also happens to the rearward-traveling
> > currents.
>
>In my class in secondary school counseling, I learned a technique that
>might be helpful here. It's called, "Be the thing." Whatever it is that
>you are trying to understand, mentally become that thing. In other words,
>assume that you are the reflected current to find out what you
>would experience. Obviously, it is just a mental exercise, but one
>that I have found quite useful throughout the years.
>
>First, assume that you are the reflected voltage from a mismatched load.
>What do you encounter back at the match point? You encounter another
>reflected voltage with equal magnitude and opposite phase traveling in
>the same rearward direction. What happens to you? Your momentum in the
>rearward direction is reversed and your energy starts flowing toward the
>load. As a reflected voltage, based on your necessarily limited knowledge,
>you assume that you must have encountered a virtual short circuit.
>
>Second, assume that you are the reflected current from a mismatched load.
>What do you encounter back at the match point? You encounter another
>reflected current with equal magnitude and opposite phase traveling in
>the same rearward direction. What happens to you? Your momentum in the
>rearward direction is reversed and your energy starts flowing toward the
>load. As a reflected current, based on your necessarily limited knowledge,
>you assume that you must have encountered a virtual open circuit.
>
>There exists an apparent contradiction. A match point cannot simultaneously
>be a virtual short and a virtual open. How is the apparent contradiction
>resolved? Is there anything else in physics that can cause a total reflection
>of energy besides a short, open, or pure reactance? The answer is, "yes", and
>it happens all the time in the field of optics. In a system with only two
>directions of energy travel available, total destructive interference in one

>direction has to result in total constructive interference in the other
>direction. That's the way perfect non-glare thin-film coated glass works in
>the presence of a coherent single-frequency laser beam.

Yes, Cecil, I understand. However I don't particularly like the notion of saying both fields go to zero, or both fields go to zero in the rearward direction. Confusing. Remember, weeks ago I swore that both fields could never go to zero simultaneously? The reason I disagreed with you is that you didn't mention the 'direction'. The reason I dislike hearing that both fields go to zero is that it's really not true. Like I've said many times, on encountering a short,circuit voltage and the E field go to zero and the current and H field doubles AND REVERSES DIRECTION. To me, Reversing direction is more meaningful and less confusing than both going to zero, and it still says there is no energy propagating rearward of the match point.

Going now to the cancellation process when the voltages and currents of both waves are mutually out of phase. You say that voltages 180 out yields a short (agreed) and that currents 180 out yields an open. Sounds good, and I mistakenly agreed a coupla days ago. But I don' think so. I believe voltage 180 out defines a short--period. Look at it this way. Take a zip cord and put male plugs on both ends. Plug one end into an outlet, say the top one, and then plug the other end into the bottom outlet with the polarities reversed. With respect to voltage we have a 'circuit breaker' short circuit, because the voltages entering the zip cord at each end were 180 out. But so were the currents initially. Then why the short circuit current flow? Certainly not because the circuit is open to current.

Another scenario with the same initial conditions and results: Take two identical generators delivering the same level of harmonically related output voltages. Connect their terminals in phase.Voltages in phase--currents in phase. Result? No current flow. Why? Zero voltage differential. Open circuit to voltage--open circuit to current.

Now reconnect their terminals in the opposite manner. Voltages 180 out--currents 180 out. Do we have current flow? You bet--dead short! Because current results from voltage, if voltages are 180 out of phase we have a short to both voltage and curent. No open circuit to current.

Cecil, I hope we're both still on the same page on this one;

Walt

3526. Re: Balun efficiency

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 20:09:55 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c2299d_7@corp.newsgroups.com>
Source record: 93881

Reg Edwards wrote:
> "Cecil Moore" wrote > Reg Edwards wrote:
>>You didn't give enough information for anyone to provide a valid answer,
>>Reg. What is the impedance from the junction looking back toward system
>>ground? If it is three ohms, a balun is necessary. If it is 300 ohms,
>>you can probably get by without a balun.
>>
> OK, so it's 3 ohms. Wot's the percentage unbalance ?
> Just a number is required.

How about Ohm's law? 3 ohms in parallel with ??? ohms.
I forgot to ask what is the impedance looking in the
direction of the load.

> If it's 300 ohms. Wot's the percentage unbalance ?
> Just another number is required.

How about Ohm's law? 300 ohms in parallel with ??? ohms.
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3527. Re: Balun efficiency

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 20:19:14 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jka4c0t1lqh68rfdh8b74gqtbdddqqkbit@4ax.com>
Source record: 93882

On Sat, 05 Jun 2004 15:09:55 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>I forgot to ask
:-)

3528. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 20:23:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c22cd4_7@corp.newsgroups.com>
Source record: 93883

Walter Maxwell wrote:
> Yes, Cecil, I understand. However I don't particularly like the notion of saying
> both fields go to zero, or both fields go to zero in the rearward direction.

But Walt, that's exactly what happens when total destructive interference
occurs as explained by J. C. Slater in _Microwave_Transmission_.

> I believe voltage 180 out defines a short--period.

That same belief is what got Dr. Best into trouble. He never considered
what happens to the reflected current waves. In a sense, your and his
disagreements are because you both made the same conceptual mistake and
arrived at different conclusions because of that common mistake. If you
and he had not made that shared mistake, you both would have arrived at
the same conclusions.

> Another scenario with the same initial conditions and results: Take two
> identical generators delivering the same level of harmonically related output
> voltages. Connect their terminals in phase.Voltages in phase--currents in phase.
> Result? No current flow. Why? Zero voltage differential. Open circuit to
> voltage--open circuit to current.

> Now reconnect their terminals in the opposite manner. Voltages 180 out--currents
> 180 out. Do we have current flow? You bet--dead short! Because current results
> from voltage, if voltages are 180 out of phase we have a short to both voltage
> and curent. No open circuit to current.

This is the problem with trying to use circuit analysis to replace network analysis.
Put the two sources at the two ends of a transmission line and please reconsider
the outcome. Equip the two sources with circulators and dummy loads so the outcome
cannot be in doubt.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3529. Re: Balun efficiency

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 20:29:15 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c22e26_7@corp.newsgroups.com>
Source record: 93884

Richard Clark wrote:

> <Cecil.A.Moore@ieee.org> wrote:
>>I forgot to ask
>
> :-)

Richard, I am really glad that you are so omnipotent
and omniscient that you never make a mistake of
commission or omission. I, OTOH, make a lot of them.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3530. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 20:43:05 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <jaa4c0lbqo0lotjtk3q27q7gk3tu5husko@4ax.com>
Source record: 93885

On Sat, 05 Jun 2004 10:14:09 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> But Cecil, take another look at Fig 6 on page 23-5 to note that those two waves
>> arrive 180 out of phase at point A, which means only that the E and H fields
>> cancel in the rearward direction only, resulting in a Zo match to the source.
>
>Yes, and that is exactly my point. EXACTLY the same thing happens to the E-fields
>and H-fields. That means exactly the same thing that happens to the rearward-
>traveling voltages also happens to the rearward-traveling currents. Two equal-
>magnitude/opposite-phase voltages cancel. Two equal-magnitude/opposite-phase
>currents cancel. That doesn't happen at either an open or a short. If one
>looks at just the voltages, it looks like a short. If one looks at just the
>currents, it looks like an open.

Snip

>>>J. C. Slater says that's what happens in the above quote. Voltages 1/2WL apart
>>>in time cancel to zero. Currents 1/2WL apart in time cancel to zero.
>>
>> Yep, but only in the rearward direction.
>
>The rearward direction is what we are talking about. The point is that EXACTLY
>the same thing happens to the two rearward-traveling current waves as happens
>to the two rearward-traveling voltage waves. A short-circuit doesn't affect
>voltages and currents in the same way. An open-circuit doesn't affect
>voltages and currents in the same way. A match point affects the rearward-
>traveling voltages and rearward-traveling currents in EXACTLY the same way.
>The re-reflection at a match point is a conservation of energy reflection where
>the rearward destructive interference energy supplies energy to constructive
>interference in the opposite direction. For light, the equation are:
>
>Destructive Interference Irradiance = I1 + I2 - 2{SQRT[(I1)(I2)]} (9.16)
>
>Constructive Interference Irradiance = I1 + I2 + 2{SQRT[(I1)(I2)]} (9.15)
>
>_Optics_, by Hecht, fourth edition, page 388
>
>Note the similarities to equations 13 and 15 in Dr. Best's QEX article,
>Part 3.
>
>PFtotal = P1 + P2 - 2{SQRT[(P1)(P2)]} (Eq 15)
>
>PFtotal = P1 + P2 + 2{SQRT[(P1)(P2)]} (Eq 13)
>

>Too bad he didn't label them as Hecht did, as "total destructive interference"
>and "total constructive interference" equations.

Sorry, Cecil, in spite of their similarity with Hecht's, these equations are totally invalid. Steve derived them from his Eq 9, which is also totally invalid for use with reflected power. This equation is correct and valid when there are two separate and individual sources. But here there is only one source, the transceiver. When connecting two batteries in series Eq 9 works, because there is enough energy there to support the additional current demanded with the increased voltage. But not when the transceiver is the sole source of power.

With the transmission line system Steve's voltage V2 comes from the same source as V1. The problem is that when the total forward power resulting from the addition of reflected power and source power the total forward power is never absorbed in the load, the power resulting from the reflection is subtracted from the total power. This limitation does not occur when there are two separate sources to maintain the increased current.

Because Steve used Eq 9 in an invalid way to derive Eqs 10 through 15, all of these derived equations are also invalid. Try Eq 13 for example. It says 75 w plus 8.33 w = 133.33 w, as you well know. This is absurd!

In addition, because the powers don't add up correctly using V1 and V2 at zero phase relationship, he concocted the ruse that they must add vectorially, and he goes through several values of phase relationships to show what the forward power would be with the various phases. This is poppycock, because the phase relationship between the source (V1) and re-reflected voltage (V2) is ALWAYS ZERO on lossless lines.

His initial problem is that he misinterpreted Eq 6 in Part 1 to yield the forward voltage Vfwd, where it actually yields the voltage E of the standing wave at any point on the line, where the point on the line is determined by the 'L' term in the exponents on the right-hand side of the equation. In other words, the summation of terms on the right-hand side of his Eq 6 does not equal forward voltage Vfwd, as it indicates incorrectly, but instead equals the voltage of the standing wave.

In addition to other errors, the entire right-hand column of page 46 is invalid.

Walt

3531. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 21:06:46 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406051306.28d9ed15@posting.google.com>
Source record: 93886

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:<2ie4jfFltgnoU1@uni-berlin.de>...
> "J. McLaughlin" <JCM@Power-Net.Net> wrote in message
> news:10c3kd0qv1lnd1b@corp.supernews.com...
> > Dear Richard - no full name - no call - no location - probably not a
> > real E-mail address:
> >
> > Let me see if I understand: You have the strange idea that someone
> > who has the experience and skill to craft for you an expensive design
> > (for free) is looking for something to do. Strange indeed.
> > Mac N8TT
> > --
> > J. Mc Laughlin - Michigan USA
> > Home: JCM@Power-Net.Net
> >
>
> I bought some "models" from Mr Cebik.
>
> This is what he says in his notes:
>
> " Although many of the designs may be directly built from the models in this
> collection, the models themselves are for study purposes. Perfecting the
> design to a level that permits construction of an antenna that is both
> electrically and mechanically sound is your responsibility.
>
> L. B. Cebik, W4RNL"
>
> This is my problem and what I was asking for. I can mess around with the
> models quite freely, but perfecting the design to a level that is both
> electrically and mechanically sound is right now beyond me. What you are
> saying is that this task is such a huge one and requires great skill. Not
> easy then for your regular Joe ham to do much with the models in a practical
> way. He/she has to become something of an antenna buff for that to
> transpire. And because the task is so demanding, no antenna buff would ever
> consider producing an actual contstruction design for anyone, apart from
> him/herself maybe. And then he/she might condescend to allow others to
> copy his/her design.

Pore deprived thing.

You study some of the mountain of illustrated artcles in the ham
literature which show how others have sucessfully put VHF Yagis
together to get an education on the various "basement engineering"
practical mechanicals they came up with.

You run the model based on the materials you have available and the construction scheme you have chosen.

You build it. You test it. You tweak it. You put it up again and go SWLing on
162 Mhz.

No, you don't have to be an "antenna buff" to do any of it these days.

But if you build your own you do have to get off your butt and put a bit of your own mental effort into the matter. Don't hold your breath while hoping that somebody around here will save you from the butt-lift maneuver just because you don't wanna do it yourself.

w3rv

3532. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 21:10:01 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <ojc4c0hloo8vrq595kt8nm04rcannqbtg5@4ax.com>
Source record: 93887

On Sat, 05 Jun 2004 15:23:37 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Yes, Cecil, I understand. However I don't particularly like the notion of saying
>> both fields go to zero, or both fields go to zero in the rearward direction.
>
>But Walt, that's exactly what happens when total destructive interference
>occurs as explained by J. C. Slater in _Microwave_Transmission_.
>
>> I believe voltage 180 out defines a short--period.
>
>That same belief is what got Dr. Best into trouble. He never considered
>what happens to the reflected current waves. In a sense, your and his
>disagreements are because you both made the same conceptual mistake and
>arrived at different conclusions because of that common mistake. If you
>and he had not made that shared mistake, you both would have arrived at
>the same conclusions.

Cecil, how do you figure I made a mistake in this issue? I have always considered voltage 180 out as a short. And my writings show voltage at 180 as a short, as stated on page 23-9. I agree that the opposite phases of both voltage and current in that discussion resulted in the cancelation of reflected power traveling in the 225-ohm section of line. And during the last day or two I leaned toward thinking the out of phase current implied an open circuit. But you can see from my words above that voltage rules--when the voltages are 180 out of phase it defines a short circuit. My zip cord example is evidence to that. Consequently, I don't agree that Steve and I made the same mistake. My writings delivered the correct mathematical answers--Steve's does not. The mistake I made on page 23-9 is in overlooking that it is the effective open circuit condition seen looking in the rearward direction by the reflected waves at point A is what gave both the voltage and current waves the reversal and phase change to zero relative to the source waves.

>> Another scenario with the same initial conditions and results: Take two
>> identical generators delivering the same level of harmonically related output
>> voltages. Connect their terminals in phase.Voltages in phase--currents in phase.
>> Result? No current flow. Why? Zero voltage differential. Open circuit to
>> voltage--open circuit to current.
>
>> Now reconnect their terminals in the opposite manner. Voltages 180 out--currents
>> 180 out. Do we have current flow? You bet--dead short! Because current results
>> from voltage, if voltages are 180 out of phase we have a short to both voltage
>> and curent. No open circuit to current.
>
>This is the problem with trying to use circuit analysis to replace network analysis.

>Put the two sources at the two ends of a transmission line and please reconsider
>the outcome. Equip the two sources with circulators and dummy loads so the outcome
>cannot be in doubt.

Cecil, I don't believe the outcome is in doubt.

Walt

3533. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 21:12:17 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <yVSdnQBMFLAVqI_dUSdV9g@ptd.net>
Source record: 93888

Pound 'em down (say 4-6" below surface, then backfill the hole) and buy new ones.

They're cheap and if they've been in the ground any time they'll 1) probably be hard as hell to pull and 2) probably have corroded to the point where new ones would be well worth the $.

73,
Carl - wk3c

"Gary Boyer" <gboyer@columbus.rr.com> wrote in message news:0ZJvc.20287$DG4.13504@fe2.columbus.rr.com...
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY
>
>

3534. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 21:49:43 UTC
From: audiovideo@aggressive.com
Message-ID: <fb858fd2.0406051349.5e615f7f@posting.google.com>
Source record: 93889
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Here's my letter, for what its worth:

I am writing to ask you not to allow the implementation of BPL
(Broadband over Power Lines) in our nation's communities.

I rely on shortwave radio as a source of entertainment, world news and
cultural information. I listen to low & high-power broadcasts from the
world over. Reliable reception is already a challenge due to the
interference caused by the deplorable state of our nation's power
lines. I have had to send several complaints to my local power company
due to electrical power pole arcing that interferes with my shortwave
radio. Adding broadband data to these already unreliable power lines
would render a bad situation worse. In my experience, power companies
have little regard for complaints regarding radio interference, and
are slow to respond, if at all. I consider it irresponsible to entrust
BPL technology to power companies that already have an indifferent,
monopolistic attitude towards customer service.
Power companies are also overwhelmed with maintaining the poor repair
state of their equipment. With the addition of BPL,
how will power companies manage to stay within the radio interference
regulations set forth by the FCC?

I beleive BPL would be an unreliable system of delivery, and an
unneeded duplication of existing data services. It would interfere
with all shortwave radio services, including commercial, utility,
aircraft, rescue, and amateur radio services. Its effect on higher
frequency services due to harmonic interference remains to be seen.

In all, I think BPL is a unrequired, unpredictable technology and I
urge you to prevent BPL from polluting our nation's radio spectrum.

3535. Re: FA: Heavy Duty 20m (14mhz) Dipole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 22:18:54 UTC
From: j999w@aol.com
Message-ID: <20040605181854.16160.00000659@mb-m15.aol.com>
Source record: 93890

No disrespect to the auctioneer ... but I fear the day when ham radio men can't build their own dipoles.

jw
K9RZZ

3536. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 22:20:16 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9tgv0jss1@sparta.btinternet.com>
Source record: 93891

> Pound 'em down (say 4-6" below surface, then backfill the hole) and buy
new
> ones.
>
> They're cheap and if they've been in the ground any time they'll 1)
probably
> be hard as hell to pull and 2) probably have corroded to the point where
new
> ones would be well worth the $.
>
> 73,
> Carl - wk3c
>
Agreed. If the idea is to pound in the old rod somewhere else, and is intended for radio ground purposes only, then it is much better left where it is. A single ground rod is practically useless for radio purposes. Unless immersed in salt sea water it is equivalent to a single shallow buried radial wire of slightly greater length. Just measure the resistance of one in average sort of soil at about 2 MHz. Use a hand-held antenna analyser on the impedance range and a bottom-loaded resonant vertical antenna. Or mess about with a pair of rods spaced apart 3 times their depth. You can crudely estimate local soil resistivity (or conductivity) by such means. Kneeling down, however, to read the meter in cold damp stoney soil can result in house-maid's knees. If you are short-sighted, as I am, then you have to lie on your belly. Keep all test leads short. The arithmetic is fairly simple. I can't understand why so many of you have never done it.
===
Reg, G4FGQ

3537. Re: FA: Heavy Duty 20m (14mhz) Dipole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 22:42:26 UTC
From: jgboyles@aol.com
Message-ID: <20040605184226.06079.00000410@mb-m17.aol.com>
Source record: 93892

>No disrespect to the auctioneer ... but I fear the day when ham radio men
>can't build their own dipoles.

What about ham radio women? :-) As you know there are hams that are not physically able to build their own antennas. If this is the case, they have no choice but to buy. I fear the day that a ham does not have the knowledge to build a dipole, and tune it up.

73 Gary N4AST

3538. Re: Balun efficiency

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 23:03:39 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <c9tjgalua1@hercules.btinternet.com>
Source record: 93893

Dear Cec,
Tell you what (an English coloquialism), YOU provide all the information you need to do the calculations and thereby provide some answers. Typical results under typical conditions, plus or minus 15 percent is all that's needed.

If you prefer it that way, you can even invent your own questions.
===
Reg, G4FGQ

By the way, I'm on Blue Nun Merlot tonight. Which is nicely appropriate now that Bush and Blair have belatedly come round to the French (and the rest of the World's) point of view. Vive L'entente Cordiale.

==========

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40c22e26_7@corp.newsgroups.com...
> Richard Clark wrote:
>
> > <Cecil.A.Moore@ieee.org> wrote:
> >>I forgot to ask
> >
> > :-)
>
> Richard, I am really glad that you are so omnipotent
> and omniscient that you never make a mistake of
> commission or omission. I, OTOH, make a lot of them.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
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> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3539. Re: FA: Heavy Duty 20m (14mhz) Dipole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-05 23:07:42 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40C2523E.2D9183E8@shaw.ca>
Source record: 93894

J999w wrote:
>
> No disrespect to the auctioneer ... but I fear the day when ham radio men can't
> build their own dipoles.
>
> jw
> K9RZZ

It's here now! That's why I'm not overly concerned about BPL taking over!
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3540. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 00:11:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c26240_1@corp.newsgroups.com>
Source record: 93895

Walter Maxwell wrote:
> Sorry, Cecil, in spite of their similarity with Hecht's, these equations are
> totally invalid.

Before we go any farther, Walt, please reference a copy of _Optics_,
by Hecht. Dr. Best's equations are valid. He just didn't understand what
he was dealing with and presented them improperly. Hecht presents them
properly. Dr. Best's equations are the classical physics equations for
the destructive interference and constructive interference.

> With the transmission line system Steve's voltage V2 comes from the same source
> as V1.

Yes, V1 comes from the generator and V2 comes from reflections from the
load which come originally from the generator. Dr. Best didn't understand
the S-parameter analysis and presented his material in an invalid way. But
even though he didn't understand what he was saying, his equations are
valid. He was completely off base in his explanations. It was like
Einstein coming up with E = MC^2 and then completely blowing the
explanation.

In an S-parameter analysis, b2 = s21(a1) + s22(a2)

In Dr. Best's analysis, VFtotal = V1 + V2 where:
V1 = V1F*(transmission coefficient) + V2R*(reflection coefficient)

V1F is the voltage incident upon the impedance discontinuity from the left. (port1)
V2R is the voltage incident upon the impedance discontinuity from the right. (port2)

There's a one-to-one correspondence above. If the S-parameter analysis is
valid, then Dr. Best's equations are valid. He just didn't present them
in a valid manner.

> Because Steve used Eq 9 in an invalid way to derive Eqs 10 through 15, all of
> these derived equations are also invalid. Try Eq 13 for example. It says 75 w
> plus 8.33 w = 133.33 w, as you well know. This is absurd!

His equations are valid. His knowledge is what was invalid. It is true that

75w + 8.33W + 2*SQRT(75W*8.33W) = 133.33W

P1 + P2 + interference power = PFtotal

I presented this to Dr. Best 9 months before his Part 3 was
published. He simply didn't pay any attention.

From a voltage standpoint where ci means constructive interference:

V1^2/Z02 + V2^2/Z02 + Vci^2/Z02 = VFtotal^2/Z02

For a Z02 equal to 150 ohms (if I remember correctly)

106.07v^2 + 35.35v^2 + 86.6v^2 = 141.42v^2 So

V1^2 + V2^2 + Vci^2 = VFtotal^2

This is exactly what you have been saying all along, something that Dr.
Best simply didn't understand. He completely ignored the interference
term without which the voltage equation cannot balance.

2*SQRT(75W*8.33W) is the constructive interference term supplied by the
destructive interference event on the other side of the match point which
Dr. Best completely ignored in his article.

> In addition, because the powers don't add up correctly using V1 and V2 at zero
> phase relationship, he concocted the ruse that they must add vectorially, and he
> goes through several values of phase relationships to show what the forward
> power would be with the various phases. This is poppycock, because the phase
> relationship between the source (V1) and re-reflected voltage (V2) is ALWAYS
> ZERO on lossless lines.

Only if the system is perfectly matched. If the system is not matched, V1 and
V2 can have any phase relationship. Dr. Best's equations are valid but he just
didn't comprehend their meaning. When I called him on it, he seemed never to have
heard of destructive/constructive interference. That's what set me to researching
EM waves in the arena of optics.

I looked at the situation assuming that you two guys are both knowledgeable and
intelligent and I arrived at the conclusion that the two of you are only two inches
apart. But (IMO) neither one of you is willing to move that one inch to bridge the
gap. (I have said this before in private email to Walt.)
--
73, Cecil http://www.qsl.net/w5dxp

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3541. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 00:20:18 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c2644e_1@corp.newsgroups.com>
Source record: 93896

Walter Maxwell wrote:
> But you
> can see from my words above that voltage rules--when the voltages are 180 out of
> phase it defines a short circuit.

This is exactly the same mistake that Dr. Best made. *VOLTAGE DOESN'T RULE!*
Current is *equally* important to voltage. If you had assumed that "current
rules", you would be saying - "when the currents are 180 out of phase it
defines an open circuit".

My argument is actually a minor point but bridges part of the gap between
you and Dr. Best. (And absolutely nothing being discussed here concerns
the source impedance of a transmitter. All we are discussing is what
happens at a match point in a transmission line or at a tuner.)
--
73, Cecil http://www.qsl.net/w5dxp

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3542. Re: Balun efficiency

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 00:36:17 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c2680e_1@corp.newsgroups.com>
Source record: 93897

Reg Edwards wrote:
> Tell you what (an English coloquialism), YOU provide all the information
> you need to do the calculations and thereby provide some answers. Typical
> results under typical conditions, plus or minus 15 percent is all that's
> needed.

Reg, the question (assertion) was yours. Now you have to defend it by
furnishing the impedance looking back toward the source and the impedance
looking toward the load. I can tell you what it is in my antenna system,
but not yours or anyone else's. In my system, the impedance looking back
toward the source is very low. The impedance looking toward the load is
between 25 ohms and 100 ohms. That's an ideal application for a balun.

> By the way, I'm on Blue Nun Merlot tonight.

I just finished off 5 liters of Almaden Cabernet Sauvignon. All I
have left in this dry county is Coor's light and Bella Sera Merlot.
That Italian wine is not as good as it used to be. They must have
changed from wooden barrels to mass produced metal vats.
--
73, Cecil http://www.qsl.net/w5dxp

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3543. Re: Antenna mounting recommendations for flat roof academic building

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 00:49:45 UTC
From: Bill Blum <billdotblum@mousepotato.net>
Message-ID: <JStwc.19807$eH1.9060728@newssvr28.news.prodigy.com>
Source record: 93898

Jimmy wrote:
> If your school has a vo-tech department fabricating such mounts should be a
> no-brainer for them.

Nope-- we're a "liberal arts" university.

Found a few things at a local surplus shop that should work...

3544. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 01:45:34 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40C2773E.79AA@wt.net>
Source record: 93899

Richard wrote:
> I don't know whether I've got the know-how or the time to design a homebrew
> VHF yagi for the marine band.
>
> So, is anyone out there interested in providing a service to all marine band
> DXers/eavesdroppers of designing and producing *full constructional notes*
> on a range of marine antennas, and then putting the designs up on a website.
>
> All antennas shall principally be for reception.
>
> All antennas should be described as covering 156-162Mhz.
>
> As far as the yagis are concerned, they should range from 2 to 6 elements.
>
> All yagis shall have 4mm (or 3/16") diameter parasitic elements.
>
> All parasitic elements shall be secured to boom by nylon rivets as per
> G3SEK's notes at:
> http://www.ifwtech.co.uk/g3sek/diy-yagi/#Construction
>
> All booms shall consist of either 20mm or 15mm square tubing.
>
> The DE for all yagis shall be 8mm (or 5/16").
>
> The DE for all yagis shall be a regular hertz dipole.
>
> There shall be some kind of balun.
>
> Please, please!

There are half a jillion designs already out there. Also in books. All designs can scaled to any other frequency. IE: any 2 meter VHF antenna design can be easily scaled to 160 mhz. Why the rigid construction requirements?
If you are scaling a design to another freq, you should also scale the element dia. Luckily, there should be no need to change element diameter for a rescaled 2m antenna, as it's already close enough. I once built a marine band 4 element yagi from a thin copper tube as a boom, and coathanger wire soldered to the boom as the elements. Not the greatest materials, and it eventually rusted, but I could hear stuff that didn't exist on verticals. I'm in Houston, and was listening to marine traffic out towards Galveston, and the gulf. 50-60 plus miles easy... If you have NBS designs, what are you waiting for? Those spacings are quite

good enough. They do lean towards max gain vs f/b, but you don't need super f/b with what you are doing. So a NBS design should be fine. "the f/b is still about 10 db" Thats what I used. My 6m beam is also a NBS yagi. All my homebrew yagi's use a driven element grounded to the boom. Also, I use gamma or T matches, etc...I rarely use a split driven element insulated from the boom. It's more work, and I'm lazy...Only my store bought "I didn't pay for it" HF beam is built that way. MK

--
http://web.wt.net/~nm5k

3545. Re: Anything less than 1/2" ? [In UK]

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 01:53:59 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40C27937.6E14@wt.net>
Source record: 93900

Richard wrote:
>
> Two places now (Sandpiper Aerials and JB Television Services) where I've
> made enquiries about dipole center peices and the only thing offered is for
> 1/2" tube. Small sample I know, but what, nobody makes dipole peices for
> 1/4" and 3/8" tube anymore?

Many use welding rod for elements on VHF/UHF antennas. It's a good size.
You can build VHF yagi's totally from hard drawn copper tubing. Boom,
elements, gamma match, the whole thing. One piece, all welded together.
My 6m yagi is built that way from 1/2 copper for the elements. One inch
copper for the boom. Elements are brazed to the boom. I'd use much
smaller for VHF. You can get both 1/4 and 3/8 copper tubing. You could
use 1/2 inch for the boom. You want to use hard drawn copper. Preferably
not the soft stuff that is coiled. Although for VHF, even it would work
ok. But my 50 mhz yagi, I had to use hard drawn. It's too big for soft
copper. It would wilt...:(MK
--
http://web.wt.net/~nm5k

3546. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 01:55:23 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406051755.324698e8@posting.google.com>
Source record: 93901

"Chuck...K1KW" <cdoneal@comcast.net> wrote in message
news:<0wNvc.39192$3x.31853@attbi_s54>...
> Anyone know anything about the "technology" in the article below?

Ask him, he dunnit.

http://www.qrz.com/detail/K1DFT

w3rv

> http://www.uri.edu/news/releases/?id=2659
>
> Chuck...K1KW
>
> Article text below

3547. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 02:02:56 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406051802.64820c22@posting.google.com>
Source record: 93902

That says that narrow bandwidth contributes to higher efficiency
which is how I always understood it.(Though many do not accept that)
But as you say it is a shorthand type statement.
My antenna on 160 is very narrow banded at any particular setting or
frequency
(two loops and a short dipole coupled in tight cluster form),when
modelled ,shows part of the current curve breaking out into a sino
soidal oscillation (no phase change) for portions of the antenna.
Such modelling, ofcourse, requires a large amount of points per unit
length for high accuracy and the occillation would probably not show
up visually if calculation points were reduced.
It does not seem to affect things in practice on the air but I have
often wondered what the consequences would be if the bandwidth was
narrowed even more and the current oscillation possibly propagate over
all the of the antenna !
With the current taking on an occillation it would suggest changes in
radiation

Art

Richard Clark <kb7qhc@comcast.net> wrote in message
news:<6kf1c0tjvm4o2f3k4dmtm2jl9ie5bsejmb@4ax.com>...
> On 4 Jun 2004 10:44:01 -0700, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
> >> "According to current
> >> theory, you have to give up one of the three-size, efficiency, or
> >> bandwidth-to achieve any one of the other two."
> >>
> > snip
> > Is the above statement correct ?
>
> Hi Art,
>
> In a crude and shorthand way, yes. This is why your small 160M
> vertical dipole is up to 15 to 17dB below performance in comparison to
> a full size one. All common legacy for CFAs, EHs, fractals, and the
> rest of this ilk that come down the pike.
>
> 73's
> Richard Clark, KB7QHC

3548. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 03:20:50 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <oru4c01ig501m78hu3r3ccksira7p33fep@4ax.com>
Source record: 93903

On Sat, 05 Jun 2004 19:11:32 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Sorry, Cecil, in spite of their similarity with Hecht's, these equations are
>> totally invalid.
>
>Before we go any farther, Walt, please reference a copy of _Optics_,
>by Hecht. Dr. Best's equations are valid. He just didn't understand what
>he was dealing with and presented them improperly. Hecht presents them
>properly. Dr. Best's equations are the classical physics equations for
>the destructive interference and constructive interference.

I'm trying to locate my Hecht paper, but can't at the moment. Let's make sure we're talking about the same set of of equations. The ones I'm saying are invalid as stated in his article appear on Page 46, Col 2. These equations are all being used invalidly as a result of his Eq 9, Part 3 being invalid for use with reflected power with only one source. This a concept you're just going to have to learn to accept. This equation is valid ONLY when there are two separate sources--the rearward traveling reflected wave is NOT a second source, and it will NOT work on power contained in the reflected wave. You must understand why the invalidity of his Eq 6 in Part 1is responsible for the entire problem. Once you understand this point you'll understand why the equations on Page 46 are invalid.

Cecil, Steve's Eq 9 is valid only if there is more than one source. In this case there is only one, the transceiver. This a concept that you apparentely aren't getting, and Steve didn't either. Because Steve derived his Eqs 10 thru 15 from an invalid premise concerning Eq 6 those equations are invalid. Just plug his values for P1 and P2 into any of those equations and you'll get invalid answers.

>> With the transmission line system Steve's voltage V2 comes from the same source
>> as V1.
>
>Yes, V1 comes from the generator and V2 comes from reflections from the
>load which come originally from the generator.

But Cecil, you CAN'T add V1 and V2 in any manner to obtain forward power, because adding V1 and V2 does not yield forward voltage. This is the first place Steve erred in Part 1. Go back and review my previous msg where I explain why his Eq 6 in Part 1 is invalid.

Dr. Best didn't understand
>the S-parameter analysis and presented his material in an invalid way. But
>even though he didn't understand what he was saying, his equations are
>valid. He was completely off base in his explanations. It was like
>Einstein coming up with E = MC^2 and then completely blowing the

>explanation.
>
>In an S-parameter analysis, b2 = s21(a1) + s22(a2)
>
>In Dr. Best's analysis, VFtotal = V1 + V2 where:
>V1 = V1F*(transmission coefficient) + V2R*(reflection coefficient)

How many times do I have to explain that V1 + V2 does NOT equal VF total? This concept cannot be fudged into the S- parameter analysis, because V1 + V2 = VF total is an invalid premise.

>V1F is the voltage incident upon the impedance discontinuity from the left. (port1)
>V2R is the voltage incident upon the impedance discontinuity from the right. (port2)

I repeat, Cecil, V1 + V2 yields only the swr, not VF total forward voltage.

>There's a one-to-one correspondence above. If the S-parameter analysis is
>valid, then Dr. Best's equations are valid. He just didn't present them
>in a valid manner.

The S-parameter analysis would be valid if the premise that V1 + V2 = VF were valid, which it is not. Please review my explanation why his Eq 6 in Part 1 is invalid. This is the crux of the entire case, which has made the Eqs that I say are invalid, invalid.
>
>> Because Steve used Eq 9 in an invalid way to derive Eqs 10 through 15, all of
>> these derived equations are also invalid. Try Eq 13 for example. It says 75 w
>> plus 8.33 w = 133.33 w, as you well know. This is absurd!
>
>His equations are valid. His knowledge is what was invalid. It is true that
>
>75w + 8.33W + 2*SQRT(75W*8.33W) = 133.33W

This is Steve's Eq 12, which appears to be correct when theta = zero, but he qualifies this equation, saying tghat when V1 and V2 are in phase the total power can be determined by Eq 13. NOT SO. The ironic part of this is that when the system is matched V1 and V2 are always in phase on lossless lines.

>P1 + P2 + interference power = PFtotal

This fact is precisely what Steve emphatically denies,

>I presented this to Dr. Best 9 months before his Part 3 was
>published. He simply didn't pay any attention.
>
> From a voltage standpoint where ci means constructive interference:

I don't understand the ci term--please explain.

>V1^2/Z02 + V2^2/Z02 + Vci^2/Z02 = VFtotal^2/Z02

V1^2/Zo + V2^2/ Zo = total forward power. The left -hand terms of the above equation are power terms that do not equal VFtotal^2/Zo, because V1 + V2 does not equal VFtotal.

>For a Z02 equal to 150 ohms (if I remember correctly)
>
>106.07v^2 + 35.35v^2 + 86.6v^2 = 141.42v^2 So
>
>V1^2 + V2^2 + Vci^2 = VFtotal^2

Again, if V1 + V2 does not equal VFtotal, then the sum of the squares of V1 and V2 cannot equal the square of VFtotal, unless Vci^2 is a large negative number.
>
>This is exactly what you have been saying all along, something that Dr.
>Best simply didn't understand. He completely ignored the interference
>term without which the voltage equation cannot balance.
>
>2*SQRT(75W*8.33W) is the constructive interference term supplied by the
>destructive interference event on the other side of the match point which
>Dr. Best completely ignored in his article.

>> In addition, because the powers don't add up correctly using V1 and V2 at zero
>> phase relationship, he concocted the ruse that they must add vectorially, and he
>> goes through several values of phase relationships to show what the forward
>> power would be with the various phases. This is poppycock, because the phase
>> relationship between the source (V1) and re-reflected voltage (V2) is ALWAYS
>> ZERO on lossless lines.
>
>Only if the system is perfectly matched. If the system is not matched, V1 and
>V2 can have any phase relationship.

Yeah, but if V1 and V2 have any relationship other than zero the system is NOT perfectly matched.

Dr. Best's equations are valid but he just
>didn't comprehend their meaning. When I called him on it, he seemed never to have
>heard of destructive/constructive interference. That's what set me to researching

But Cecil, why would we be considering any condition other than perfectly matched? All of his equations from 9 thru 15 specifiy the route to obtain either PF or VF. This means conditions are for a matched system.
>EM waves in the arena of optics.
>
>I looked at the situation assuming that you two guys are both knowledgeable and
>intelligent and I arrived at the conclusion that the two of you are only two inches
>apart. But (IMO) neither one of you is willing to move that one inch to bridge the
>gap. (I have said this before in private email to Walt.)

Sorry, Cecil, we're miles apart, and will be until the erroneous Eq 6 in Part 1 is corrected.

I know I've rambled all over the place with redundancies, but I tried to respond to each of your paragraph statements as they occurred.

Walt

3549. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 03:25:31 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <vg35c0hjhvfgna2l77jbfoindi6lrorjmh@4ax.com>
Source record: 93904

On Sat, 05 Jun 2004 19:20:18 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> But you
>> can see from my words above that voltage rules--when the voltages are 180 out of
>> phase it defines a short circuit.
>
>This is exactly the same mistake that Dr. Best made. *VOLTAGE DOESN'T RULE!*
>Current is *equally* important to voltage. If you had assumed that "current
>rules", you would be saying - "when the currents are 180 out of phase it
>defines an open circuit".

Then how can you explain what happens when you reverse the zip cord, plugging one end in one way and the other with the prongs reversed ? Are you saying the currents in this condition are seeing an open circuit?

>My argument is actually a minor point but bridges part of the gap between
>you and Dr. Best. (And absolutely nothing being discussed here concerns
>the source impedance of a transmitter. All we are discussing is what
>happens at a match point in a transmission line or at a tuner.)

3550. Channel master 9521

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 03:50:55 UTC
From: Uwe <outhouse@midcoast.com>
Message-ID: <BCE80CDE.7FD5%outhouse@midcoast.com>
Source record: 93905

I have 2 questions regarding the channel master 9521.

Does anybody have info regarding the torque of this entry level model??
I seem not to be able to locate this piece of information.

And does anybody know if it is possible to eliminate the stop allowing the
unit to turn more than 360 degrees??

As you can guess I am trying to use the unit for something else...

TIA

Uwe

3551. Hustler 6btv - broken 75/80 resonator coupler

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 04:25:44 UTC
From: Dan <lists@elp.rr.com>
Message-ID: <5h65c0d655ti2jcd2vuov5n9ruu19vtchi@4ax.com>
Source record: 93906

While trying to fix a minor problem on my vertical... I accidentally broke the threaded coupler between the bottom of the 75/80 meter resonator and the top of the lower section is screws into this coupler is now broken off 1/2 in the resonator the other 1/2 in the lower mating section. At first I assume I could use like an "easy out and turn the broken pieces out of each unit. This is not the case. the part broken in the resonator does turn easy but will not back out. I am assuming it is some how captured and may not be a threaded item anyway..

the part broken in the lower section I can not even get it to break loose and turn it..

I have though about using a drill and tap on both sections and then use a thread rod about 1 to 1.5 inches long ..

any ideas? am I missing something? any ideas and or fixes would sure be appreciated very much!!

thanks

Dan

3552. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 04:28:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <8165c0113n9shvah072qfc3bt9ld6pmalv@4ax.com>
Source record: 93907

On 5 Jun 2004 19:02:56 -0700, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>That says that narrow bandwidth contributes to higher efficiency
>which is how I always understood it.(Though many do not accept that)

Hi Art,

When a low bandwidth antenna has very high efficiency (in the range of
95-98 percent), "more" efficient is not very remarkable.

The problem you are encountering is trying to equate bandwidth/Q with
efficiency. There is an old adage: correlation is not causation. A
successful antenna design is by definition lossy = radiation
resistance. You can reduce this loss to zero, boost the Q, make for a
very small bandwidth and come up with a very inefficient antenna.
Same thing goes for Tube finals' tuning. You don't want narrow
bandwidth/high Q because that means no power will leave the
transmitter. Q for the Finals falls between 10 and 15 because the
load must be a loss.

The coil/capacitor that makes up the finals tuning has an "unloaded" Q
that is high, which means that the coil/capacitor in and of itself
does not contribute to the loss, but as a system, Q is relatively low
(by at least a power of 10 if not 20). It would be impossible to
measure the unloaded Q of an antenna because it is necessarily MUCH
larger than a conventional coil/capacitor lumped circuit. Being large
means that it encompasses that loss of radiation resistance.

There is, of course, a hazy area where antennas get very small, or
finals get very big. The 1M loops sold as "magnetic" loops certainly
approach that, and yet the ratio of radiation resistance and loss
resistance in the low bands is clearly a loser proportion for this
breed. If you have no choice, even 5% efficiency is gold bond stuff.
However, simply because it has high Q does not elevate its poor
performance.

This returns us to that crude triad of pick any two characteristics
and leave the third for the vultures.

73's
Richard Clark, KB7QHC

73's
Richard Clark, KB7QHC

3553. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 04:36:07 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c2a044_2@corp.newsgroups.com>
Source record: 93908

Walter Maxwell wrote:
> I'm trying to locate my Hecht paper, but can't at the moment. Let's make sure
> we're talking about the same set of of equations. The ones I'm saying are
> invalid as stated in his article appear on Page 46, Col 2.

Walt, I'm sorry, all I have is the QEX CD and the pages are not the same as
they were in QEX magazine. Dr. Best's equations 13 and 15 are the classical
physics interference equations virtually identical to the irradiance equations
in _Optics_, by Hecht.

> But Cecil, you CAN'T add V1 and V2 in any manner to obtain forward power,
> because adding V1 and V2 does not yield forward voltage.

Yes, it does, Walt. Consider the following matched system similar to the
example in Dr. Best's article.

100w XMTR-----50 ohm line---x---1/2WL 150 ohm line---50 ohm load

P1 = 100W(1-rho^2) = 100(1-.25) = 75W

P2 = 33.33W(rho^2) = 33.33W*.25 = 8.33W

P1 = 75W, P2 = 8.33W, PFtotal = 133.33W

V1 = 106.07V, V2 = 35.35V, VFtotal = 141.4V

V1 + V2 = VFtotal, 106.07V + 35.35V = 141.4V

> How many times do I have to explain that V1 + V2 does NOT equal VF total?

But it does, Walt. See above.

>>75w + 8.33W + 2*SQRT(75W*8.33W) = 133.33W (Equation 13)
>
> This is Steve's Eq 12, which appears to be correct when theta = zero, but he
> qualifies this equation, saying that when V1 and V2 are in phase the total
> power can be determined by Eq 13. NOT SO.

Yes, it is, Walt. Equation 13 is valid for any matched system. That's
equation 13 just above. Perhaps you don't understand what Dr. Best means
by P1 and P2.

PFtotal = P1 + P2 + 2*SQRT(P1*P2) total forward power

133.33W = 75W + 8.33W + 50W

There's 50W of constructive interference and the equation balances perfectly.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3554. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 04:39:35 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c2a113$1_2@corp.newsgroups.com>
Source record: 93909

Walter Maxwell wrote:
> Then how can you explain what happens when you reverse the zip cord, plugging
> one end in one way and the other with the prongs reversed ? Are you saying the
> currents in this condition are seeing an open circuit?

I'm sorry, Walt, you lost me. What zip cord?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3555. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 04:52:37 UTC
From: k7itm@aol.com
Message-ID: <3200347.0406052052.2d6e3163@posting.google.com>
Source record: 93910

Hi Thierry,

Yes, the cage idea should work well. I'd recommend 3 wires as the
very minimum, and I think 4 or more would be better. It also helps if
the form a cone, like the "Isopole" antennas, so the cage is well away
from the coaxial feedline, which would be centered in the cone.

If you use coax with a "copperweld" (copper-clad steel) center
conductor, perhaps you can strip 5 meters of the jacket and braid off
the end of the coax, and the coax is then one continuous run. In
fact, you can probably just cut the jacket and braid off of a short
section 5 meters from the end, to make the job easier. Then attach
some wires, even thin ones, to the feedline braid and run them back
along the line.

I'd recommend a choke balun, perhaps a few cm further along the line
from where the cage wires end. For single band use, you can coil up
some coax and even bridge across the coil with a capacitor to tune it,
connecting the capacitor to the braid -- that trick is useful if you
want to keep the coil small.

Cheers,
Tom

hello <hello@nospam.com> wrote in message
news:<SxLvc.49522$zm5.25179@nntpserver.swip.net>...
> HI
> I want to put a dipole for 20m in my garden.
> A tree and the home roof will be ok to fix the extremity.
> My problem is the feed point : If IA center feed it , the feed line will
> just hang at the center of the garden, something not acceptable by the
> YL :-)
>
> So I'm looking for a way to feed it by one "side".
> I could endfeed it, but impedance matching is not so easy at such a high
> impedance.
> Then, after reading lots of post in this newsgroup, I read about the
> sleeve antenna : generaly a vertical dipole where one leg is a sleeve.
> Coax enter in the sleeve to the center feed point.
> I think this antenna could work horizontaly and for HF and solve my
> problem. Now, hanging horizontaly a 5m long metallic sleeve is surely
> not a good idea, but at HF , I thing that man could replace the sleeve
> by some wire cage.
> So I end up with the idea of a cage or biconic dipole , with the coax
> entering horizontaly in the middle of the cage to the center.
>

> What do you think of this idea ?
> How many wire for the cage 2 (a bowtie), 3, more ?
> Do you have a better one for my particular constrains ?
>
> Lots of questions, but I'm sure you will have lots of answers !
>
> Thanks in advance
>
> Thierry
> F4DWV

3556. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 05:03:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <k695c0dv5r92af6imah3lqfau0ljv1pee4@4ax.com>
Source record: 93911

On Sat, 05 Jun 2004 23:39:35 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>What zip cord?
:-)
A point offered that is not even half a day old... Symptoms of two
conversations running under the impression they are on the same
planet.

3557. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 06:17:12 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <e9d5c01gps8a4chsf28ibc95q83437kb15@4ax.com>
Source record: 93912

On Sat, 05 Jun 2004 20:06:48 GMT, Walter Maxwell <w2du@iag.net> wrote:
>Cecil, I hope we're both still on the same page on this one;
Same page, different books....

Hi Walt,

Let's see, the score is one argument, two correspondents, and three explanations. Do you know where Cecil is? Used to be "Find Waldo."

73's
Richard Clark, KB7QHC

3558. Re: Lightweight yagi antennas as a design philosphy

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 08:38:03 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <iaLts$CrftwAFwPB@b-howie.demon.co.uk>
Source record: 93913

In message <40c1dda8$1@news.vallnet.com>, Tyas_MT
<tyas_mt@hotplonkmail.com> writes
>
>I built, for a 'start from scratch' foxhunt, a 3 element yagi on 2m (~146
>mhz) out of magnet wire glued onto a piece of poster board. I used standard
>numbers and it worked fine. The hardest part was soldering wire thinner than
>my hair to the coax and anchoring the coax to the poster board so it would
>get pulled off.
>I won the hunt over all the 'body shielded ht' guys, even taking 10min to
>build my antenna...

This is interesting. I toyed with the idea of disposable antenna
systems for VHF Field Days. They only have to survive for 24hours, but
have to be big, cheap and light weight. I came up with the idea of
wrapping kitchen foil onto the thin dowel used to support plants to make
the elements (maybe plastic drinking straws would do on 70cm) and make
the boom out of bamboo or plastic tubing using string and a t-bar to
stop droop and sideways bend.

I never pursued it, but the card idea comes close to what I was
thinking of. Anyone tried something more ambitious. ?

Brian GM4DIJ
--
Brian Howie

3559. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 09:29:07 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ig6e4FmovuvU1@uni-berlin.de>
Source record: 93914

"Mark Keith" <nm5k@wt.net> wrote in message news:40C2773E.79AA@wt.net...

> There are half a jillion designs already out there. Also in books. All
> designs can scaled to any other frequency. IE: any 2 meter VHF antenna
> design can be easily scaled to 160 mhz. Why the rigid construction
> requirements?
> If you are scaling a design to another freq, you should also scale the
> element dia. Luckily, there should be no need to change element diameter
> for a rescaled 2m antenna, as it's already close enough. I once built a
> marine band 4 element yagi from a thin copper tube as a boom, and
> coathanger wire soldered to the boom as the elements. Not the greatest
> materials, and it eventually rusted, but I could hear stuff that didn't
> exist on verticals. I'm in Houston, and was listening to marine traffic
> out towards Galveston, and the gulf. 50-60 plus miles easy... If you
> have NBS designs, what are you waiting for? Those spacings are quite
> good enough. They do lean towards max gain vs f/b, but you don't need
> super f/b with what you are doing. So a NBS design should be fine. "the
> f/b is still about 10 db" Thats what I used. My 6m beam is also a NBS
> yagi. All my homebrew yagi's use a driven element grounded to the boom.
> Also, I use gamma or T matches, etc...I rarely use a split driven
> element insulated from the boom. It's more work, and I'm lazy...Only my
> store bought "I didn't pay for it" HF beam is built that way. MK
>
> --
> http://web.wt.net/~nm5k

Mark

If I am prepared to go with other peoples electrical and mechanical designs
then there is no doubt my task ought to be easy peasy. And as you say there
are zillions of designs out there already.There is a heck of a lot of sense
in taking that approach. :c)

It's perhaps unfortunate that I was started off by being given a model to
run in a program. This may have complicated the approch uneccessarily and
taken me away from what was the more sensible approach.

So obtaining software models and messing with antenna programs is perhaps
rather a redundant exercise.

Thanks for driving that home to me.

Rich

3560. Scaling yagi antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 10:59:10 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2igbn1Fmeti9U1@uni-berlin.de>
Source record: 93915

Strategy is that you don't rely on other peoples' software models. Because if you do you might find yourself having to engage in quite extensive design work, that is probably out of your skill range anyway. (Assumption is that there's no way that you can simply transfer dimensions from a software model to an actual antenna. This may be true to a greater or lesser extent.)

You decide on someone else's electrical and mechanical design. But the design is for another frequency. So, you chose a design closest to your frequency. This means you must scale the antenna.

Scaling simply invoves altering the dimensions proportionally. If the already designed antenna is for 144 Mhz and your desired antenna is for 159 Mhz then you have to scale size downwards by a factor of 144/159 = 0.90566.

If you were to scale to perfection every part of the antenna would be reduced in size, the boom, the element diameters etc. But this is not quite necessary in practice if there is no great difference in design frequency of the original antenna and your desired antenna frequency.

In the example given, concerning the element length, if the element lengths are reduced by 0.90566 then that should suffice. In other words, just altering the element lengths should suffice, no need to scale everying.

Yet, there may be times when you wish to alter the element and the boom sizes.

If the designed antenna is for a different frequency than what you want, changing the element lengths (again, sometimes you can get away by just changing the element lengths) is a matter of scaling.

However, you can also wish to change dimentions, but not scale the antenna. For instance, you want an antenna for 144Mhz, and you chose a 144Mhz antenna design, but you want to alter either the element diameters, or the boom size. Alteration of the element diameters will mean the length of the elements will have to change, to maintain resonance. Alteration of boom size will also have an effect on element lenghs. In this situation what you need is a G3SEK's program ELE.EXE which will calculate the new element length sizes when you alter either element diameter or boom size.

So, concerning the example: To get your 159 Mhz yagi antenna, you simpy scale the element lengths of the 144Mhz antenna. That should suffice as long as you keep to the original element diameters and boom.

However, if thereafter you wish to alter element diameters or boom size you have to use ELE.EXE. In that case you pretend that the scaled antenna is an original antenna. Remember, all you did was scale element lengths, nothing else, and because the scaling was minimal it's safe to say the scaled

antenna will work pretty close to the original. So when using ELE.EXE you take the scaled antenna as the original. But, you have to be carefull, changing the design configuration too much will not produce a good result. For instance, if you change the elements from going through the boom, to over the top of the boom, that may be a change too far.

This is how you "design" your antenna using someone elses original design. Well, it's how I think you do, not being an antenna buff.

Ian, G3SEK, can you say anything more about ELE.EXE. What can you alter, I presume the construction must remain the same, just that you may alter element diameters and boom size. What I want to do, is scale, and then possibly alter either all parasitic element diameters, keeping DE diameter the same, or just alter DE diameter, keeping parasitic element the same. Or alter both. Can ELE.EXE cope with that?

I put "scaling antennas" into Google and got a measly 18 hits. Probably because as a concept it's simple.

Perhaps there should be a word for scaling then altering element or boom diameters. A name given to this "design" approach. :c)

3561. Re: Antenna mounting recommendations for flat roof academic building

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 11:05:05 UTC
From: G&R <spam@limbo.hell>
Message-ID: <wTCwc.2532$sS2.13417@news20.bellglobal.com>
Source record: 93917

Try www.gordtelecom.com they have this product.

"Bill Blum" <billdotblum@mousepotato.net> wrote in message
news:KGNvc.5074$n65.3079@newssvr33.news.prodigy.com...
> Hi there--
>
> We've been given permission to mount a few antennas on the roof of one
> of the buildings at school, with the only caveat being "don't make holes
> in the roof."
>
> We're looking at some yagis (LPDA, about 12 feet long) for VHF work,
> and just need to get the things about 10-20 feet above the roof if
possible.
>
> Does anybody have any recommendations/tips on how to handle this? At
> work, I've seen large steel mast mounts than lay flat on a roof to
> support lightweight/low crosssection antennas... (yes, they're weighted
> down with concrete blocks.) Where would I find such a beast? Our
> facility manager has NO idea when these mast mounts wound up on the roof
> at work.
>
>
>
> Thanks.
> -bill
>
> (Replies to the group please)

3562. Re: Scaling yagi antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 11:09:01 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2igc9gFmrmr0U1@uni-berlin.de>
Source record: 93916

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2igbn1Fmeti9U1@uni-berlin.de...

> Perhaps there should be a word for scaling then altering element or
> boom diameters. A name given to this "design" approach. :c)

What I do wonder of whether these two things, scaling and altering element
diamer or boom size, is worth a dedicated webpage, uncluttered with other
design issues.

3563. Re: Scaling yagi antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 11:28:50 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2igdflFn09ppU1@uni-berlin.de>
Source record: 93918

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2igc9gFmrmr0U1@uni-berlin.de...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:2igbn1Fmeti9U1@uni-berlin.de...
>
> > Perhaps there should be a word for scaling then altering element or
> > boom diameters. A name given to this "design" approach. :c)
>
> What I do wonder of whether these two things, scaling and altering element
> diamer or boom size, is worth a dedicated webpage, uncluttered with other
> design issues.

http://www.ifwtech.co.uk/g3sek/diy-yagi/index.htm

There is information here, but I'm saying could someone create a webpage
where the only issues are scaling and element and boom corrections. Where
there is nothing about construction, because you are going to stick to the
original construction, nothing about modelling, because that's not relevant.

The page is made for those persons who only wish to scale and alter element
diameters or boom from a published design. A page not cluttered with
superflous information, information that has nothing to do with what the
person needs to know.

3564. Re: Scaling yagi antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 11:38:52 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <A3i13tBMJwwAFwYc@b-howie.demon.co.uk>
Source record: 93919

In message <2igc9gFmrmr0U1@uni-berlin.de>, Richard
<nearlynews_email@ntlworld.com> writes
>
>"Richard" <nearlynews_email@ntlworld.com> wrote in message
>news:2igbn1Fmeti9U1@uni-berlin.de...
>
>> Perhaps there should be a word for scaling then altering element or
>> boom diameters. A name given to this "design" approach. :c)
>
>What I do wonder of whether these two things, scaling and altering element
>diamer or boom size, is worth a dedicated webpage, uncluttered with other
>design issues.
>
One of the biggest problems I've had is when you scale the antenna from
a higher frequency down say 1296 to 432 you also scale the weight by a
factor of something like 27 (someone could build the weight -scale into
a program I suppose), and you usually don't want to that.

Brian GM4DIJ
--
Brian Howie

3565. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 14:02:50 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <lt86c090umeckgifjg78f615av30419a1f@4ax.com>
Source record: 93920

On Sat, 05 Jun 2004 23:39:35 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Then how can you explain what happens when you reverse the zip cord, plugging
>> one end in one way and the other with the prongs reversed ? Are you saying the
>> currents in this condition are seeing an open circuit?
>
>I'm sorry, Walt, you lost me. What zip cord?

Cecil, you must not be reading my posts. Go back one or two to get the drift.

Walt

3566. Re: Hustler 6btv - broken 75/80 resonator coupler

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 15:07:25 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <NqGwc.9702$HG.8758@attbi_s53>
Source record: 93821

"Dan" <lists@elp.rr.com> wrote in message
news:5h65c0d655ti2jcd2vuov5n9ruu19vtchi@4ax.com...
> While trying to fix a minor problem on my vertical... I accidentally
> broke the threaded coupler between the bottom of the 75/80 meter
> resonator and the top of the lower section is screws into this coupler
> is now broken off 1/2 in the resonator the other 1/2 in the lower
> mating section. At first I assume I could use like an "easy out
> and turn the broken pieces out of each unit. This is not the case.
> the part broken in the resonator does turn easy but will not back out.
> I am assuming it is some how captured and may not be a threaded item
> anyway..
>
> the part broken in the lower section I can not even get it to break
> loose and turn it..
>
> I have though about using a drill and tap on both sections and then
> use a thread rod about 1 to 1.5 inches long ..
>
> any ideas? am I missing something? any ideas and or fixes would sure
> be appreciated very much!!
>
> thanks
>
> Dan

Dan -

It sounds like these parts have "seized"
(this happens with aluminum parts - if you do not use a product like
Pentrox-A by Burndy)

I had a similar problem with a threaded radial on a Cushcraft VHF/UHF
vertical.

Although I ordered a replacement radial, I had to slowly drill out the
broken radial
(patience and a drill press help) ... I did use a correctly sized tap to
clean the threads.

I then applied Pentrox-A to the threads when I reassembled the antenna.

Greg
w9gb

3567. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 15:21:26 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <p4ednWkcDNrrq17dRVn-sA@comcast.com>
Source record: 93822

Surely you realize that there are people that listen to things on radio.
Shortwave, VHF, UHF. Military comms, utilities, ect. You do actually
participate in the radio hobby, don't you?

"Fractenna" <fractenna@aol.com> wrote in message
news:20040605135952.16718.00000480@mb-m29.aol.com...
> >Oh you got me! I've been caught out! I'm listening to the marine band.
Shall
> >I expect the police at my door? Quickly I must hide my apperatus! I think
> >not.
> >
>
> I asked a reasonable question, and did not expect a sarcastic response.
> Please: why is there a need, or an interest, to "eavesdrop" (using your
> description) on the marine band with a high gain unidirectional antenna?
>
> 73,
> Chip N1IR

3568. Re: bt6v 160 meter add on capacitor value

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 15:24:13 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <xGGwc.53283$eY2.32844@attbi_s02>
Source record: 93823

<rlangevin@interwrx.com> wrote in message
news:40C21A35.3060108@interwrx.com...
> Group
> I have been asked to look at a butternut antenna for a fellow ham.
> the 160m and the 30m capacitors are broken.
> I dug through the archives and found the value of the 30m caps (67pf
> 7.5KVDC)but I can not find the value of the 160m caps.
> I want to look in his junk box before I order new ones from bencher.
>
> Thanks
> Rich L
> KB7YEB
>

Rich -

All of the Butternut manuals and part lists can be found on the Bencher web
site.
[This also includes specific dates of some models - where parts or assembly
were slightly modified]
http://www.bencher.com/pdf_download.html

Parts list and diagram for HF-6V antenna
http://www.bencher.com/pdfs/00648ZZV.pdf

The HF6V does not cover 160 meters, without the addition of the 160 m
accessory add-on option.

You will note that there have been 3 versions of the 160 meter resonator kit
through the years
This is the current production version (I do not see a reference to the
capacitor value for this 160 m kit)
http://www.bencher.com/pdfs/00237IZV.pdf

You can contact Bencher. they recently moved from their former Woodale
location
Bencher, Inc.
241 Depot Street
Antioch, IL 60002
Phone: 847-838-3195
Fax: 847-838-3479

Greg
w9gb

3569. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 15:33:31 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <6lb6c0l0vnrk8qujhp9mv94isv75cbb47b@4ax.com>
Source record: 93824

On Sat, 05 Jun 2004 23:36:07 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> I'm trying to locate my Hecht paper, but can't at the moment. Let's make sure
>> we're talking about the same set of of equations. The ones I'm saying are
>> invalid as stated in his article appear on Page 46, Col 2.
>
>Walt, I'm sorry, all I have is the QEX CD and the pages are not the same as
>they were in QEX magazine. Dr. Best's equations 13 and 15 are the classical
>physics interference equations virtually identical to the irradiance equations
>in _Optics_, by Hecht.
>
>> But Cecil, you CAN'T add V1 and V2 in any manner to obtain forward power,
>> because adding V1 and V2 does not yield forward voltage.
>
>Yes, it does, Walt. Consider the following matched system similar to the
>example in Dr. Best's article.
>
>100w XMTR-----50 ohm line---x---1/2WL 150 ohm line---50 ohm load
>
>P1 = 100W(1-rho^2) = 100(1-.25) = 75W
>
>P2 = 33.33W(rho^2) = 33.33W*.25 = 8.33W
>
>P1 = 75W, P2 = 8.33W, PFtotal = 133.33W
>
>V1 = 106.07V, V2 = 35.35V, VFtotal = 141.4V
>
>V1 + V2 = VFtotal, 106.07V + 35.35V = 141.4V
>
>> How many times do I have to explain that V1 + V2 does NOT equal VF total?
>
>But it does, Walt. See above.

Well, Cecil, so far I haven't been able to follow the logic in the lines above. Perhaps they are correct for that particular example, but I'm not so sure. For example, if 100 w is available only 75 w will enter the 150-ohm line initially, so initially only 56.25 w is absorbed in the 50-ohm load and 18.75 w is reflected, which then sees a 3:1 mismatch on return to the 50-ohm line, making the re-reflected power 4 .69 w . I haven't had time to work through the remaining steps to the steady state. So before I do I notice that you state that Eqs 10 thru 15 are valid for any matched system. So let's see if this is so by using the example Steve used earlier in his Part 3, the one he took from Reflections and then called it a 'fallacy'.

This is that example: 50-ohm lossles line terminated with a 150 + j0 load. 100 w available from the source at 70.71 v. Matched at the line input, in the steady state the total forward power Pfwd = 133.33 w and power reflected is Pref = 33.333 w. With these steady state powers the forward voltage is 81.65 v and reflected voltage is 40.82 v. Due to the integration of the reflected waves the source voltage 70.71 increased 10.94 v to 81.65 v. Therefore, in the steady state V1 = 81.65 v and V2 = 40.82 v.

Now using V1 and V2 in Eqs 7 and 8 we get P1 = 133.33 w and P2 = 33.333 w. So far so good, these Eqs are correct and valid.

But now let's plug V1 and V2 into Eq 9:

(V1 + V2) = 122.47 v. Then 122.47^2/50 = 300 w. Something's amiss here. So let's go a step further and plug P1 and P2 into Eq 13:

P1 = 133.33 w and P2 = 33.333 w.
Then using Eq 13, PF total = (sqrt 133.33 + sqrt 33.333)^2 = 300 w.
We get the same incorrect value as with Eq 9. Now why can this be?

For starters, P1 derived from Eq 7 is already the total forward power. So why is the forward power value P1 plugged into Eq 13 do derive the total foward power PFtotal?

Do you see where this is going, Cecil?

So now let's go one step backward to use Eq 11:

Plugging V1 and V2 into Eq 11 we get VFtotal^2 = 14 ,999.6983 (call it 15,000). Therefore, VFtotal = sqrt VFtotal^2 = 122.4733 v.

This is the same incorrect value obtained using Eq 9.

So, Cecil, do you still believe these equations are valid for every matched situation?

Walt

3570. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 15:58:14 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <39f6c0539ueklmk0ugb36ucltje7obb6lr@4ax.com>
Source record: 93825

On Sun, 06 Jun 2004 15:33:31 GMT, Walter Maxwell <w2du@iag.net> wrote:

>On Sat, 05 Jun 2004 23:36:07 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>
>>Walter Maxwell wrote:

>Well, Cecil, so far I haven't been able to follow the logic in the lines above.
>Perhaps they are correct for that particular example, but I'm not so sure. For
>example, if 100 w is available only 75 w will enter the 150-ohm line initially,
>so initially only 56.25 w is absorbed in the 50-ohm load and 18.75 w is
>reflected, which then sees a 3:1 mismatch on return to the 50-ohm line, making
>the re-reflected power 4 .69 w . I haven't had time to work through the
>remaining steps to the steady state. So before I do I notice that you state that
>Eqs 10 thru 15 are valid for any matched system. So let's see if this is so by
>using the example Steve used earlier in his Part 3, the one he took from
>Reflections and then called it a 'fallacy'.
>
>This is that example: 50-ohm lossles line terminated with a 150 + j0 load. 100 w
>available from the source at 70.71 v. Matched at the line input, in the steady
>state the total forward power Pfwd = 133.33 w and power reflected is Pref =
>33.333 w. With these steady state powers the forward voltage is 81.65 v and
>reflected voltage is 40.82 v. Due to the integration of the reflected waves the
>source voltage 70.71 increased 10.94 v to 81.65 v. Therefore, in the steady
>state V1 = 81.65 v and V2 = 40.82 v.
>
>Now using V1 and V2 in Eqs 7 and 8 we get P1 = 133.33 w and P2 = 33.333 w. So
>far so good, these Eqs are correct and valid.
>
>But now let's plug V1 and V2 into Eq 9:
>
>(V1 + V2) = 122.47 v. Then 122.47^2/50 = 300 w. Something's amiss here. So let's
>go a step further and plug P1 and P2 into Eq 13:
>
>P1 = 133.33 w and P2 = 33.333 w.
>Then using Eq 13, PF total = (sqrt 133.33 + sqrt 33.333)^2 = 300 w.
>We get the same incorrect value as with Eq 9. Now why can this be?
>
>For starters, P1 derived from Eq 7 is already the total forward power. So why is
>the forward power value P1 plugged into Eq 13 do derive the total foward power
>PFtotal?
>
>Do you see where this is going, Cecil?
>
>So now let's go one step backward to use Eq 11:
>

>Plugging V1 and V2 into Eq 11 we get VFtotal^2 = 14 ,999.6983 (call it 15,000).
>Therefore, VFtotal = sqrt VFtotal^2 = 122.4733 v.
>
>This is the same incorrect value obtained using Eq 9.
>
>So, Cecil, do you still believe these equations are valid for every matched
>situation?
>
>Walt

Cecil, one point I forgot in the msg above--the standing wave.

Remember I said earlier that V1 + V2 yields the standing wave, not forward voltage Vfwd? We know that V1 + V2 = 122.47 v. This is the max value of the standing wave.

Now V1 - V2 = 40.82 v. Notice that (V1+ V2)/(V1 - V2) = 122.47/40.82 = 3. 0. Doesn't this look something like the SWR?

Walt

3571. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 16:43:16 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c34ab4_3@corp.newsgroups.com>
Source record: 93826

Walter Maxwell wrote:
> Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>
>>Walter Maxwell wrote:
>>>Then how can you explain what happens when you reverse the zip cord, plugging
>>>one end in one way and the other with the prongs reversed ? Are you saying the
>>>currents in this condition are seeing an open circuit?
>>
>>I'm sorry, Walt, you lost me. What zip cord?
>
> Cecil, you must not be reading my posts. Go back one or two to get the drift.

Are you talking about the two generators hooked up back to back.
If so, where are the two EM waves traveling in the same direction
which is a prerequisite for complete destructive/constructive
interference? The generated EM waves, in your example, are moving
in opposite directions which is simply not relevant to this discussion.

Please conjure up an experiment where two coherent waves are
moving in the same direction without affecting the generators.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3572. Re: B&W HF Wideband Folded Dipole and Isotron

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 16:45:09 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c34b24_3@corp.newsgroups.com>
Source record: 93827
Cross-posted to: alt.binaries.schematics.electronic,alt.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

R. David Steele wrote:

> <kc8gpd28@nospam.earthlink.net> wrote:
> |I am looking for homebrew designs for the Barker & Williamson 90ft or 180ft
> |1.8-30MHz Broadband Folded Dipole. also intersted in desgins based on the
> |isotron.
>
> It is just a folded loop with a terminating resistor. Much like
> a Rhombic.

But not much like a Rhombic in performance.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3573. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 16:46:13 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <10c6iop3t5okq76@corp.supernews.com>
Source record: 93828

"Walter Maxwell" <w2du@iag.net> wrote in message
news:39f6c0539ueklmk0ugb36ucltje7obb6lr@4ax.com...
snip

> Now V1 - V2 = 40.82 v. Notice that (V1+ V2)/(V1 - V2) = 122.47/40.82 = 3.
0.
> Doesn't this look something like the SWR?
>
> Walt
>

Walt
You really should write a book.
(rim shot) =]8*O

73
H.

3574. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 17:44:38 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c35917_3@corp.newsgroups.com>
Source record: 93829

Walter Maxwell wrote:
> Well, Cecil, so far I haven't been able to follow the logic in the lines above.
> Perhaps they are correct for that particular example, but I'm not so sure.

Please pick any example of your choice of matched systems. Dr. Best's equation 13 will be valid for any matched system. VFtotal = V1 + V2 will be valid for any system, matched or not.

> For
> example, if 100 w is available only 75 w will enter the 150-ohm line initially,
> so initially only 56.25 w is absorbed in the 50-ohm load and 18.75 w is
> reflected, which then sees a 3:1 mismatch on return to the 50-ohm line, making
> the re-reflected power 4 .69 w . I haven't had time to work through the
> remaining steps to the steady state.

When you do, you will get the same values as I.

> So before I do I notice that you state that
> Eqs 10 thru 15 are valid for any matched system. So let's see if this is so by
> using the example Steve used earlier in his Part 3, the one he took from
> Reflections and then called it a 'fallacy'.

As I have said before, Steve's equations are correct but he simply drew the wrong conclusions from them. His "fallacy" is a fallacy but has nothing to do with his equations. He simply drew the wrong conclusions from valid equations.

> This is that example: 50-ohm lossles line terminated with a 150 + j0 load. 100 w
> available from the source at 70.71 v. Matched at the line input, in the steady
> state the total forward power Pfwd = 133.33 w and power reflected is Pref =
> 33.333 w. With these steady state powers the forward voltage is 81.65 v and
> reflected voltage is 40.82 v. Due to the integration of the reflected waves the
> source voltage 70.71 increased 10.94 v to 81.65 v. Therefore, in the steady
> state V1 = 81.65 v and V2 = 40.82 v.

Nope, you simply misunderstood what Steve said. V1 and V2 are *NOT* on the 50 ohm line. In fact, the 1 WL 50 ohm line is irrelevant and just serves to confuse. V1 and V2 are voltages existing *at the match point* at the INPUT of the tuner. Steve chose an example that is virtually impossible to explain or understand.

Let's take it step by step starting with Steve's example:

100W XMTR---50 ohm line---tuner---1WL 50 ohm line---150 ohm load

The 1WL 50 ohm lossless line is irrelevant except for power measurements so eliminate it.

100W XMTR---50 ohm line---tuner---150 ohm load

The tuner can now be replaced by 1/4WL of 86.6 ohm feedline.

100W XMTR---50 ohm line---x---1/4WL 86.6 ohm line---150 ohm load
100W--> 107.76W-->
<--0W <--7.76W
V1-->
V2-->

Now we have an example that is understandable and we haven't changed
any of the conditions.

The magnitude of the reflection coefficient is 0.268. That makes the magnitude
of the transmission coefficient equal to 1.268 (Rule of thumb for matched
systems with single step-function impedance discontinuities)

So V1 = 70.7 * 1.268 = 89.6V V2 = VF2 * 0.268 = 6.95V

VFtotal = V1 + V2 = 89.6V + 6.95V = 96.6V

PFtotal = 96.6V^2/86.6 = 107.76W

> So, Cecil, do you still believe these equations are valid for every matched
> situation?

Yes, they are, Walt, once one understands them. I don't blame you for being
confused about Steve's example. He chose the worst example possible and
didn't explain it very well at all.

I still maintain that you two are two inches apart and neither one of you
will budge an inch.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3575. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 18:04:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c35dc5$1_3@corp.newsgroups.com>
Source record: 93830

Walter Maxwell wrote:
> Remember I said earlier that V1 + V2 yields the standing wave, not forward
> voltage Vfwd?

Dr. Best's V1 + V2 are moving in the same direction toward the load
and do NOT yield the standing wave. You have misunderstood what he
was trying to say (which is super easy to do).

Dr. Best's V1 is proportional to the S-parameter term, s21(a1)
The only difference is that all S-parameter voltages are normalized
to the square root of Z0.

Dr. Best's V2 is proportional to the S-parameter term, s22(a2)

Consider this easy-to-understand generalized example.

XMTR---Z01---x---1/2WL Z02---load=Z01
VF1--> VF2-->
<--VR1 <--VR2

VF1 is the forward voltage in the Z01 section. VF2 is the forward
voltage in the Z02 section. VR1 is the reflected voltage in the
Z01 section. VR2 is the reflected voltage in the Z02 section.

RHO is the physical reflection coefficient and TAU is the physical
transmission coefficient which is equal to (1+RHO) at an impedance
discontinuity.

Dr. Best's V1 = VF1(TAU) His V2 = VR2(RHO)

Dr. Best's V1 is the part of VF1 that makes it through the impedance
discontinuity (coming from the source side). It is traveling toward
the load.

Dr. Best's V2 is the reflected voltage re-reflected from the match
point. It is also traveling toward the load.

V1 and V2 superpose into VF2 which Dr. Best calls VFtotal. And that
is indeed what happens. That Dr. Best was somewhat incapable of
explaining the equation is his fault, not yours. His explanations
were so obtuse, I'm not sure he understood them himself. He certainly
didn't recognize the classical interference equations as such.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3576. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 18:13:59 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c35ff7$1_3@corp.newsgroups.com>
Source record: 93831

Walter Maxwell wrote:
> Now V1 - V2 = 40.82 v. Notice that (V1+ V2)/(V1 - V2) = 122.47/40.82 = 3. 0.
> Doesn't this look something like the SWR?

Well, let's see.

V1 = VF1(TAU)

V2 = VR2(RHO)

[VF1(TAU) + VR2(RHO)]/[VF1(TAU) - VR2(RHO)]

Does that look something like SWR?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3577. FS:Texas Bugcatcher Available

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 20:05:29 UTC
From: mailfrmpa@aol.com
Message-ID: <20040606160529.16279.00000598@mb-m29.aol.com>
Source record: 93832

Base load coil, mast, two whips, etc. Want to sell for local pickup in Denver, CO metro area. Asking $150.00

K0MB@arrl.net

3578. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 21:27:46 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <9g07c0tgk8ab8k65f8civqdcr240c7a4b2@4ax.com>
Source record: 93833

On Sun, 06 Jun 2004 12:44:38 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Well, Cecil, so far I haven't been able to follow the logic in the lines above.
>> Perhaps they are correct for that particular example, but I'm not so sure.
>
>Please pick any example of your choice of matched systems. Dr. Best's equation
>13 will be valid for any matched system. VFtotal = V1 + V2 will be valid for
>any system, matched or not.
>
>> For
>> example, if 100 w is available only 75 w will enter the 150-ohm line initially,
>> so initially only 56.25 w is absorbed in the 50-ohm load and 18.75 w is
>> reflected, which then sees a 3:1 mismatch on return to the 50-ohm line, making
>> the re-reflected power 4 .69 w . I haven't had time to work through the
>> remaining steps to the steady state.
>
>When you do, you will get the same values as I.
>
>> So before I do I notice that you state that
>> Eqs 10 thru 15 are valid for any matched system. So let's see if this is so by
>> using the example Steve used earlier in his Part 3, the one he took from
>> Reflections and then called it a 'fallacy'.
>
>As I have said before, Steve's equations are correct but he simply drew the
>wrong conclusions from them. His "fallacy" is a fallacy but has nothing to
>do with his equations. He simply drew the wrong conclusions from valid
>equations.
>
>> This is that example: 50-ohm lossles line terminated with a 150 + j0 load. 100 w
>> available from the source at 70.71 v. Matched at the line input, in the steady
>> state the total forward power Pfwd = 133.33 w and power reflected is Pref =
>> 33.333 w. With these steady state powers the forward voltage is 81.65 v and
>> reflected voltage is 40.82 v. Due to the integration of the reflected waves the
>> source voltage 70.71 increased 10.94 v to 81.65 v. Therefore, in the steady
>> state V1 = 81.65 v and V2 = 40.82 v.
>
>Nope, you simply misunderstood what Steve said. V1 and V2 are *NOT* on the 50 ohm
>line. In fact, the 1 WL 50 ohm line is irrelevant and just serves to confuse. V1
>and V2 are voltages existing *at the match point* at the INPUT of the tuner. Steve
>chose an example that is virtually impossible to explain or understand.

Cecil, Steve's equations 4 thru 8 are correct, valid, and completely GENERAL. In
the text preceding the Eqs he even specifies Zo as 50 ohm, not that it matters.
He correctly defines V1 in Eq 7 and he correctly defines V2 in Eq 8. However, he

makes a vital error in the paragraph preceding these two equations.

He says incorrectly, "When two forward traveling waves add, general superposition theory and Kirchoff's voltage law require that the total forward-traveling voltage be the vector sum of the individual forward-traveling voltages such that VFtotal = V1 + V2."

This statement is TOTALLY FALSE, and this error is the basis for the remainder of his equations to be invalid. Kirchoff's voltage law does not apply in this case of transmission line practice. There are times when circuit theory doesn't hold and transmission line theory is required.

You are still ignoring his Eq 6 in Part 1, which is false and invalid because he mistook the expression for determining the standing wave for the total forward wave. Look back at my previous msg where I've shown that the addition of the forward and reflected waves yields the standing wave, not the forward wave. The standing wave is NOT the forward wave.

Refer to the text on your CD at the paragraph that begins: "A transmission line system analysis must be performed with voltage and current, from which the power is then derived." Read on from this point to where it reads, "If total re-reflection of power occurs at the T-network, the re-reflected voltage must have the same magnitude as the reflected voltage."

Please note the values of voltages and currents that appear in that entire section, because this section is a direct copy of my example he took from Reflections in an attempt to disprove it. Which he does in the next sentence:

"Therefore, based on the assumption that total power re-reflection and in-phase forward-wave addition, the total forward-traveling wave of 81.65 v must be the result of a voltage having a magnitude of 70.711 v adding in phase with a voltage having a magnitude of 40.825 v. Two in-phase complex voltages having magnitudes of 70.711 v and 40.825 v cannot add together such that the resulting voltage has a magnitude 81.65 v."

OF COURSE IT CAN'T, because these two voltages CANNOT BE ADDED TOGETHER TO DERIVE THE FORWARD VOLTAGE.. This is further evidence that he didn't realize that Eq 6 in Part 1 was wrong, because it derives the standing wave voltage, NOT THE FORWARD VOLTAGE.

He then goes on in an unsuccessful attempt to prove my method wrong, in which he gets himself into trouble with those equations that don't work in general. If you still don't see the problem, Cecil, please go back and review my analysis in the earlier post and explain to me why you disagree with my results that show conclusively that the equations don't work.

To conclude, I have shown you why I have not used his values of V1 and V2 incorrectly, as you say. If you can show that I'm wrong I'll take the time to study the step-by-step in your example below.

Walt

>Let's take it step by step starting with Steve's example:
>

>100W XMTR---50 ohm line---tuner---1WL 50 ohm line---150 ohm load
>
>The 1WL 50 ohm lossless line is irrelevant except for power measurements so
>eliminate it.
>
>100W XMTR---50 ohm line---tuner---150 ohm load
>
>The tuner can now be replaced by 1/4WL of 86.6 ohm feedline.
>
>100W XMTR---50 ohm line---x---1/4WL 86.6 ohm line---150 ohm load
> 100W--> 107.76W-->
> <--0W <--7.76W
> V1-->
> V2-->
>
>Now we have an example that is understandable and we haven't changed
>any of the conditions.
>
>The magnitude of the reflection coefficient is 0.268. That makes the magnitude
>of the transmission coefficient equal to 1.268 (Rule of thumb for matched
>systems with single step-function impedance discontinuities)
>
>So V1 = 70.7 * 1.268 = 89.6V V2 = VF2 * 0.268 = 6.95V
>
>VFtotal = V1 + V2 = 89.6V + 6.95V = 96.6V
>
>PFtotal = 96.6V^2/86.6 = 107.76W
>
>> So, Cecil, do you still believe these equations are valid for every matched
>> situation?
>
>Yes, they are, Walt, once one understands them. I don't blame you for being
>confused about Steve's example. He chose the worst example possible and
>didn't explain it very well at all.
>
>I still maintain that you two are two inches apart and neither one of you
>will budge an inch.

Cecil, I've shown where we're apart. It's a lot more than 2 inches.

3579. Re: Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 22:27:58 UTC
From: Umbrella-AZ <unbrella-az@att.net>
Message-ID: <OTMwc.41870$_k3.1034537@bgtnsc05-news.ops.worldnet.att.net>
Source record: 93834

Thierry, F4DWV, writes:

> Looks like a lindenblad antenna
> (http://www.amsat.org/amsat/articles/w6shp/lindy.html)
> with a original feeding.

I think there is definitely a kinship there. Folding
back the dipole "legs" makes the dipoles less directive
and it becomes possible to use only two dipoles rather
than the four of the Lindenblad.

Of course, when I look at a Lindenblad in a certain
way, it appears to be a highly truncated, half-wave
section of a quadrifilar helical antenna radiating
in the normal (radial) mode. You have to tilt your
head just right to see it.

Jim, K7JEB

3580. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 22:32:24 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c39c88_5@corp.newsgroups.com>
Source record: 93835

Walter Maxwell wrote:
> To conclude, I have shown you why I have not used his values of V1 and V2
> incorrectly, as you say. If you can show that I'm wrong I'll take the time to
> study the step-by-step in your example below.

Steve is essentially doing an S-parameter analysis without the (square root of Z0) normalization. Since we know that an S-parameter analysis of a match point is indeed valid, a lot of Steve's equations are valid by association.

Assuming the S-parameter equation is valid, we can use it to prove that

VFtotal = V1 + V2

V1/SQRT(Z0) = s21(a1) in the S-parameter analysis.

V2/SQRT(Z0) = s22(a2) in the S-parameter analysis.

VFtotal/SQRT(Z0) = b2 in the S-parameter analysis.

Given: b2 = s21(a1) + s22(a2) is a valid S-parameter equation.

Therefore, VFtotal/SQRT(Z0) = V1/SQRT(Z0) + V2/SQRT(Z0) is a valid equation because there is an EXACT one-to-one correspondence to the S-parameter equation.

Therefore, if we multiply both sides by SQRT(Z0) we get VFtotal = V1 + V2

The only way for the above equation to be wrong is if the S-parameter equation is wrong. The only difference in the S-parameter equation and Dr. Best's equation is the normalization by [SQRT(Z0)].

Given a generalized matched system:

XMTR---Z01---x---1/4WL Z02---load
VF1--> VF2-->
<--VR1 <--VR2

VF2 = VF1(TAU) + VR2(RHO) = V1 + V2 Dr. Best's equation

b2 = s21(a1) + s22(a2) S-parameter equation

Dr. Best is essentially quoting an S-parameter analysis
--
73, Cecil http://www.qsl.net/w5dxp

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3581. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 22:49:58 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <gh77c0tihjm6o3fek7v0pqhnmuhlce4b4i@4ax.com>
Source record: 93836

On Sun, 06 Jun 2004 17:32:24 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> To conclude, I have shown you why I have not used his values of V1 and V2
>> incorrectly, as you say. If you can show that I'm wrong I'll take the time to
>> study the step-by-step in your example below.
>
>Steve is essentially doing an S-parameter analysis without the (square
>root of Z0) normalization. Since we know that an S-parameter analysis of a
>match point is indeed valid, a lot of Steve's equations are valid by
>association.

snip

>Dr. Best is essentially quoting an S-parameter analysis

Cecil, if the S-parameteri analysis is applied correctly the results of the S-parameter analysis should agree with the results of mine that appears in my earlier posts. You have not responded to the results of my analysis that proves Steve's use of the equations 9 thru 15 is incorrect. I've proved that these equations do not work in general. Referring to my analysis, please show me where I went wrong, if that's your position.

Walt

3582. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-06 23:03:31 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c3a3d4_5@corp.newsgroups.com>
Source record: 93837

Walter Maxwell wrote:
> Cecil, if the S-parameteri analysis is applied correctly the results of the
> S-parameter analysis should agree with the results of mine that appears in my
> earlier posts. You have not responded to the results of my analysis that proves
> Steve's use of the equations 9 thru 15 is incorrect. I've proved that these
> equations do not work in general. Referring to my analysis, please show me
> where I went wrong, if that's your position.

I thought I did that, Walt. Your V1 and Dr. Best's V1 are NOT the same quantity.
Your V2 and Dr. Best's V2 are NOT the same quantity. It is no wonder that you
didn't get the same results. The 1WL 50 ohm line in Dr. Best's example is
absolutely irrelevant. Calculating anything on that line is a waste of effort.

Please center your calculations around the match point.

Plug any values into the following generalized matched system:

```
Z0-match
XMTR-----Z01-----x-----1/4WL Z02-----load
VF1--> VF2-->
<--0V <--VR2
```

VF2 = VFtotal in Dr. Best's article traveling toward the load

VF1(TAU) = V1 in Dr. Best's article traveling toward the load

VR2(RHO) = V2 in Dr. Best's article traveling toward the load

VR2 will always equal VF1(TAU) + VR2(RHO) = V1 + V2

just like b2 will always equal s21(a1) + s22(a2)
--
73, Cecil http://www.qsl.net/w5dxp

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3583. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 00:11:50 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406061611.400311f3@posting.google.com>
Source record: 93838

snip
wrote:
> >> "According to current
> >> theory, you have to give up one of the three-size, efficiency, or
> >> bandwidth-to achieve any one of the other two."
> >>
> > snip
> > Is the above statement correct ?
>
> Hi Art,
>
> In a crude and shorthand way, yes. This is why your small 160M
> vertical dipole is up to 15 to 17dB below performance in comparison to
> a full size one. All common legacy for CFAs, EHs, fractals, and the
> rest of this ilk that come down the pike.
>
> 73's
> Richard Clark, KB7QHC

Hmm I don't know where you are coming from but I ouldn't put my
antenna
in the CFA group that you state above. I know in the past that your
antenna is better than mine which is O.K. but the fact is that many
amateurs like to experiment and also pursue the "holy grail" Each
attempt provide knowledge
which is why antennas are pursued so much .I wager that the patent
pending
aproach discussed will provide welcome reading for everybody on this
newsgroup.
As for my particular antenna pursuit I am still not ready to throw it
into the dustbin as every change provides new insights on antennas (
the sinosoidal current wave for one)
I use my present antenna in the rotatable form on the top of the tower
for convenience but I modelled it after reading your comments and they
are as follows

Top band....vertical orientation
Impedance 349 +j41 ohms (186-j13 ohms when horizontally oriented
on the tower)
Load losses 2.88 db
Efficiency 51.5%
Radiation peak 23 degrees elevation -1.53dbi

The above has bandwidth of around 5 Khz which is O.K. for audio,
and frequency of use is selectable across the band.

Since the feed point is at the center I don't have to tear up the lawn for those rotten radial wires.
Efficiency jumps to over 90% on 80 meters and other bands with the typical figure eight form pattern, but my primary pursuit is on top band.
Yes, the antenna can be beaten when following conventional design but the hunt
using unconventional designs is part of the excitement, where slight change of inductance value moves you along the band /bands with out restriction with respect to power , the requirement of high voltage capacitors or large areas of grounding systems.
My antenna may be regarded as 'useless' by many but, unlike the CFA and other antennas you placed me with, my antenna is in use and the impedances provided seem to match those given by modelling using a PRO antenna program and using maximum segments because of the UNCONVENTIONAL close coupled cluster design.
Unconventional design provides insights to antennas like the oscillations that I refered to earlier, which is not to be seen on conventional designs and for which I seek further understanding and explanation.
The new unconventional design from R.I. which is 'patent pending' no less may well provide further insights that we are unaware of.
Unfortunately his efforts WILL be ridiculed by those who know that 'every thing about antennas is known' and by sharing he has shown his personal foolishnes to his peers.
When will the amateur learn that it is a waste of time to experiment where the failures are heralded and the minutia of new facts are ignored ???
Please forgive me for writing this extra post which has strayed from my original post.
Regards to all
Art

3584. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 00:11:51 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406061611.6a442965@posting.google.com>
Source record: 93839

snip
wrote:
> >> "According to current
> >> theory, you have to give up one of the three-size, efficiency, or
> >> bandwidth-to achieve any one of the other two."
> >>
> > snip
> > Is the above statement correct ?
>
> Hi Art,
>
> In a crude and shorthand way, yes. This is why your small 160M
> vertical dipole is up to 15 to 17dB below performance in comparison to
> a full size one. All common legacy for CFAs, EHs, fractals, and the
> rest of this ilk that come down the pike.
>
> 73's
> Richard Clark, KB7QHC

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antenna
in the CFA group that you state above. I know in the past that your
antenna is better than mine which is O.K. but the fact is that many
amateurs like to experiment and also pursue the "holy grail" Each
attempt provide knowledge
which is why antennas are pursued so much .I wager that the patent
pending
aproach discussed will provide welcome reading for everybody on this
newsgroup.
As for my particular antenna pursuit I am still not ready to throw it
into the dustbin as every change provides new insights on antennas (
the sinosoidal current wave for one)
I use my present antenna in the rotatable form on the top of the tower
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Yes, the antenna can be beaten when following conventional design but the hunt
using unconventional designs is part of the excitement, where slight change of inductance value moves you along the band /bands with out restriction with respect to power , the requirement of high voltage capacitors or large areas of grounding systems.
My antenna may be regarded as 'useless' by many but, unlike the CFA and other antennas you placed me with, my antenna is in use and the impedances provided seem to match those given by modelling using a PRO antenna program and using maximum segments because of the UNCONVENTIONAL close coupled cluster design.
Unconventional design provides insights to antennas like the oscillations that I refered to earlier, which is not to be seen on conventional designs and for which I seek further understanding and explanation.
The new unconventional design from R.I. which is 'patent pending' no less may well provide further insights that we are unaware of.
Unfortunately his efforts WILL be ridiculed by those who know that 'every thing about antennas is known' and by sharing he has shown his personal foolishnes to his peers.
When will the amateur learn that it is a waste of time to experiment where the failures are heralded and the minutia of new facts are ignored ???
Please forgive me for writing this extra post which has strayed from my original post.
Regards to all
Art

3585. Re: Interference, was Re: VE9SRB

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 00:17:06 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <5vb7c0dim4jgbo83hpj0kv9rkco4mml7oa@4ax.com>
Source record: 93840

On Sun, 06 Jun 2004 18:03:31 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Cecil, if the S-parameteri analysis is applied correctly the results of the
>> S-parameter analysis should agree with the results of mine that appears in my
>> earlier posts. You have not responded to the results of my analysis that proves
>> Steve's use of the equations 9 thru 15 is incorrect. I've proved that these
>> equations do not work in general. Referring to my analysis, please show me
>> where I went wrong, if that's your position.
>
>I thought I did that, Walt. Your V1 and Dr. Best's V1 are NOT the same quantity.
>Your V2 and Dr. Best's V2 are NOT the same quantity. It is no wonder that you
>didn't get the same results. The 1WL 50 ohm line in Dr. Best's example is
>absolutely irrelevant. Calculating anything on that line is a waste of effort.

Cecil, it seems like we're going around in cirles.

If Steve's equations are valid they should work in general. It doesn't matter whether we use the values from his T network section that comes later, or the values in my example that he attempts to prove incorrect.

What does matter is that the equations must deliver the correct answers regardless of the values used in the equations. I have proved that valid values plugged into his equations don't yield the correct answers.

Cec;il, why are you avoiding trying to understand the basis for his erroneous concept of adding forward and reflected voltages to obtain total forward voltage? You don't even respond to my discussion on this point.

Walt

3586. Amplifier TV Antenna on Consumer Product

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 01:12:50 UTC
From: Tommy <tommy@google.com>
Message-ID: <miPwc.20618$eH1.9290907@newssvr28.news.prodigy.com>
Source record: 93842

All folk,

I got some of amplifier TV antennas from consumer product in the markets.
None of them works well in all local TV stations. What are going on in these
products in the markets? They seem use wrong theory or don't use any theory.
It becomes just a toy on the top of the TV.

Regards

3587. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 01:15:23 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <4nf7c0le1naqsfutthhiendirpg4ieg2cq@4ax.com>
Source record: 93841

On 6 Jun 2004 17:11:50 -0700, aunwin@insightbb.com (Art Unwin KB9MZ)
wrote:

>Top band....vertical orientation Impedance 349 +j41 ohms
> (186-j13 ohms when horizontally oriented on the tower)

This reveals the tower is a significant radiator and a necessary
adjunct for the operation of the antenna. This is an identical
characteristic of CFA's, EH's and fractals.

>Unconventional design provides insights to antennas like the
>oscillations that I refered to earlier, which is not to be seen on
>conventional designs and for which I seek further understanding and
>explanation.

I see nothing unconventional at all.

73's
Richard Clark, KB7QHC

3588. Painting antenna against corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 01:34:58 UTC
From: janan@695online.com
Message-ID: <9a619ffc.0406061734.4aefc57a@posting.google.com>
Source record: 93843

Hello,

Will painting a TV antenna with latex hurt reception at all?
I have a problem with corrosion.

Jan

3589. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 01:44:46 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c3c9a2_7@corp.newsgroups.com>
Source record: 93844

Walter Maxwell wrote:
> Cecil, why are you avoiding trying to understand the basis for his erroneous
> concept of adding forward and reflected voltages to obtain total forward
> voltage? You don't even respond to my discussion on this point.

I'm not trying to avoid it, Walt. Dr. Best simply doesn't do that. V1 is a *forward-traveling voltage*. V2 is a *forward-traveling voltage*. Their sum is VFtotal, the *total forward-traveling voltage*. He does NOT add a forward voltage to a reflected voltage. V2 is the *forward-traveling* re-reflected voltage equal to VR2(RHO).

When the reflected voltage is acted upon by the reflection coefficient, it becomes a forward-traveling voltage. That you think Dr. Best is adding forward and reflected voltages, is the source the present misunderstanding. The individual Poynting Vector for V1 points toward the *load*. The individual Poynting Vector for V2 points toward the *load*. V1 and V2 are coherent component waves, both flowing toward the load so, of course, they superpose.

Again, consider the following *matched* configuration where RHO is the reflection coefficient and TAU is the transmission coefficient.

XMTR---Z01---x---1/4WL Z02---load
VF1--> VF2-->
<--VR1 <--VR2

There are four superposition components that occur. Two of them are traveling toward the load and two of them are traveling toward the source.

V1 = VF1(TAU) traveling toward the load
V2 = VR2(RHO) traveling toward the load

Adding these two forward-traveling voltages yields VF2 = V1 + V2

V3 = VF1(RHO) traveling toward the source
V4 = VR2(TAU) traveling toward the source

Adding these two rearward-traveling voltages yields VR1 = V3 + V4 which, in a matched case is zero because V3 = -V4.

VF1 breaks up into two components, V1 toward the load and V3 toward the source.

VR2 breaks up into two components, V2 toward the load and V4 toward the source.

Collect and superpose the two forward-traveling terms and you get the total forward-traveling voltage.

Collect and superpose the two rearward-traveling terms and you get
the total rearward-traveling voltage.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3590. Re: FA: Heavy Duty 20m (14mhz) Dipole Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 01:51:45 UTC
From: j999w@aol.com
Message-ID: <20040606215145.27620.00000685@mb-m05.aol.com>
Source record: 93845

Not too long ago BPL was short for Brass Pounder League. How many hams now know what that is???

jw
K9RZZ

3591. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 02:07:21 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <tti7c01todbieqirksmkiacjnsui1mstog@4ax.com>
Source record: 93846

On Sun, 06 Jun 2004 20:44:46 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Cecil, why are you avoiding trying to understand the basis for his erroneous
>> concept of adding forward and reflected voltages to obtain total forward
>> voltage? You don't even respond to my discussion on this point.
>
>I'm not trying to avoid it, Walt. Dr. Best simply doesn't do that. V1 is
>a *forward-traveling voltage*. V2 is a *forward-traveling voltage*. Their
>sum is VFtotal, the *total forward-traveling voltage*. He does NOT add a
>forward voltage to a reflected voltage. V2 is the *forward-traveling* re-
>reflected voltage equal to VR2(RHO).
>
>When the reflected voltage is acted upon by the reflection coefficient, it
>becomes a forward-traveling voltage. That you think Dr. Best is adding forward
>and reflected voltages, is the source the present misunderstanding. The
>individual Poynting Vector for V1 points toward the *load*. The individual
>Poynting Vector for V2 points toward the *load*. V1 and V2 are coherent
>component waves, both flowing toward the load so, of course, they superpose.

Cecil, I know V2 is the re-reflected voltage, but what I'm trying to persuade you is that they do NOT superpose to form the forward voltage--they superpose only to form the standing wave. You've go to accept that the standing wave voltage is NOT the forward voltage. If you can't come to realize this is the key to the problem I'm going to have to give up.

Incidentally, you say tau is 1+ rho as the transmission coefficient, which when muliplied by input voltage yields forward voltage. I thought (1 - rho^2) is the transmission coefficient. These two terms are not equal. Can you explain the difference?

Walt

3592. Re: Amplifier TV Antenna on Consumer Product

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 02:32:05 UTC
From: dplatt@radagast.org
Message-ID: <10c7kt5kbk4trce@corp.supernews.com>
Source record: 93847

>All folk,
>
>I got some of amplifier TV antennas from consumer product in the markets.
>None of them works well in all local TV stations. What are going on in these
>products in the markets? They seem use wrong theory or don't use any theory.
>It becomes just a toy on the top of the TV.

Amplified indoor RC antennas are, in my experience, a rather poor-performing product family in general. This seems to me to be a fundamental problem - it's not just an implementation glitch with one or another variety.

The problem is this: in many indoor situations, there just isn't enough clean, reflection-free RF for many stations present, above the local ambient noise floor. The signal present is badly contaminated by noise, and by reflections of the signal from nearby buildings (multipath), even before it hits the antenna. In these cases, it really doesn't help matters all that much to amplify the noisy/ghost-filled signal before sending it to the TV set - you boost the ambient noise and the ghosts, along with the desired signal.

In some cases, with some TVs, I gather that the amplification can help somewhat (some TVs seem to have poor RF front-end gain), but in other cases the amplification either doesn't help, or makes matters worse (by overloading the TV's tuner with other, stronger signals on nearby channels).

There's not really a good substitute for an antenna with good directional gain, mounted up as high as is practical on the roof, and aimed properly.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3593. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 03:47:51 UTC
From: aunwin <aunwin@insightbb.com>
Message-ID: <HzRwc.11666$HG.10803@attbi_s53>
Source record: 93848

I duly note your judgement which appears to be based on the feed impedances
provided. For the record the vertical was modelled
with one end about two feet above the ground (over perfect ground) whereas
the horizontal form was modelled at 820 inches above ground , again over
"perfect ground". I look forward to when the initial 'new' technology
alluded to in this thread is available for full discusion.
Regards to all
Art

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:4nf7c0le1naqsfutthhiendirpg4ieg2cq@4ax.com...
> On 6 Jun 2004 17:11:50 -0700, aunwin@insightbb.com (Art Unwin KB9MZ)
> wrote:
>
> >Top band....vertical orientation Impedance 349 +j41 ohms
> > (186-j13 ohms when horizontally oriented on the tower)
>
> This reveals the tower is a significant radiator and a necessary
> adjunct for the operation of the antenna. This is an identical
> characteristic of CFA's, EH's and fractals.
>
> >Unconventional design provides insights to antennas like the
> >oscillations that I refered to earlier, which is not to be seen on
> >conventional designs and for which I seek further understanding and
> >explanation.
>
> I see nothing unconventional at all.
>
> 73's
> Richard Clark, KB7QHC

3594. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 04:18:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c3edb3$1_3@corp.newsgroups.com>
Source record: 93849

Walter Maxwell wrote:
> Cecil, I know V2 is the re-reflected voltage, but what I'm trying to persuade
> you is that they do NOT superpose to form the forward voltage--they superpose
> only to form the standing wave. You've go to accept that the standing wave
> voltage is NOT the forward voltage. If you can't come to realize this is the key
> to the problem I'm going to have to give up.

I'm sorry, Walt,
Your belief that V2 is a reflected wave is the root of the misunderstanding.
V2 is a re-reflected wave and is therefore forward-traveling toward the load.
V2 is equal to the reflected wave voltage multiplied by the reflection
coefficient. V1 and V2 are traveling in the same direction, toward the load.

> Incidentally, you say tau is 1+ rho as the transmission coefficient, which when
> muliplied by input voltage yields forward voltage. I thought (1 - rho^2) is the
> transmission coefficient. These two terms are not equal. Can you explain the
> difference?

(1-rho^2) is the POWER transmission coefficient. For a single impedance
discontinuity situation, 1+rho is the VOLTAGE transmission coefficient.
From the IEEE Dictionary: "transmission coefficient, ... Note 2, An interface
is a special case of a network where the reference planes associated with
the incident and transmitted waves become coincident; in this case the
voltage transmission coefficient is equal to one plus the voltage
reflection coefficient."
--
73, Cecil http://www.qsl.net/w5dxp

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3595. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 05:46:56 UTC
From: theplanters95@aol.comnospam
Message-ID: <20040607014656.24939.00000450@mb-m21.aol.com>
Source record: 93850

Why do I get this error in my BPL comments?

A fatal error has occurred while loading your file.

Please try again later.
id_submission='-1'

3596. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 06:36:57 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gi28c0lunbejtja5cs6nn37ga3cor067mn@4ax.com>
Source record: 93851

On Sun, 06 Jun 2004 23:18:37 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:
>Walter Maxwell wrote:
>> voltage is NOT the forward voltage. If you can't come to realize this is the key
>> to the problem I'm going to have to give up.
>
>I'm sorry, Walt,
>Your belief that V2 is a reflected wave is the root of the misunderstanding.
>V2 is a re-reflected wave
Another way of saying "You are right, Walt, you are wrong."

Let's see, you two have passed this SAME thing back and forth 39
times, cannot agree about what each thinks about ONE particular, and
each of you insist you know what a third party meant.

Well, I'm off to Foggy Bottom (D.C.) again to where they do this kind
of thing for a living and call it law. ;-)

Let's see if a week improves this chowder.

73's
Richard Clark, KB7QHC

3597. Re: Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 13:02:18 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2ij7ahFnfngpU1@uni-berlin.de>
Source record: 93852

Here is a description of this antenna by Peter Onnigian, P.E., who developed and patented the design:

+ +
(Onnigian) Shunt Fed Slanted Dipole Antennas
The slanted dipole antenna in its present configuration was developed and patented in 1970. It consists of 2 half-wave dipoles bent 90°, slanted and fed in phase.
The slant angle is critical as it is the factor which determines the ratio of vertically and horizontally polarized radiated power. The phase point center is at the feed insulator on the dipole support arm. When fed through a vertical support pole on which the antenna was mounted during initial development tests, the axial ratio varied less than 1 dB.
The commercial adoption uses a horizontal boom containing a step transformer. This boom supports two half-wave dipoles in which the included angle is 90°. The two sets of dipoles are rotated at 22.5° from the horizontal plane. Two opposite arms of the dipoles are delta matched to provide a 50 ohm impedance at the radiator input flange. All four dipole arm lengths may be adjusted to resonance by mechanical adjustment of the end fittings. Shunt feeding, when properly adjusted, provides equal currents in all four arms resulting in excellent azimuth circularity.
+ +

(RF) The <1 dB axial ratio of this configuration is reduced by the adjacent transmission line(s), and the tower structure needed to support it (as with all sidemounted radiators).

NEC-2 patterns for this design, and three others commonly used in FM broadcast transmit antenna arrays are shown in paper 10 at the link below. Paper 6 shows examples of sidemount antenna pattern distortions from the line and tower.

RF

Visit http://rfry.org for FM broadcast RF system papers.

"Eric Schumacher"
> Can anyone give me a brief explanation of the theory of operation of a
> commerical FM broadcast antenna. Specfically the Jampro JMPC ...

3598. Re: Painting antenna against corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 13:33:24 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40C46EA4.FA80D364@cwis.net>
Source record: 93853

Jan,
It should have no affect on reception. I'm not sure
a latex type paint would be the 'best' for weather proofing
metal, but if it's what you have...
'Doc

PS - A bright pink would be pretty!

3599. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 14:02:20 UTC
From: tdonaly@aol.com
Message-ID: <20040607100220.16648.00000643@mb-m29.aol.com>
Source record: 93854

Richard Clark wrote,
>
>Let's see, you two have passed this SAME thing back and forth 39
>times, cannot agree about what each thinks about ONE particular, and
>each of you insist you know what a third party meant.
>
>Well, I'm off to Foggy Bottom (D.C.) again to where they do this kind
>of thing for a living and call it law. ;-)
>
>Let's see if a week improves this chowder.
>
>73's
>Richard Clark, KB7QHC
>

The triumph of hope over experience.
73,
Tom Donaly, KA6RUH

3600. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 14:09:25 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <8sr8c014nbjc7h3nucrque12nuk67eov7v@4ax.com>
Source record: 93855

On Sun, 06 Jun 2004 23:18:37 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Cecil, I know V2 is the re-reflected voltage, but what I'm trying to persuade
>> you is that they do NOT superpose to form the forward voltage--they superpose
>> only to form the standing wave. You've go to accept that the standing wave
>> voltage is NOT the forward voltage. If you can't come to realize this is the key
>> to the problem I'm going to have to give up.
>
>I'm sorry, Walt,
>Your belief that V2 is a reflected wave is the root of the misunderstanding.
>V2 is a re-reflected wave and is therefore forward-traveling toward the load.
>V2 is equal to the reflected wave voltage multiplied by the reflection
>coefficient. V1 and V2 are traveling in the same direction, toward the load.

Cecil, please read me in the first paragraph. By Steve's own words he says the re-reflected wave must equal the reflected wave. This means the system is matched in his account. Therefore, V2, is not the root of any misunderstanding in my part.

You are still not getting the picture concerning that V1 and V2 cannot be added to establish the forward wave, as Steve incorrectly believes, they add only to form the standing wave.

I'm sorry that I didn't think of this earlier that Steve copied his Eq 6 in Part 1 from Johnson, except he placed Vfwd, the forward voltage, instead of E for the standing wave voltage. Look it up in your Johnson on Pages 99 and 100. He derives Eq 4.23 (the Eq Steve misunderstands) on Page 99, and expresses it on Page 100. However, note on Page 98, the beginning of Sec 4.2:

"The equations for E and I along the line can be expressed...."

So Cecil, please understand that this equation does NOT yield the forward voltage, as Steve believes, which is the root of his misunderstanding throughout his entire paper.

Concerning tau, I've seen it described in an HP App Note, which I didn't bring to Michigan, but I've never used it. However, if the power transmission coefficient is (1 - rho^2) the coefficient is 0.75 for rho = 0.5. Therefore, for 100 w forward only 75 w are delivered. This condition is shown valid experimentally.

Now let's use tau = 1 + rho as the voltage transmission coefficient. I interpret this to mean tau x input voltage = forward voltage arriving at a mismatched load. For a 100 w source at 50 ohms with the same rho as above, we have 70.71 x 1.5 = 106.07 v. But we know that the forward voltage on a matched 50-ohm line with rho = 0.5 is 81.65 v. Why the difference?

I should have been more aware of the explanation in the HP App Note--there must be a reason shown there to explain the difference.

Walt

3601. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 14:31:14 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c47d47_4@corp.newsgroups.com>
Source record: 93856

Richard Clark wrote:
> On Sun, 06 Jun 2004 23:18:37 -0500, Cecil Moore
> <Cecil.A.Moore@ieee.org> wrote:
>>I'm sorry, Walt,
>>Your belief that V2 is a reflected wave is the root of the misunderstanding.
>>V2 is a re-reflected wave
>
> Another way of saying "You are right, Walt, you are wrong."

It's a very minor mistake, Richard, and one easily made. If you have
a copy of Dr. Best's QEX article, please feel free to express your
take on this discussion.

Let's see if I can present superposition in ASCII graphics. rho
is the voltage reflection coefficient and tau is the voltage
transmission coefficient. Assume VF1 has a phase angle of zero
degrees. Phase angles are important in the following but since
the system is matched, all phase angles are either at zero degrees
or at 180 degrees at the match point. So a sign change is equivalent
to a 180 degree phase shift.

100W XMTR---50 ohm line---x---1/2WL 150 ohm line---50 ohm load
VF1=70.7V--> VF2=141.4V-->
<--VR1=0V <--VR2=70.7V

According to the rules of superposition, the two voltages incident
upon 'x', VF1 and VR2, can be considered separately and then added.

Breaking VF1 down into its two superposition components yields:

x
|
VF1=70.7V (100W)-->|
|--> V1=106.06V (75W)
V3=35.35V (25W)<--|
|

VF1 = 70.7V at zero degrees (100W)

V1 = VF1(forward-tau) = 70.7(1.5) = 106.06V at zero degrees (75W)

V3 = VF1(forward-rho) = 70.7(0.5) = 35.35V at zero degrees (25W)

Note that PF1 = 100W = P1 + P3 = 75W + 25W

Breaking VR2 down into its two superposition components yields.

```
x
|
|<-- VR2=70.7V (33.33W)
V4=35.35V (25W)<--|
|--> V2=35.35V (8.33W)
|
```

VR2 = 70.7V at 180 degrees (33.33W)

V2 = VR2(reverse-rho) = 70.7(-0.5) = 35.35V at zero degrees (8.33W)

V4 = VR2(reverse-tau) = 70.7(0.5) = 35.35V at 180 degrees (25W)

Note that PR2 = 33.33W = P2 + P4 = 25W + 8.33W

Now, following the rules of superposition:

To get the total forward voltage, add V1 + V2

VF2 = V1 + V2 = 106.06V + 35.35V = 141.4V (133.33W)

To get the total reflected voltage, add V3 and V4

VR1 = V3 + V4 = 35.35V - 35.35V = zero volts (0W)

Note: Dr. Best neglected to mention P3 and P4 in his QEX article.
P3+P4 is the interference joules/sec. They are scalar values.

All voltages are consistent and all powers are consistent.

So, in this matched system, all reflected power is re-reflected:

PF2 = 133.33W = P1 + P2 + P3 + P4 = 75W + 8.33W + 25W + 25W

PF2 = P1 + P2 + (complete constructive interference) = 133.33W

PR1 = P3 + P4 - (complete destructive interference) = zero watts

Note that the voltage forward-rho = (150-50)/(150+50) = +0.5

reverse-rho = (50-150)/(50+150) = -0.5 (180 deg phase shift)
--
73, Cecil http://www.qsl.net/w5dxp

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3602. Re: Amplifier TV Antenna on Consumer Product

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 14:46:59 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <44OdnfroPaVH4IndRVn-uw@comcast.com>
Source record: 93857

"Tommy" <tommy@google.com> wrote in message
news:miPwc.20618$eH1.9290907@newssvr28.news.prodigy.com...
> All folk,
>
> I got some of amplifier TV antennas from consumer product in the markets.
> None of them works well in all local TV stations. What are going on in
these
> products in the markets? They seem use wrong theory or don't use any
theory.
> It becomes just a toy on the top of the TV.
>
> Regards
>
>
I think the key here is "on top of the TV'. That is not where you want to
have an antenna.

Tam/WB2TT

3603. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 14:56:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c48317_4@corp.newsgroups.com>
Source record: 93858

Walter Maxwell wrote:
> Cecil, please read me in the first paragraph. By Steve's own words he says the
> re-reflected wave must equal the reflected wave.

No, he says that is a fallacy. He says the re-reflected wave equals the
reflected wave multiplied by the reflection coefficient. His example is:
reflected power = 33.33W, re-reflected power = 8.33W

re-reflected power = 33.33W(rho^2) = 33.33W(0.25) = 8.33W
Here's what Dr. Best said in his QEX article, Part 3: "When two forward-traveling
waves add, general superposition theory ... require(s) that the total forward
traveling voltage be the vector sum of the individual forward-traveling voltages
such that VFtotal = V1 + V2." He clearly implies that V2 is a forward-traveling
wave and it is. Numerically, it is equal to the voltage reflected from the load
multiplied by the reverse reflection coefficient. In S-parameter terms, V2 is
the s22(a2) term.

> Concerning tau, I've seen it described in an HP App Note, which I didn't bring
> to Michigan, but I've never used it. However, if the power transmission
> coefficient is (1 - rho^2) the coefficient is 0.75 for rho = 0.5. Therefore, for
> 100 w forward only 75 w are delivered. This condition is shown valid
> experimentally.

Yes, 100W(0.75) is perfectly consistent with 70.7V(1.5)^2/150 where Z0=150 ohms

> Now let's use tau = 1 + rho as the voltage transmission coefficient. I interpret
> this to mean tau x input voltage = forward voltage arriving at a mismatched
> load.

No, no, no. Mistaken interpretation.

tau x input voltage = V1 (not the total forward voltage)

rho x reflected voltage = V2 (re-reflected)

V1 + V2 = forward voltage arriving at a mismatched load

V1 is proportional to the S-parameter term, s21(a1) where s21 is the forward-transmission
coefficient.

V2 is proportional to the S-parameter term, s22(a2) where s22 is the reverse-reflection
coefficient.

b2 is the total forward voltage arriving at a mismatched load.

VFtotal = V1 + V2 is virtually identical to b2 = s21(a1) + s22(a2)
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3604. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 15:25:59 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <pe19c0p51kbm1mtf9vb04gdrr2ac6n7ter@4ax.com>
Source record: 93859

On Mon, 07 Jun 2004 09:56:04 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> Cecil, please read me in the first paragraph. By Steve's own words he says the
>> re-reflected wave must equal the reflected wave.
>
>No, he says that is a fallacy. He says the re-reflected wave equals the
>reflected wave multiplied by the reflection coefficient. His example is:
>reflected power = 33.33W, re-reflected power = 8.33W

But when the system is matched the reflection coefficient is 1.0.

>re-reflected power = 33.33W(rho^2) = 33.33W(0.25) = 8.33W
>Here's what Dr. Best said in his QEX article, Part 3: "When two forward-traveling
>waves add, general superposition theory ... require(s) that the total forward
>traveling voltage be the vector sum of the individual forward-traveling voltages
>such that VFtotal = V1 + V2." He clearly implies that V2 is a forward-traveling
>wave and it is. Numerically, it is equal to the voltage reflected from the load
>multiplied by the reverse reflection coefficient. In S-parameter terms, V2 is
>the s22(a2) term.

Cecil, it is clear that you are not reading my posts!!!

You quoted Steve above, but I quoted the SAME quote earlier, explaining that he is WRONG. Please reread my quote. General superposition theory does NOT require that the forward voltage be the vector sum of the individual forward-traveling voltages.

When are you going to understand that that superposition yields the standing wave, NOT the forward wave? I've told you this over and over again, but you apparently aren't listening.

Cecil, please go to Johnson as I pointed out earlier and become educated as to where Steve screwed up.

Walt

3605. Re: Painting antenna against corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 15:53:39 UTC
From: * <*@*.com>
Message-ID: <2ijiv0Fns451U1@uni-berlin.de>
Source record: 93860

latex has a porus surface water wets and goes through it, corrosion
continues and will discolor,
less so with a gloss. Outside is more of a problem than inside.
You could just use a laquer or epoxy spray paint, most all paints are non
conductive.

"'Doc" <w5lz@cwis.net> wrote in message news:40C46EA4.FA80D364@cwis.net...
> Jan,
> It should have no affect on reception. I'm not sure
> a latex type paint would be the 'best' for weather proofing
> metal, but if it's what you have...
> 'Doc
>
> PS - A bright pink would be pretty!

3606. Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 16:36:00 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406070836.6ed22d98@posting.google.com>
Source record: 93861

I notice that the STEPPIR antenna patent is still "Pending"
I thought that "pending" meant that the patent has been awarded
and awaiting printing! Fluid motions have been stating Patent pending
for more than a few months (year)now and I have yet to see a release.
Anybody have any info on this ? I also noticed that another thread on
unconventional antenna design that the news release also stated
"patent pending"!
Has " patent pending "replaced the term "patent applied for" or has
the revised patent procedure and the USPTO fallen flat on its face ?
Art

3607. Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 16:36:01 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406070836.5defdbc6@posting.google.com>
Source record: 93862

I notice that the STEPPIR antenna patent is still "Pending"
I thought that "pending" meant that the patent has been awarded
and awaiting printing! Fluid motions have been stating Patent pending
for more than a few months (year)now and I have yet to see a release.
Anybody have any info on this ? I also noticed that another thread on
unconventional antenna design that the news release also stated
"patent pending"!
Has " patent pending "replaced the term "patent applied for" or has
the revised patent procedure and the USPTO fallen flat on its face ?
Art

3608. Re: Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 16:41:37 UTC
From: fractenna@aol.com
Message-ID: <20040607124137.27551.00000659@mb-m05.aol.com>
Source record: 93863

>Has " patent pending "replaced the term "patent applied for" or has
>the revised patent procedure and the USPTO fallen flat on its face ?
>Art
>

Both descriptions are valid. Both denote that an application has been made. No legal right of property has been assigned by the USPTO under these.

'Patent applied for' is less used compared to 'pat pending'...

73
Chip N1IR

3609. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 17:32:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C4A6A8.D964502C@uci.edu>
Source record: 93864

Cecil Moore wrote:
>
> Jim Kelley wrote:
> > How does
> > something that isn't a real short - and apparently doesn't even act like
> > a real short - cause real reflections? I'm not saying it doesn't. I'm
> > just saying that if you know how, please explain it. Thanks.
>
> I can't explain how but I certainly can explain why.

I know why - because it's the only way you can understand. It just doesn't happen to be true - as evidenced by the lack of any physical explanation for it.

73, Jim AC6XG

3610. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 19:41:24 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C4C4E4.95CD7D33@uci.edu>
Source record: 93865

Walter Maxwell wrote:
>
> On Mon, 07 Jun 2004 09:56:04 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>
> >Walter Maxwell wrote:
> >> Cecil, please read me in the first paragraph. By Steve's own words he says the
> >> re-reflected wave must equal the reflected wave.
> >>
> >No, he says that is a fallacy. He says the re-reflected wave equals the
> >reflected wave multiplied by the reflection coefficient. His example is:
> >reflected power = 33.33W, re-reflected power = 8.33W
>
> But when the system is matched the reflection coefficient is 1.0.

But if rho = 1.0, then tau = 2.0. Wasn't it 1.5 just a minute ago?

73, Jim AC6XG

3611. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 20:28:01 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c4d0e6_2@corp.newsgroups.com>
Source record: 93866

Walter Maxwell wrote:
> But when the system is matched the reflection coefficient is 1.0.

Not in an S-parameter analysis which is essentially what Dr. Best is doing. He is dealing with the PHYSICAL reflection coefficient, (Z2-Z1)/Z2+Z1), not the virtual reflection coefficient based on reflected power being zero. This may be the source of the misunderstanding between you two. His reflection coefficients, like the S-parameter reflection coefficients, don't change from startup to steady-state. They remain constant even when no signal is present.

> General superposition theory does NOT require
> that the forward voltage be the vector sum of the individual forward-traveling
> voltages.

Superposition of two individual forward-traveling voltages requires that the sum be the vector sum as long as the interference energy requirements are met.

> When are you going to understand that that superposition yields the standing
> wave, NOT the forward wave? I've told you this over and over again, but you
> apparently aren't listening.

I am listening, Walt, and still telling you that you are wrong about that concept. Superposition of two waves traveling in opposite directions yields the standing wave. Superposition of two coherent waves traveling in the same direction yields DESTRUCTIVE/CONSTRUCTIVE INTERFERENCE, not standing waves.

> Cecil, please go to Johnson as I pointed out earlier and become educated as to
> where Steve screwed up.

I know where Steve screwed up, Walt, and he did screw up. But it wasn't in the area of an S-parameter analysis in the forward direction. It was in the rearward direction that he screwed up royally.

In the afore-mentioned example, the four powers associated with the four superposition voltages are P1, P2, P3, and P4. P1=75W, P2=8.33W, P3=25W, and P4=25W.

P1+P3 = 100W = generated power

P2+P4 = 33.33W = power reflected from the load

Dr. Best tell us that 75W+8.33W+2*SQRT(75*8.33)=133.33W and that is mathematically true.

What Dr. Best doesn't tell us is that 2*SQRT(75*8.33) = P3+P4 and that they are the interference component powers from classical optics theory.

You are grouping the powers together in this manner, (P1+P3)+(P2+P4)=133.33W
and that is perfectly true mathematically.

Both of you are doing essentially the same thing but neither one of you
realizes it. You guys are two inches apart and don't know it. It feels like
I am listening to two flatlanders argue about the third dimension.
--
73, Cecil http://www.qsl.net/w5dxp

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3612. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 20:31:47 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c4d1c8_2@corp.newsgroups.com>
Source record: 93867

Jim Kelley wrote:

> Cecil Moore wrote:
>>I can't explain how but I certainly can explain why.
>
> I know why - because it's the only way you can understand. It just
> doesn't happen to be true - as evidenced by the lack of any physical
> explanation for it.

The 'why' is conservation of energy. If there are only two directions
available and energy was traveling in one direction and now it isn't,
it's a no-brainer to realize that it must have changed directions.

I'm sorry that you don't believe in the conservation of energy theorem,
Jim. Do you boss know that?

So far you have failed every challenge to disprove the why. Wonder why?
--
73, Cecil http://www.qsl.net/w5dxp

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3613. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 20:33:49 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c4d240$1_2@corp.newsgroups.com>
Source record: 93868

Jim Kelley wrote:

> Walter Maxwell wrote:
>>But when the system is matched the reflection coefficient is 1.0.
>
> But if rho = 1.0, then tau = 2.0. Wasn't it 1.5 just a minute ago?

Dr. Best is using physical reflection coefficients, aka an S-parameter analysis, which are never 1.0 in a system with a mismatched load.
--
73, Cecil http://www.qsl.net/w5dxp

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3614. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 21:16:02 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <etl9c01qad7j7qn0q16ftas7iuuhcme89f@4ax.com>
Source record: 93869

On Mon, 07 Jun 2004 15:28:01 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> But when the system is matched the reflection coefficient is 1.0.
>
>Not in an S-parameter analysis which is essentially what Dr. Best is doing.
>He is dealing with the PHYSICAL reflection coefficient, (Z2-Z1)/Z2+Z1), not
>the virtual reflection coefficient based on reflected power being zero. This
>may be the source of the misunderstanding between you two. His reflection
>coefficients, like the S-parameter reflection coefficients, don't change from
>startup to steady-state. They remain constant even when no signal is present.
>
>> General superposition theory does NOT require
>> that the forward voltage be the vector sum of the individual forward-traveling
>> voltages.
>
>Superposition of two individual forward-traveling voltages requires that the
>sum be the vector sum as long as the interference energy requirements are met.
>
>> When are you going to understand that that superposition yields the standing
>> wave, NOT the forward wave? I've told you this over and over again, but you
>> apparently aren't listening.
>
>I am listening, Walt, and still telling you that you are wrong about that
>concept. Superposition of two waves traveling in opposite directions yields
>the standing wave. Superposition of two coherent waves traveling in the same
>direction yields DESTRUCTIVE/CONSTRUCTIVE INTERFERENCE, not standing waves.
>
>> Cecil, please go to Johnson as I pointed out earlier and become educated as to
>> where Steve screwed up.
>
>I know where Steve screwed up, Walt, and he did screw up. But it wasn't in the
>area of an S-parameter analysis in the forward direction. It was in the rearward
>direction that he screwed up royally.

Cecil, you're not even close to knowing where Steve screwed up. And you won't know until you follow my directions and go to Johnson and read what I said to read. I can't understand why you refuse to go in that direction. Because you refuse we're going around in circles. This has to stop.

What Johnson and I are trying to tell you is that the superposition of the source voltage and the re-reflected voltages DO NOT establish the forward voltage. Steve used Johnson's Eq for determining the standing wave voltage at any point on the line incorrectly as the forward re-reflected voltage wave V2. THIS IS WHERE HE SCREWED UP, CECIL., SCREWING UP THE ENTIRE ARTICLE !!

Walt

3615. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 21:39:21 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C4E089.663FC49D@uci.edu>
Source record: 93771

Cecil Moore wrote:

> I'm sorry that you don't believe in the conservation of energy theorem,
> Jim. Do you boss know that?

Thankfully you're the only one who deludes himself with this notion,
Cecil. Energy moves from source to load. It doesn't bounce back and
forth on it's way. That's what my "boss" believes - as I have explained
to you previously, in great detail.

73, Jim AC6XG

3616. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 21:43:07 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <MOGdnQAwN8H_fFndRVn-hg@comcast.com>
Source record: 93870

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40c4d1c8_2@corp.newsgroups.com...
> The 'why' is conservation of energy. If there are only two directions
> available and energy was traveling in one direction and now it isn't,
> it's a no-brainer to realize that it must have changed directions.

Cecil, I think a more convincing argument is that I can take a slotted line
and directly measure a standing wave on it. A wave traveling in one
direction can not do that. Or am I cunfusing things?

Tam/WB2TT

3617. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 21:52:15 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c4e4a2$1_8@corp.newsgroups.com>
Source record: 93772

Walter Maxwell wrote:
> What Johnson and I are trying to tell you is that the superposition of the
> source voltage and the re-reflected voltages DO NOT establish the forward
> voltage.

If Johnson really said that, he screwed up because he is in direct contradiction to the S-parameter analysis described in Ramo, Whinnery, and Van Duzer in _Fields_and_Waves_in_Communications_Electronics_, (c) 1965, page 603, Section 11.09 "Scattering and Transmission Coefficients".

You and Dr. Best obtain the same component powers. You just group them differently. You guys are two inches away from agreeing.

Please provide the location of the Johnson quote details again. I sort by date and cannot find your Johnson reference even when sorting by threads.
--
73, Cecil http://www.qsl.net/w5dxp

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3618. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 22:03:55 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c4e75f_8@corp.newsgroups.com>
Source record: 93773

Jim Kelley wrote:
> Energy moves from source to load. It doesn't bounce back and
> forth on it's way.

Shirley, you jest. That means you have never seen your
reflection in a mirror. (If I were you, I wouldn't be
able to stand looking myself in the eye either.)
--
73, Cecil http://www.qsl.net/w5dxp

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3619. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 22:16:17 UTC
From: Jim Kelley <jwkelley@uci.edu>
Message-ID: <40C4E931.F3FD05A5@uci.edu>
Source record: 93774

Tam/WB2TT wrote:
>
> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> news:40c4d1c8_2@corp.newsgroups.com...
> > The 'why' is conservation of energy. If there are only two directions
> > available and energy was traveling in one direction and now it isn't,
> > it's a no-brainer to realize that it must have changed directions.
>
> Cecil, I think a more convincing argument is that I can take a slotted line
> and directly measure a standing wave on it. A wave traveling in one
> direction can not do that. Or am I cunfusing things?
>
> Tam/WB2TT

No. That's right. But the point is - how much energy is actually
moving past the probe? Cecil seems to believe that a standing wave is
more than a superposition of voltages. It would be easy to mistake that
as a superposition of energies. But one can only superpose vector
quantities.

73, Jim AC6XG

3620. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 23:14:16 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <uus9c0drv4muo8chc0mlmj8ipippiotd21@4ax.com>
Source record: 93775

On Mon, 07 Jun 2004 16:52:15 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> What Johnson and I are trying to tell you is that the superposition of the
>> source voltage and the re-reflected voltages DO NOT establish the forward
>> voltage.
>
>If Johnson really said that, he screwed up because he is in direct
>contradiction to the S-parameter analysis described in Ramo, Whinnery,
>and Van Duzer in _Fields_and_Waves_in_Communications_Electronics_, (c)
>1965, page 603, Section 11.09 "Scattering and Transmission Coefficients".

No Cecil, Johnson didn't screw up. Incidentally, the equation in question is his Eq. 4.23, derived on Pages 98 and 99, and displayed on Page 100. Steve screwed up because, as I've been repeating, he misinterpreted the equation to determine the forward wave instead of the standing wave.

From all of your statements so far, it appears you may have misunderstood what the forward wave really is. Here's a clue. When a tuner is properly adjusted in matching a 50-ohm line to a 150 + j0 resistance and the output voltage of the source is 70.71 v. the forward voltage is 70.71 x 1.1547 = 81.65 v. Do you recognize it or know where the 1.1547 came from ? Steve doesn't have a clue.

Walt

3621. Re: Painting antenna against corrosion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 23:15:11 UTC
From: janan@695online.com
Message-ID: <9a619ffc.0406071515.300b125f@posting.google.com>
Source record: 93776

"*" <*@*.com> wrote in message news:<2ijiv0Fns451U1@uni-berlin.de>...
> latex has a porus surface water wets and goes through it, corrosion
> continues and will discolor,
> less so with a gloss. Outside is more of a problem than inside.
> You could just use a laquer or epoxy spray paint, most all paints are non
> conductive.
>
>
> "'Doc" <w5lz@cwis.net> wrote in message news:40C46EA4.FA80D364@cwis.net...
> > Jan,
> > It should have no affect on reception. I'm not sure
> > a latex type paint would be the 'best' for weather proofing
> > metal, but if it's what you have...
> > 'Doc
> >
> > PS - A bright pink would be pretty!

////

Thanks all for the info.

Jan

3622. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 23:32:37 UTC
From: "H. Adam Stevens" <hstevens@totalaccessNOSPAM.net>
Message-ID: <10c9uvgfsifqu92@corp.supernews.com>
Source record: 93777

whoa
system is: source - line - load
If there are impedance mismatches, in the steady state (ie 3 microseconds
after key down);
There will be more energy in the transmission line and the source than there
would be if all the impedances were matched.
This is necessary to satisfy the boundary conditions imposed on Maxwell's
Equations at each end of the transmission line.

The losses are the rent you pay for storing the energy; See bazookas for a
good example.

To the radiated energy moving past the probe one must add the losses.

That's why I prefer antennas with no reflections.
Reflect on that.

If you really want a book Paul Dirac's "Quantum Mechanics" is sweet.
Or Hawking's "The Large Scale Structure of Space-Time."

My cat, Hiram P Maxim (Max for short, he likes sleeping on the S-Line I've
had since '63), just walked over the keys and approves.

73
H.
NQ5H

"Jim Kelley" <jwkelley@uci.edu> wrote in message
news:40C4E931.F3FD05A5@uci.edu...
>
>
> Tam/WB2TT wrote:
> >
> > "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
> > news:40c4d1c8_2@corp.newsgroups.com...
> > > The 'why' is conservation of energy. If there are only two directions
> > > available and energy was traveling in one direction and now it isn't,
> > > it's a no-brainer to realize that it must have changed directions.
> >
> > Cecil, I think a more convincing argument is that I can take a slotted
line
> > and directly measure a standing wave on it. A wave traveling in one
> > direction can not do that. Or am I cunfusing things?
> >
> > Tam/WB2TT
>

> No. That's right. But the point is - how much energy is actually
> moving past the probe? Cecil seems to believe that a standing wave is
> more than a superposition of voltages. It would be easy to mistake that
> as a superposition of energies. But one can only superpose vector
> quantities.
>
> 73, Jim AC6XG

3623. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 23:40:03 UTC
From: Gene Fuller <W4SZzzzzzz@att.net>
Message-ID: <m17xc.45794$_k3.1137903@bgtnsc05-news.ops.worldnet.att.net>
Source record: 93778

Cecil,

I am happy to see that we are in agreement on this long-standing argument.

I explained this to Walt in some private e-mails about 18 months ago, and I wrote similar explanations in this group. I was vilified by both Walt and you.

I will summarize once again.

Both the Walter Maxwell model and the Steve Best model for this transmission line problem work correctly. They are internally self consistent, and they give the same physical answers. They obey the standard laws of physics and mathematics. However it is not possible to mix-and-match the models, using equations and definitions from one model in the other.

Walt continues to mis-read Steve Best's QEX articles. He needs to throw away all of his pre-conceived definitions about the meaning of specific Vx components and read exactly what Steve wrote.

73,
Gene
W4SZ

Cecil Moore wrote:

>
> You and Dr. Best obtain the same component powers. You just group them
> differently. You guys are two inches away from agreeing.
>

3624. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-07 23:46:33 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c4ff6d_8@corp.newsgroups.com>
Source record: 93779

Jim Kelley wrote:
> Cecil seems to believe that a standing wave is
> more than a superposition of voltages.

Exactly, it is also a superposition of currents in phase with
the voltages. V*I*cos(0)=power

Everyone, including you, gets into trouble by completely ignoring
the superposition of currents. When are you (and your boss) going
to stop violating the laws of physics?
--
73, Cecil http://www.qsl.net/w5dxp

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3625. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 00:02:27 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c50327_8@corp.newsgroups.com>
Source record: 93780

Walter Maxwell wrote:
> No Cecil, Johnson didn't screw up. Incidentally, the equation in question is his
> Eq. 4.23, derived on Pages 98 and 99, and displayed on Page 100. Steve screwed
> up because, as I've been repeating, he misinterpreted the equation to determine
> the forward wave instead of the standing wave.

On page 99, in between equations 4.22 and 4.23 is an equation presented by
Johnson that is close to Steve's equation to which you are objecting.

> From all of your statements so far, it appears you may have misunderstood what
> the forward wave really is. Here's a clue. When a tuner is properly adjusted in
> matching a 50-ohm line to a 150 + j0 resistance and the output voltage of the
> source is 70.71 v. the forward voltage is 70.71 x 1.1547 = 81.65 v. Do you
> recognize it or know where the 1.1547 came from ? Steve doesn't have a clue.

The forward voltage wave equals s21(a1)+s22(a2) which is virtually the same
as V1+V2 because V1/[SQRT(Z0)] + V2/[SQRT(Z0)] = s21(a1) + s22(a2). It's the
old one-to-one correspondence rule.

As I said before, Walt, the 1WL section of 50 ohm line in Steve's example
is *completely irrelevant* to the discussion. Steve only included that line
so the forward/reflected power could be measured and the impedance reproduced.
As long as you allow that 1WL of 50 ohm line to enter into your thinking and
calculations, you will never understand what he was trying to say. Please remove
the 1WL of 50 ohm line and please re-think your position. All the conditions
discussed by Steve occur at the *MATCH POINT* which, I think you will agree,
is NOT on the 50 ohm line.
--
73, Cecil http://www.qsl.net/w5dxp

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3626. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 00:04:51 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c503b6$1_8@corp.newsgroups.com>
Source record: 93781

H. Adam Stevens wrote:
> That's why I prefer antennas with no reflections.

Dipoles are reflected-wave antennas. You don't like them?
--
73, Cecil http://www.qsl.net/w5dxp

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3627. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 00:11:40 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c50550$1_8@corp.newsgroups.com>
Source record: 93782

Gene Fuller wrote:
> I explained this to Walt in some private e-mails about 18 months ago,
> and I wrote similar explanations in this group. I was vilified by both
> Walt and you.

I still believe that neither model is perfectly consistent. I do
believe that an S-parameter analysis is perfectly consistent.

> Both the Walter Maxwell model and the Steve Best model for this
> transmission line problem work correctly. They are internally self
> consistent, and they give the same physical answers.

But how can Steve deny the 100% re-reflected energy premise when
all the energy winds up at the load? How did it get to the load
if it was not re-reflected at the match point? TV ghosting proves
that it is indeed re-reflected at the match point.
--
73, Cecil http://www.qsl.net/w5dxp

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3628. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 00:18:03 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c506d0_8@corp.newsgroups.com>
Source record: 93783

Tam/WB2TT wrote:

> "Cecil Moore" <Cecil.A.Moore@ieee.org> wrote:
>>The 'why' is conservation of energy. If there are only two directions
>>available and energy was traveling in one direction and now it isn't,
>>it's a no-brainer to realize that it must have changed directions.
>
> Cecil, I think a more convincing argument is that I can take a slotted line
> and directly measure a standing wave on it. A wave traveling in one
> direction can not do that.

Yes, that is the basis of my earlier challenge. Nobody has been able to provide a standing wave not composed of a forward-traveling wave superposed with a rearward-traveling wave. I have offered anyone and everyone $100 who can accomplish that in a single-source/single transmission line/single-load system. So far, no takers. One wonders why, considering all the gurus on this newsgroup. What I get instead are obfuscations of how waves can exist without energy.
--
73, Cecil http://www.qsl.net/w5dxp

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3629. Ain't no Reflected power ------

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 00:23:24 UTC
From: "H. Adam Stevens" <hstevens@totalaccessNOSPAM.net>
Message-ID: <10ca1udjpk03rd0@corp.supernews.com>
Source record: 93784

cecil
when they're resonant and match the transmission line
they ain't no reflections back down the line
it's all gone to somewhere else
mostly to be detected by some one elses SETI attempt
too late
73
H

"Cecil Moore" <Cecil.A.Moore@ieee.org> wrote in message
news:40c503b6$1_8@corp.newsgroups.com...
> H. Adam Stevens wrote:
> > That's why I prefer antennas with no reflections.
>
> Dipoles are reflected-wave antennas. You don't like them?
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3630. Re: Ain't no Reflected power ------

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 01:17:25 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c514ba_7@corp.newsgroups.com>
Source record: 93785

H. Adam Stevens wrote:
> when they're resonant and match the transmission line
> they ain't no reflections back down the line
> it's all gone to somewhere else

H., there are standing waves all over a dipole antenna.
Its traveling-wave feedpoint impedance is about 600 ohms.
Only the reflections from each end of a dipole lower the
feedpoint impedance to 50 ohms or so. The reflected current
arrives back in phase at the feedpoint and the reflected
voltage arrives back out of phase. You can thank destructive
interference for the low feedpoint impedance of a dipole.

If you don't like reflections, you don't like a dipole and
should probably try a terminated rhombic. :-)
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3631. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 01:43:12 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <ih2ac0tffhgp7b6iiq7je9n7vsqpkl3vkm@4ax.com>
Source record: 93786

On Mon, 07 Jun 2004 23:40:03 GMT, Gene Fuller <W4SZzzzzzz@att.net> wrote:

>Cecil,
>
>I am happy to see that we are in agreement on this long-standing argument.
>
>I explained this to Walt in some private e-mails about 18 months ago,
>and I wrote similar explanations in this group. I was vilified by both
>Walt and you.
>
>I will summarize once again.
>
>Both the Walter Maxwell model and the Steve Best model for this
>transmission line problem work correctly. They are internally self
>consistent, and they give the same physical answers. They obey the
>standard laws of physics and mathematics. However it is not possible to
>mix-and-match the models, using equations and definitions from one model
>in the other.
>
>Walt continues to mis-read Steve Best's QEX articles. He needs to throw
>away all of his pre-conceived definitions about the meaning of specific
>Vx components and read exactly what Steve wrote.
>
>73,
>Gene
>W4SZ

Hello again Gene,

What Steve wrote exactly, Gene, and I have read it exactly, over and over again, is based entirely on an invalid premise that you and all the rest who, like you, have expressed the notion that Steve's paper is the 'most brilliant and definitive paper ever written on the subject. Unfortunately, it's both ironic and tragic that a person so brilliant a mathematician, and knowledgeable in transmission line technique, should make such a grievous error in formulating the basis for his entire paper. It's also tragic that all of you who think his article is so great also made the same error in not recognizing the problem in the First Part of the article, his Eqs 6, 7, and 8, because they are invalid.

Steve used an equation in Johnson's "Transmission Lines and Networks" as the foundation for the entire paper. But unfortunately he misunderstood the meaning of the equation. He misunderstood it as early as 1998 when I pointed out why he misunderstands it, but he denied that he misunderstands it , stating that it is I who misunderstands it. Not a chance.

The equation he misunderstands is Eq 4.23 on Page 100 in Johnson, which is explained and derived on Pages 98 and 99, to derive the voltage E of the standing wave for any position along a mismatched transmission line. Steve's misunderstanding is that he believes the equation expresses the value of the forward voltage on the line. Consequently, his Eq 6 in Part 1 says that 'Vfwd = the terms on the right-hand side of the equation copied from Johnson', while the correct version is 'E = the terms on the righ-hand side'.

The difference between 'E' and Vfwd is so significantly different as to be unbelievable that he, of all people, used it for this purpose, and it is also unbelievable and shameful that you experienced engineers failed to recognize, not only the error in Steve's equation, but the ramifications it had on the domino effect on the remainder of his paper, especially making his equations 9 thru 15 in Part 3 invalid for general use.

I'd like for you and Cecil, and any other reader who believes Steve's paper is correct, to rethink the definitions of the standing wave and the forward voltage with the view toward another review of the paper. Then make that review and see if you still believe the material appearing there is correct.

If you then still believe the paper is correct I'd like for you to let me know the technical reason why you believe it's correct so that I can discuss it with you. It's really worth that effort--don't just blow it off as another rant and rave from Walt Maxwell.

Thanks for listening to what I think is an important issue.

Walt

3632. Re: Ain't no Reflected power ------

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 01:43:47 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040607214347.16160.00000772@mb-m15.aol.com>
Source record: 93787

>
>H., there are standing waves all over a dipole antenna.
>Its traveling-wave feedpoint impedance is about 600 ohms.
>Only the reflections from each end of a dipole lower the
>feedpoint impedance to 50 ohms or so. The reflected current
>arrives back in phase at the feedpoint and the reflected
>voltage arrives back out of phase. You can thank destructive
>interference for the low feedpoint impedance of a dipole.
>
>If you don't like reflections, you don't like a dipole and
>should probably try a terminated rhombic. :-)
>--
>73, Cecil http://www.qsl.net/w5dxp
>
>

I think this should be on the front of each antenna book. It would open eyes of many "gurus" especially when looking at loading the shortened antennas.

Thanks Cecil!

Yuri

3633. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 02:51:50 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40c529c6$0$437$5cbedd26@news.real-time.com>
Source record: 93788

Good luck. There are a few "engineers" here I would let touch my toaster.

tom
K0TAR

Walter Maxwell wrote:
> On Mon, 07 Jun 2004 23:40:03 GMT, Gene Fuller <W4SZzzzzzz@att.net> wrote:
>
>
>>Cecil,
>>
>>I am happy to see that we are in agreement on this long-standing argument.
>>
>>I explained this to Walt in some private e-mails about 18 months ago,
>>and I wrote similar explanations in this group. I was vilified by both
>>Walt and you.
>>
>>I will summarize once again.
>>
>>Both the Walter Maxwell model and the Steve Best model for this
>>transmission line problem work correctly. They are internally self
>>consistent, and they give the same physical answers. They obey the
>>standard laws of physics and mathematics. However it is not possible to
>>mix-and-match the models, using equations and definitions from one model
>>in the other.
>>
>>Walt continues to mis-read Steve Best's QEX articles. He needs to throw
>>away all of his pre-conceived definitions about the meaning of specific
>>Vx components and read exactly what Steve wrote.
>>
>>73,
>>Gene
>>W4SZ
>
>
> Hello again Gene,
>
> What Steve wrote exactly, Gene, and I have read it exactly, over and over again,
> is based entirely on an invalid premise that you and all the rest who, like you,
> have expressed the notion that Steve's paper is the 'most brilliant and
> definitive paper ever written on the subject. Unfortunately, it's both ironic
> and tragic that a person so brilliant a mathematician, and knowledgeable in
> transmission line technique, should make such a grievous error in formulating
> the basis for his entire paper. It's also tragic that all of you who think his
> article is so great also made the same error in not recognizing the problem in

> the First Part of the article, his Eqs 6, 7, and 8, because they are invalid.
>
> Steve used an equation in Johnson's "Transmission Lines and Networks" as the
> foundation for the entire paper. But unfortunately he misunderstood the meaning
> of the equation. He misunderstood it as early as 1998 when I pointed out why he
> misunderstands it, but he denied that he misunderstands it , stating that it is
> I who misunderstands it. Not a chance.
>
> The equation he misunderstands is Eq 4.23 on Page 100 in Johnson, which is
> explained and derived on Pages 98 and 99, to derive the voltage E of the
> standing wave for any position along a mismatched transmission line. Steve's
> misunderstanding is that he believes the equation expresses the value of the
> forward voltage on the line. Consequently, his Eq 6 in Part 1 says that 'Vfwd =
> the terms on the right-hand side of the equation copied from Johnson', while the
> correct version is 'E = the terms on the righ-hand side'.
>
> The difference between 'E' and Vfwd is so significantly different as to be
> unbelievable that he, of all people, used it for this purpose, and it is also
> unbelievable and shameful that you experienced engineers failed to recognize,
> not only the error in Steve's equation, but the ramifications it had on the
> domino effect on the remainder of his paper, especially making his equations 9
> thru 15 in Part 3 invalid for general use.
>
> I'd like for you and Cecil, and any other reader who believes Steve's paper is
> correct, to rethink the definitions of the standing wave and the forward voltage
> with the view toward another review of the paper. Then make that review and see
> if you still believe the material appearing there is correct.
>
> If you then still believe the paper is correct I'd like for you to let me know
> the technical reason why you believe it's correct so that I can discuss it with
> you. It's really worth that effort--don't just blow it off as another rant and
> rave from Walt Maxwell.
>
> Thanks for listening to what I think is an important issue.
>
> Walt
>
>
>
>
>

3634. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 03:22:49 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c53220_7@corp.newsgroups.com>
Source record: 93789

Walter Maxwell wrote:
> The equation he misunderstands is Eq 4.23 on Page 100 in Johnson, which is
> explained and derived on Pages 98 and 99, to derive the voltage E of the
> standing wave for any position along a mismatched transmission line. Steve's
> misunderstanding is that he believes the equation expresses the value of the
> forward voltage on the line. Consequently, his Eq 6 in Part 1 says that 'Vfwd =
> the terms on the right-hand side of the equation copied from Johnson', while the
> correct version is 'E = the terms on the righ-hand side'.

Johnson's equation contains all possible components - both forward and
reflected, so Johnson's equation predicts the total net standing-wave
voltage. (Note that Johnson's equation contains both positive and negative
exponents.)

Dr. Best's equation contains only the forward components of Johnson's
equation. Therefore, Dr. Best's equation predicts *only* the forward-
traveling voltage. (Note that Dr. Best's equation contains only negative
exponents and represents the E+ half of Johnson's equation while omitting
the E- half of Johnson's equation.)

In other words, the two equations do *not* predict the same quantity
and they are *not* supposed to be the same equations. As I said before,
Dr. Best made a lot of conceptual errors but his equations seem to be
valid. If you break Johnson's equation into two parts representing E+
and E-, the E+ part will be Dr. Best's Eq 6.

Please consider the following matched system with a 1/2 second long lossless
transmission line. The physical rho is 0.5. Assume VF1 is a constant 70.7V.

100W XMTR---50 ohm line---x---1/2 second long lossless 150 ohm line---50 ohm load
VF1=70.7V--> VF2-->
<--VR1 <--VR2

V1 is equal to 70.7(1.5) = 106.06V and is a constant value
V2 starts out at zero and builds up to 35.35V
VF2=V1+V2 assuming they are in phase

Here is (conceptually simplified) how VF2 builds up to its steady-state value.
VR2(t+1) is 1/2 of VF2(t) and V2(t+1) is 1/4 of VF2(t)

Time in
Seconds V1 VR2 V2 VF2
0 106.06 0 0 106.06
1 106.06 53.03 26.5 132.56
2 106.06 66.26 33.13 139.19
3 106.06 69.58 34.79 140.85
4 106.06 70.4 35.2 141.26

5 106.06 70.63 35.32 141.38
6 106.06 70.69 35.34 141.39
7 106.06 70.7 35.35 141.4 very close to steady-state

My rounding is a little off but above is a close approximation to what happens.
Note that VF2 is equal to V1 + V2 and converges on the proper value of 141.4V.

Steady-state VF2 = 106.06 + 26.5 + 6.63 + 1.66 + 0.41 + ...
This is indeed of the form 106.06(1 + 1/4 + 1/16 + 1/64 + 1/256 + ...)
or VF2 = V1(1 + A + A^2 + A^3 + A^4 + ...)
--
73, Cecil http://www.qsl.net/w5dxp

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3635. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 04:00:07 UTC
From: Jack Twilley <jmt+usenet@twilley.org>
Message-ID: <86r7sqem2g.fsf@duchess.twilley.org>
Source record: 93790

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

>>>>> "Tom" == Tom Ring <news0000@taring.org> writes:

Tom> Good luck. There are a few "engineers" here I would let touch my
Tom> toaster. tom K0TAR

I had a similar thought, but it involved a bathtub.

Jack.
- --
Jack Twilley
jmt at twilley dot org
http colon slash slash www dot twilley dot org slash tilde jmt slash
-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.2.4 (FreeBSD)

iD8DBQFAxTnMGPFSfAB/ezgRAsQBAKDC+1XNvN/fBNwTD9Naxm7wimVOVwCg8KJu
Zjl+lNxr+FMpZCv1C2GftGg=
=nAYU
-----END PGP SIGNATURE-----
```

3636. Re: Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 04:17:49 UTC
From: Rick Karlquist N6RK <richard@karlquist.removethis.com>
Message-ID: <M5bxc.14440$HG.13166@attbi_s53>
Source record: 93791

Patent pending means the same as patent applied for.
No guarantee that it will ever issue. At least that's the
usage by the patent attorneys I work with.

What you are thinking of is the period of time between
when the examiner allows one or more claims and the
actual issuing (ie printing) of the patent. I recently had one of my
patents get issued by the USPTO, but the examiner had allowed all the claims
last fall. In that case, it was essentially a done deal when
the claims were allowed.

Also, it is now the case that after 18 months, patent applications
are public. You should be able to read Fluid Motion's steppir patent
applications by now.

Don't forget that it is possible that some patents have issued but
the very overworked staff at Fluidmotion hasn't gotten around to
updating the sales literature. I currently have over a dozen patent
applications in process at the USPTO and it gets hard to keep track of them
all, even with the help of our legal department.

IMHO, I don't see how they can patent the basic concept of
the SteppIR, but then I'm not a patent attorney. There
is the "Cliff Dweller" adjustable dipole as prior art, but will
the examiner ever find that. Maybe they are just patenting the idea of
the tape in the hollow tube.

Rick N6RK

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0406070836.6ed22d98@posting.google.com...
> I notice that the STEPPIR antenna patent is still "Pending"
> I thought that "pending" meant that the patent has been awarded
> and awaiting printing! Fluid motions have been stating Patent pending
> for more than a few months (year)now and I have yet to see a release.
> Anybody have any info on this ? I also noticed that another thread on
> unconventional antenna design that the news release also stated
> "patent pending"!
> Has " patent pending "replaced the term "patent applied for" or has
> the revised patent procedure and the USPTO fallen flat on its face ?
> Art

3637. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 05:45:34 UTC
From: m II <ohmworkLEOPARD@spots.ca>
Message-ID: <2ocxc.38794$jl6.592@edtnps89>
Source record: 93792
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

yea right wrote:
> If you value radio, this may be the last and only chance to have your
> voice heard to stop BPL from destroying your hobby. The FCC has extended
> the comment period for BPL.
>
> It is VERY simple to file a FCC comment. Click the link below and enter
>
> 03-104
>
> in box #1 (proceeding number) and fill in the blanks. The simplest way to
> comment is to type your comment into the box on the bottom of the form.
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi

I don't know if this has been mentioned before or not. There is
another problem other than interference. It's an IMPORTANT and
perhaps fatal drawback.

If a line or two goes down, not only do you lose power, but also the
means to communicate. Emergency messages will NOT get through to
anyone connected via this setup. They will STILL need regular
broadcast signals via radio or television.

In the worst case scenario, you'd lose email, phone, radio AND tv
all at once. With converging technologies, this is altogether too
likely.

Will the government carry the burden of responsibilty should someone
be killed or hurt because of this 'broadband initiative'?

I do not have a United States address, so I can not send this
suggestion myself. Please distribute this concern also. I hope it
will be noticed by the communications commitee.

mike II
rec.radio.shortwave

3638. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 11:39:39 UTC
From: fractenna@aol.com
Message-ID: <20040608073939.11585.00000704@mb-m04.aol.com>
Source record: 93793

>> If you value radio, this may be the last and only chance to have your
>> voice heard to stop BPL from destroying your hobby. The FCC has extended
>> the comment period for BPL.
>>

Kindly understand that not everyone is convinced that BPL will 'destroy' ham radio or SWL'ing. I am one of many that disagree with your assessment, and agree with the prevailing position that BPL is an important technology option that can co-exist with the 'ham' community, for example.

Ham radio is not licensed as a hobby; it is licensed as a service. When 'hams' atempt to prevent adoption of new technologies, rather than foster them, then there are those who debate the value of our spectrum allottments.

Working together with BPL is the best course for ham radio. This will allow the marketplace to decide if BPL is a viable option, rather than putting the focus on ham radio as a passe and reactionary group--which is the public perception in the popular press at this time (for example, the recent WSJ front page article).

Think about these comments in the context of what has happened so far with BPL. Then project the most likely scenario moving forward.

73,
Chip N1IR

3639. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 15:54:50 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <mkmbc0hml0p0kgfc4c5a847o6mhqeko830@4ax.com>
Source record: 93794

On Mon, 07 Jun 2004 22:22:49 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> The equation he misunderstands is Eq 4.23 on Page 100 in Johnson, which is
>> explained and derived on Pages 98 and 99, to derive the voltage E of the
>> standing wave for any position along a mismatched transmission line. Steve's
>> misunderstanding is that he believes the equation expresses the value of the
>> forward voltage on the line. Consequently, his Eq 6 in Part 1 says that 'Vfwd =
>> the terms on the right-hand side of the equation copied from Johnson', while the
>> correct version is 'E = the terms on the righ-hand side'.
>
>Johnson's equation contains all possible components - both forward and
>reflected, so Johnson's equation predicts the total net standing-wave
>voltage. (Note that Johnson's equation contains both positive and negative
>exponents.)
>
>Dr. Best's equation contains only the forward components of Johnson's
>equation. Therefore, Dr. Best's equation predicts *only* the forward-
>traveling voltage. (Note that Dr. Best's equation contains only negative
>exponents and represents the E+ half of Johnson's equation while omitting
>the E- half of Johnson's equation.)
>
>In other words, the two equations do *not* predict the same quantity
>and they are *not* supposed to be the same equations. As I said before,
>Dr. Best made a lot of conceptual errors but his equations seem to be
>valid. If you break Johnson's equation into two parts representing E+
>and E-, the E+ part will be Dr. Best's Eq 6.
>
>Please consider the following matched system with a 1/2 second long lossless
>transmission line. The physical rho is 0.5. Assume VF1 is a constant 70.7V.
>
>100W XMTR---50 ohm line---x---1/2 second long lossless 150 ohm line---50 ohm load
> VF1=70.7V--> VF2-->
> <--VR1 <--VR2
>
>V1 is equal to 70.7(1.5) = 106.06V and is a constant value
>V2 starts out at zero and builds up to 35.35V
>VF2=V1+V2 assuming they are in phase
>
>Here is (conceptually simplified) how VF2 builds up to its steady-state value.
>VR2(t+1) is 1/2 of VF2(t) and V2(t+1) is 1/4 of VF2(t)
>
>Time in
>Seconds V1 VR2 V2 VF2

> 0 106.06 0 0 106.06
> 1 106.06 53.03 26.5 132.56
> 2 106.06 66.26 33.13 139.19
> 3 106.06 69.58 34.79 140.85
> 4 106.06 70.4 35.2 141.26
> 5 106.06 70.63 35.32 141.38
> 6 106.06 70.69 35.34 141.39
> 7 106.06 70.7 35.35 141.4 very close to steady-state
>
>My rounding is a little off but above is a close approximation to what happens.
>Note that VF2 is equal to V1 + V2 and converges on the proper value of 141.4V.

Sorry to spoil your fun, Cecil, but 141.4 v is not the forward voltage, it's the max voltage of the standing wave. This is the same mistake that Steve made. I asked you to rethink what the forward voltage and you have come up wrong.

You are using circuit theory for superposition, as Steve did, when circuit theory fails to apply in certain transmission line cases. This is one of those cases. In circuit theory you can superpose the voltages from two sources and V1 + V2 equals Vtotal. But the re-reflected voltage CANNOT be added to the source voltage in the transmission line case to obtain Vfwd, because there is only ONE source.

I'll say it again, Cecil, V1 + V2 = maxV of the standing wave--V1 + V2 does NOT equal Vfwd because V2 is not a second source, it came fr om ONE source, the transceiver, and therefore superposition of V1 and V2 does not apply to establish Vfwd.

Therefore, it is true that maxV may be incident on the load if the relative phase between the reflected and forward waves permits, The only time the forward wave is incident on the load is when the load = Zo.

Please, Cecil, go back to the drawing board and come up with the correct Vfwd--it is not equal in any way to the right-hand side of Johnson's Eq 4.23;. Remember, I said earlier that when rho = 0.5 and the circuit is matched, Vfwd = Vsource x 1.1547. When you discover where the 1.1547 came from when rho = 0.5 you will have discovered the source of Vfwd.

>Steady-state VF2 = 106.06 + 26.5 + 6.63 + 1.66 + 0.41 + ...
>This is indeed of the form 106.06(1 + 1/4 + 1/16 + 1/64 + 1/256 + ...)
>or VF2 = V1(1 + A + A^2 + A^3 + A^4 + ...)

Wrong, Cecil. Change VF2 to 'E', the max value of the standing wave, and the values obtained from the sum of the terms in the geometric series will be correct.

Walt

3640. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 16:36:56 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <f6qbc0l19tl1327a69bv7qqn97ccpe1bk2@4ax.com>
Source record: 93795

On Tue, 08 Jun 2004 15:54:50 GMT, Walter Maxwell <w2du@iag.net> wrote:

>On Mon, 07 Jun 2004 22:22:49 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>
>>Walter Maxwell wrote:
>>> The equation he misunderstands is Eq 4.23 on Page 100 in Johnson, which is
>>> explained and derived on Pages 98 and 99, to derive the voltage E of the
>>> standing wave for any position along a mismatched transmission line. Steve's
>>> misunderstanding is that he believes the equation expresses the value of the
>>> forward voltage on the line. Consequently, his Eq 6 in Part 1 says that 'Vfwd =
>>> the terms on the right-hand side of the equation copied from Johnson', while the
>>> correct version is 'E = the terms on the righ-hand side'.

snip
>Sorry to spoil your fun, Cecil, but 141.4 v is not the forward voltage, it's the
>max voltage of the standing wave. This is the same mistake that Steve made. I
>asked you to rethink what the forward voltage and you have come up wrong.
>
>You are using circuit theory for superposition, as Steve did, when circuit
>theory fails to apply in certain transmission line cases. This is one of those
>cases. In circuit theory you can superpose the voltages from two sources and V1
>+ V2 equals Vtotal. But the re-reflected voltage CANNOT be added to the source
>voltage in the transmission line case to obtain Vfwd, because there is only ONE
>source.
>
> I'll say it again, Cecil, V1 + V2 = maxV of the standing wave--V1 + V2 does NOT
>equal Vfwd because V2 is not a second source, it came fr om ONE source, the
>transceiver, and therefore superposition of V1 and V2 does not apply to
>establish Vfwd.

I'll make it a little easier for you, Cecil. I' ll give you two ways to
determine Vfwd.

Way 1. Vfwd = sqrt(Power fwd x Zo)

Way 2. Vfwd = Vsource x sqrt[1/(1- rho^2)]

Now plug rho = 0.5 into the expression for Way 2 and see what comes up.

Walt

>Therefore, it is true that maxV may be incident on the load if the relative
>phase between the reflected and forward waves permits, The only time the forward
>wave is incident on the load is when the load = Zo.
>
>Please, Cecil, go back to the drawing board and come up with the correct
>Vfwd--it is not equal in any way to the right-hand side of Johnson's Eq 4.23;.

>Remember, I said earlier that when rho = 0.5 and the circuit is matched, Vfwd =
>Vsource x 1.1547. When you discover where the 1.1547 came from when rho = 0.5
>you will have discovered the source of Vfwd.
>
>>Steady-state VF2 = 106.06 + 26.5 + 6.63 + 1.66 + 0.41 + ...
>>This is indeed of the form 106.06(1 + 1/4 + 1/16 + 1/64 + 1/256 + ...)
>>or VF2 = V1(1 + A + A^2 + A^3 + A^4 + ...)
>
>Wrong, Cecil. Change VF2 to 'E', the max value of the standing wave, and the
>values obtained from the sum of the terms in the geometric series will be
>correct.
>
>Walt

3641. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 17:34:05 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <gptbc0hrggp5pn678jpoti1uvtb2e10btm@4ax.com>
Source record: 93796

>I'll make it a little easier for you, Cecil. I' ll give you two ways to
>determine Vfwd.
>
>Way 1. Vfwd = sqrt(Power fwd x Zo)
>
>Way 2. Vfwd = Vsource x sqrt[1/(1- rho^2)]
>
>Now plug rho = 0.5 into the expression for Way 2 and see what comes up.
>
>Walt

Cecil, let's take it one step further and include current, forward current, that is, Ifwd.

Ifwd = Isouce x sqrt[1/(1 - rho^2)]

Now let's see what happens with a souce voltage of 70.71 v at 100 w on a 50-ohm line. The source current is 1.414 a.

Now find Ifwd x Vfwd and see what comes up.

Walt

3642. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 17:58:17 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c5ff52_5@corp.newsgroups.com>
Source record: 93797

Walter Maxwell wrote:
> On Mon, 07 Jun 2004 22:22:49 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
>
>
>>Walter Maxwell wrote:
>>
>>>The equation he misunderstands is Eq 4.23 on Page 100 in Johnson, which is
>>>explained and derived on Pages 98 and 99, to derive the voltage E of the
>>>standing wave for any position along a mismatched transmission line. Steve's
>>>misunderstanding is that he believes the equation expresses the value of the
>>>forward voltage on the line. Consequently, his Eq 6 in Part 1 says that 'Vfwd =
>>>the terms on the right-hand side of the equation copied from Johnson', while the
>>>correct version is 'E = the terms on the righ-hand side'.
>>
>>Johnson's equation contains all possible components - both forward and
>>reflected, so Johnson's equation predicts the total net standing-wave
>>voltage. (Note that Johnson's equation contains both positive and negative
>>exponents.)
>>
>>Dr. Best's equation contains only the forward components of Johnson's
>>equation. Therefore, Dr. Best's equation predicts *only* the forward-
>>traveling voltage. (Note that Dr. Best's equation contains only negative
>>exponents and represents the E+ half of Johnson's equation while omitting
>>the E- half of Johnson's equation.)
>>
>>In other words, the two equations do *not* predict the same quantity
>>and they are *not* supposed to be the same equations. As I said before,
>>Dr. Best made a lot of conceptual errors but his equations seem to be
>>valid. If you break Johnson's equation into two parts representing E+
>>and E-, the E+ part will be Dr. Best's Eq 6.
>>
>>Please consider the following matched system with a 1/2 second long lossless
>>transmission line. The physical rho is 0.5. Assume VF1 is a constant 70.7V.
>>
>>100W XMTR---50 ohm line---x---1/2 second long lossless 150 ohm line---50 ohm load
>> VF1=70.7V--> VF2-->
>> <--VR1 <--VR2
>>
>>V1 is equal to 70.7(1.5) = 106.06V and is a constant value
>>V2 starts out at zero and builds up to 35.35V
>>VF2=V1+V2 assuming they are in phase
>>
>>Here is (conceptually simplified) how VF2 builds up to its steady-state value.
>>VR2(t+1) is 1/2 of VF2(t) and V2(t+1) is 1/4 of VF2(t)

>>
>>Time in
>>Seconds V1 VR2 V2 VF2
>> 0 106.06 0 0 106.06
>> 1 106.06 53.03 26.5 132.56
>> 2 106.06 66.26 33.13 139.19
>> 3 106.06 69.58 34.79 140.85
>> 4 106.06 70.4 35.2 141.26
>> 5 106.06 70.63 35.32 141.38
>> 6 106.06 70.69 35.34 141.39
>> 7 106.06 70.7 35.35 141.4 very close to steady-state
>>
>>My rounding is a little off but above is a close approximation to what happens.
>>Note that VF2 is equal to V1 + V2 and converges on the proper value of 141.4V.
>
> Sorry to spoil your fun, Cecil, but 141.4 v is not the forward voltage, it's the
> max voltage of the standing wave. This is the same mistake that Steve made. I
> asked you to rethink what the forward voltage and you have come up wrong.

Nope, I haven't, Walt. The maximum voltage of the standing wave equals the maximum forward voltage plus the maximum reflected voltage. The forward voltage is 141.4V. The reflected voltage is 70.7V. The maximum standing-wave voltage is 141.4V + 70.7V = 212.1V. The minimum standing-wave voltage is 141.4V - 70.7V = 70.7V. The VSWR = 212.1V/70.7V = 3:1. Rho = 0.5 SWR = (1+Rho)/(1-Rho) = 1.5/0.5 = 3:1 Everything is perfectly consistent.

So the maximum standing-wave voltage is 212.1V, not 141.4V.

Please reconsider - here's the steady-state powers for the above matched example:

100W XMTR-----50 ohm line---x---150 ohm line---50 ohm load
PF1=100W--> PF2=133.33W-->
<--PR1=0 <--PR2=33.33W

The forward power is 133.33W and Z0=150 ohms. Last time I looked, the square root of [133.33W(150 ohms)] was 141.4V.

141.4V^2/150 ohms equals 133.33W. The forward voltage is indeed 141.4V.

Until you discover your mental block, whatever it is, this discussion is not going to progress. The above example is exceptionally simple so your mistake must also be simple. You, yourself, have used the above example and always agreed that 100W + 33.33W = 133.33W, i.e. forward power equals generated power plus reflected power.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3643. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 18:08:57 UTC
From: Ken <wa0sbu@yahoo.com>
Message-ID: <fdb2308f3c53a311efc6b16d0ea3d069@news.teranews.com>
Source record: 93798

On Thu, 27 May 2004 17:24:40 -0500, Cecil Moore
<Cecil.A.Moore@ieee.org> wrote:

>
>Hank, when reflected current flows backwards through a pi-net loading
>coil, some of the reflected power is dissipated as I^2*R losses in
>the coil. Other than that, a properly tuned pi-net causes a match
>point that reflects all the reflected energy back toward the load.
>

This is a great thread, I have a question about your post. If the all
the reflected energy is reflected back toward the load, is it in phase
with the original or subsequent energy? or does it matter?

>If a match point exists in a ham radio antenna system, no reflected
>energy will reach the source. This is the great majority of amateur
>radio systems and no-reflections-at-the-source is the goal of every
>ham. The thing that you are worried about is the unusual case where
>reflections are allowed to reach the source.

3644. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 18:29:02 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c60686$1_5@corp.newsgroups.com>
Source record: 93799

Walter Maxwell wrote:
> I'll make it a little easier for you, Cecil. I' ll give you two ways to
> determine Vfwd.

OK, here's the example:

100W XMTR---50 ohm line---x----1/2WL 150 ohm line---50 ohm load
PF1=100W--> PF2=133.33W-->
<--PR1=0W <--PR2=33.33W

> Way 1. Vfwd = sqrt(Power fwd x Zo)

So Vfwd = sqrt(133.33W x 150ohms) = 141.4 volts (that's what I said)

> Way 2. Vfwd = Vsource x sqrt[1/(1- rho^2)]
> Now plug rho = 0.5 into the expression for Way 2 and see what comes up.

OK, Vfwd = 70.7V x sqrt[1/0.75] = 81.6 volts (something wrong there)
We know Vfwd has to be 141.4V as calculated above using Ohm's law.

Walt, your two ways don't yield the same value. Perhaps that is the
source of your confusion about what Dr. Best said. Your Way 2 appears
to be a calculation of the voltage delivered to a mismatched load.
--
73, Cecil http://www.qsl.net/w5dxp

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3645. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 18:34:50 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c607e6_5@corp.newsgroups.com>
Source record: 93800

Walter Maxwell wrote:
> Cecil, let's take it one step further and include current, forward current, that
> is, Ifwd.
>
> Ifwd = Isouce x sqrt[1/(1 - rho^2)]

This equation for voltage was wrong. Perhaps, we should resolve that
problem first.

Forward current can be calculated from the square root of (forward
power divided by Z0). So IF2 = SQRT(133.33W/150ohms) = 0.943 amps

Funny thing is that 141.4v*0.943a = 133.33 watts, the known forward
power on the 150 ohm line.
--
73, Cecil http://www.qsl.net/w5dxp

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3646. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 18:45:10 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c60a50_5@corp.newsgroups.com>
Source record: 93801

Ken wrote:
> This is a great thread, I have a question about your post. If the all
> the reflected energy is reflected back toward the load, is it in phase
> with the original or subsequent energy? or does it matter?

I am from the old school, Ken. I believe that power is a scalar and
doesn't possess phase. IMO, any phase calculation that you see being
used on power originates from the voltage phase and/or current phase
associated with that power. It is done all the time in optics.

The answer to your question is, assuming PA stands for Phase Angle:
Since forward voltages and forward currents are in phase, V*I*cos(PA)
yields watts with no vars. Since reflected voltage and reflected current
are 180 degrees out of phase, V*I*cos(PA) yields watts with no vars.
So extremely loosely speaking, the "phase" of the power can be considered
to be the same as the phase of the voltage or current since they are
the same phase. However, such a consideration cannot be considered to
be good physics.
--
73, Cecil http://www.qsl.net/w5dxp

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3647. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 18:56:06 UTC
From: richardharrison@webtv.net
Message-ID: <1791-40C60BC6-60@storefull-3257.bay.webtv.net>
Source record: 93802

Walter, W2DU wrote:
"I`ll give you two ways to determine Vfwd."

Walter makes it too easy by using the power relationships, but that`s the way it is. The forward (incident) wave is opposed by Ro in a practical line. The reward (reflected) wave is also opposed by Ro (the surge impedance) of the line.

Power from the transmitter is nearly the same as that delivered to the load as loss is small and no significant room exists in the line to store RF.

Power to the load is the difference between forward power and reflected power.

The voltage at any point on a mismatched line is the sum of the forward and reflected waves at that point but is merely a manifestatoion of SWR and has little practical value. At a current or a voltage loop (maximum), the forward and reflected amps or volts are in-phase. So, if a line is opened at a loop point, the impedance looking toward the load is a pure resistance regardless of the nature of the load (see page 37 of "Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and Wing).

Best regards, Richard Harrison, KB5WZI

3648. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 19:08:51 UTC
From: fractenna@aol.com
Message-ID: <20040608150851.16591.00000686@mb-m15.aol.com>
Source record: 93803

>Who are you to require an answer?
>

I am Chip, N1IR.

I don't require an answer. I invited one.

Who, sir, are you?

73,
Chip N1IR

3649. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 19:13:15 UTC
From: fractenna@aol.com
Message-ID: <20040608151315.16591.00000688@mb-m15.aol.com>
Source record: 93804

>Surely you realize that there are people that listen to things on radio.
>Shortwave, VHF, UHF. Military comms, utilities, ect. You do actually
>participate in the radio hobby, don't you?

No. I do not consider 'radio' a hobby. I appreciate the fact that others do.

Amateur radio is a service, for example.

I clearly do not understand that eavesdropping on the marine band with a unidirectional antenna is a hobby. I invite Richard to expound its virtues; tell us who does it; tell us how such hobbyists meet; discuss their fun info; and so on.

This is a new one, relatively, to me.

BTW, I have been a ham since 1966; have won various contests; have DXCC honor Rolls; 8BDXCC (equivalent); #1 DXCC Honor Roll; and so on.

I have also done various public service stuff as a ham, BTW.

I've been around the pike, so to speak.

73
Chip N1IR

3650. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 19:20:58 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.org>
Message-ID: <40c612b5_4@corp.newsgroups.com>
Source record: 93805

Richard Harrison wrote:
> The voltage at any point on a mismatched line is the sum of the forward
> and reflected waves at that point but is merely a manifestatoion of SWR
> and has little practical value.

All true and completely irrelevant to Dr. Best's article since he was
never talking about the net voltage. He is talking about the forward
voltage. Any notion that Dr. Best was talking about net voltage is a
mistaken notion. (I can't believe I'm defending Dr. Best but he said
what he said.)
--
73, Cecil http://www.qsl.net/w5dxp

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3651. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 19:47:48 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <EJoxc.15855$HG.2917@attbi_s53>
Source record: 93806
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Re: BPL - impact on radio communications
As tests and any sort of technical common sense would make obvious, broadband transmissions on miles of unshielded power lines will create havoc with the reception of micro-volt level radio communication signals. The concept is pure nonsense to anyone with a technical background. My BSEE (with communications specialization) and top FCC commercial and amateur radio licenses does not make me a great expert, but anyone with a comprehension of radio transmission and reception knows that the BPL concept does not work, unless basic MF & HF radio is sacrificed. BPL is a poorly thought out concept, with the unlikely potential for profit driving this otherwise unfathomable concept. Please get some honest technical input before allowing this BPL debacle to continue.
Sincerely, AK

"yea right" <spam@spam.spam> wrote in message
news:pan.2004.06.05.07.04.03.720063@spam.spam...
> If you value radio, this may be the last and only chance to have your
> voice heard to stop BPL from destroying your hobby. The FCC has extended
> the comment period for BPL.
>
> It is VERY simple to file a FCC comment. Click the link below and enter
>
> 03-104
>
> in box #1 (proceeding number) and fill in the blanks. The simplest way to
> comment is to type your comment into the box on the bottom of the form.
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
>
>
> If you can't think of any thing to type or wish to make this as painless
> as possible, you can cut-n-paste the comment I typed below.

Thanks for the info & the FCC link. AK

3652. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 19:55:23 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <co4cc0hc1lrqicc6ddlq4g9f3qelg79uos@4ax.com>
Source record: 93807

On Tue, 08 Jun 2004 13:29:02 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> I'll make it a little easier for you, Cecil. I' ll give you two ways to
>> determine Vfwd.
>
>OK, here's the example:
>
>100W XMTR---50 ohm line---x----1/2WL 150 ohm line---50 ohm load
> PF1=100W--> PF2=133.33W-->
> <--PR1=0W <--PR2=33.33W
>
>> Way 1. Vfwd = sqrt(Power fwd x Zo)
>
>So Vfwd = sqrt(133.33W x 150ohms) = 141.4 volts (that's what I said)
>
>> Way 2. Vfwd = Vsource x sqrt[1/(1- rho^2)]
>> Now plug rho = 0.5 into the expression for Way 2 and see what comes up.
>
>OK, Vfwd = 70.7V x sqrt[1/0.75] = 81.6 volts (something wrong there)
>We know Vfwd has to be 141.4V as calculated above using Ohm's law.
>
>Walt, your two ways don't yield the same value. Perhaps that is the
>source of your confusion about what Dr. Best said. Your Way 2 appears
>to be a calculation of the voltage delivered to a mismatched load.

Cecil, you've hit the problem on the nose. Until a few posts past I didn't realize you were using a 150-ohm line. I've been using 50 ohms for the line Zo terminated with 150 ohms, and you'll find my numbers are correct for that Zo. Vfwd = 81.6 v is correct for 100 w on a matched 50 ohm line with 3:1 mismatched load. You'll also get 81.6 using my Way 1.

However, on a 50-ohm line with a 3:1 mismatch and Vfwd = 81.6v (actually it's 81.65 v), the reflected wave is 40.83 v. When the system is matched the phase of the re-reflected wave is 0ï¿½ and is also 40.83 v. Therefore, V1 = 81.65 v and V2 = 40.83,v, which means V1 + V2 cannot equal Vfwd. Yet, in the paragraph preceding Steve's Eq 13 he says that when the phase is 0ï¿½ Eq. 13 derives PFtotal. It does not.

Using his Eq 7 V1 yields P1 = 133.33 w, and using his Eq 8 V2 P2 = = 33.33 w. Using these values of P1 and P2 in his Eq. 12 yields PFtotal = 238 watts, which is also what we get when plugging V1 and V2 into his Eq 9. We know 238 watts is incorrect, because it need to be 133.33 w. It makes no sense to plug P1 from Eq 7 into Eq 12 to find PFtotal, because P1 is already PF total.

This clearly proves that Eq 12 is invalid, because Eq 7 and 8 are valid.

I am studying your case with the 150-ohm line, but I haven't yet corralled it.

Walt

re-reflected voltage is also 40.83 v.

3653. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 19:58:56 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <ng6cc05lo21roami1es7gqqmgudu1nqku6@4ax.com>
Source record: 93808

On Tue, 8 Jun 2004 13:56:06 -0500, richardharrison@webtv.net (Richard Harrison) wrote:

>Walter, W2DU wrote:
>"I`ll give you two ways to determine Vfwd."
>
>Walter makes it too easy by using the power relationships, but that`s
>the way it is. The forward (incident) wave is opposed by Ro in a
>practical line. The reward (reflected) wave is also opposed by Ro (the
>surge impedance) of the line.
>
>Power from the transmitter is nearly the same as that delivered to the
>load as loss is small and no significant room exists in the line to
>store RF.
>
>Power to the load is the difference between forward power and reflected
>power.
>
>The voltage at any point on a mismatched line is the sum of the forward
>and reflected waves at that point but is merely a manifestatoion of SWR
>and has little practical value. At a current or a voltage loop
>(maximum), the forward and reflected amps or volts are in-phase. So, if
>a line is opened at a loop point, the impedance looking toward the load
>is a pure resistance regardless of the nature of the load (see page 37
>of "Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and
>Wing).
>
>Best regards, Richard Harrison, KB5WZI

Thanks, Richard, what you say is true, but problem is in determining the method to find the forward voltage when the line is mismatched.

Walt

3654. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 20:34:18 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <t07cc0du9p83n49k2oi922j2carqmaq0si@4ax.com>
Source record: 93809

On Tue, 08 Jun 2004 12:58:17 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:

>Walter Maxwell wrote:
>> On Mon, 07 Jun 2004 22:22:49 -0500, Cecil Moore <Cecil.A.Moore@ieee.org> wrote:
snip.
>>>Please consider the following matched system with a 1/2 second long lossless
>>>transmission line. The physical rho is 0.5. Assume VF1 is a constant 70.7V.
>>>
>>>100W XMTR---50 ohm line---x---1/2 second long lossless 150 ohm line---50 ohm load
>>> VF1=70.7V--> VF2-->
>>> <--VR1 <--VR2
>>>
>>>V1 is equal to 70.7(1.5) = 106.06V and is a constant value
>>>V2 starts out at zero and builds up to 35.35V
>>>VF2=V1+V2 assuming they are in phase
>>>
>>>Here is (conceptually simplified) how VF2 builds up to its steady-state value.
>>>VR2(t+1) is 1/2 of VF2(t) and V2(t+1) is 1/4 of VF2(t)
>>>
>>>Time in
>>>Seconds V1 VR2 V2 VF2
>>> 0 106.06 0 0 106.06
>>> 1 106.06 53.03 26.5 132.56
>>> 2 106.06 66.26 33.13 139.19
>>> 3 106.06 69.58 34.79 140.85
>>> 4 106.06 70.4 35.2 141.26
>>> 5 106.06 70.63 35.32 141.38
>>> 6 106.06 70.69 35.34 141.39
>>> 7 106.06 70.7 35.35 141.4 very close to steady-state
>>>
>>>My rounding is a little off but above is a close approximation to what happens.
>>>Note that VF2 is equal to V1 + V2 and converges on the proper value of 141.4V.
>>
>> Sorry to spoil your fun, Cecil, but 141.4 v is not the forward voltage, it's the
>> max voltage of the standing wave. This is the same mistake that Steve made. I
>> asked you to rethink what the forward voltage and you have come up wrong.

OK Cecil, I now understand why 141.4 v is the forward voltage. But there is more
below.

>Nope, I haven't, Walt. The maximum voltage of the standing wave equals the
>maximum forward voltage plus the maximum reflected voltage. The forward
>voltage is 141.4V. The reflected voltage is 70.7V. The maximum standing-wave
>voltage is 141.4V + 70.7V = 212.1V. The minimum standing-wave voltage is
>141.4V - 70.7V = 70.7V. The VSWR = 212.1V/70.7V = 3:1. Rho = 0.5

>SWR = (1+Rho)/(1-Rho) = 1.5/0.5 = 3:1 Everything is perfectly consistent.
>
>So the maximum standing-wave voltage is 212.1V, not 141.4V.

And yes, Cecil I now concur that the standing wave voltage is 212.1 v. There is still more.

>Please reconsider - here's the steady-state powers for the above
>matched example:
>
>100W XMTR-----50 ohm line---x---150 ohm line---50 ohm load
> PF1=100W--> PF2=133.33W-->
> <--PR1=0 <--PR2=33.33W
>
>The forward power is 133.33W and Z0=150 ohms. Last time I looked,
>the square root of [133.33W(150 ohms)] was 141.4V.
>
>141.4V^2/150 ohms equals 133.33W. The forward voltage is indeed 141.4V.

Yep, I agree, but as I said above, there is still more.

>Until you discover your mental block, whatever it is, this discussion is
>not going to progress. The above example is exceptionally simple so your
>mistake must also be simple. You, yourself, have used the above example
>and always agreed that 100W + 33.33W = 133.33W, i.e. forward power equals
>generated power plus reflected power.

I assure you, Cecil, there is no mental block.

Returning to Steve's paper, and as I said in the preceding post, Steve precedes his Eq 13 stating this equation works under the conditions where V1 and V2 are in phase. This means that the system is matched and thus the re-reflected voltage equals the reflected voltage. With forward voltage V1 = 141.4 and reflected voltage V2 = 70.71, and using these values in his Eqs 7 and 8 and then plugging the resulting values of P1 and P2 in Eq 13, we get PFtotal = 300 w. This again proves that Eq 13 is invalid, because P1 from Eq 7 already derived the total forward power, yet he uses P2 in Eq 13 to obtain the total forward power.

Do you not see what's wrong here?

Walt

3655. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 20:58:33 UTC
From: tdonaly@aol.com
Message-ID: <20040608165833.15285.00000353@mb-m26.aol.com>
Source record: 93810

>
>>Surely you realize that there are people that listen to things on radio.
>>Shortwave, VHF, UHF. Military comms, utilities, ect. You do actually
>>participate in the radio hobby, don't you?
>
>No. I do not consider 'radio' a hobby. I appreciate the fact that others do.
>
>Amateur radio is a service, for example.
>
>I clearly do not understand that eavesdropping on the marine band with a
>unidirectional antenna is a hobby. I invite Richard to expound its virtues;
>tell us who does it; tell us how such hobbyists meet; discuss their fun info;
>and so on.
>
>This is a new one, relatively, to me.
>
>BTW, I have been a ham since 1966; have won various contests; have DXCC honor
>Rolls; 8BDXCC (equivalent); #1 DXCC Honor Roll; and so on.
>
>I have also done various public service stuff as a ham, BTW.
>
>I've been around the pike, so to speak.
>
>73
>Chip N1IR
>

Before cell phones were widely available, the phone company around here
(Belmont, CA)
had a phone patch service for marine vhf. I met at least one guy who had a hand
held
marine vhf radio which he used to carry around so he could make phone
calls without having to find a pay phone. I expect monitoring the marine band
could get pretty boring, and might get you a charter membership in the
dull men's club, but little else. Of course, if you own a boat that's another
story.
73,
Tom Donaly, KA6RUH

3656. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 21:22:38 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <73bcc017644n37dgd89u0arkaobvqttpvf@4ax.com>
Source record: 93811
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

On Tue, 08 Jun 2004 19:47:48 GMT, "AK" <ak-in-nc@mchsi.com> wrote:

>Re: BPL - impact on radio communications
>As tests and any sort of technical common sense would make obvious,
>broadband transmissions on miles of unshielded power lines will create havoc
>with the reception of micro-volt level radio communication signals. The
>concept is pure nonsense to anyone with a technical background. My BSEE
>(with communications specialization) and top FCC commercial and amateur
>radio licenses does not make me a great expert, but anyone with a
>comprehension of radio transmission and reception knows that the BPL concept
>does not work, unless basic MF & HF radio is sacrificed. BPL is a poorly
>thought out concept, with the unlikely potential for profit driving this
>otherwise unfathomable concept. Please get some honest technical input
>before allowing this BPL debacle to continue.
>Sincerely, AK

Nice letter, but it will fall on deaf ears -- FCC head Michael Powell
is a cheerleader for BPL.

My suggestion: vote for John Kerry on Nov. 2nd. Kerry does not like
Powell. Powell will be out. And we can start afresh with a new FCC
head, one who might worry more about the consequences of BPL than this
business-friendly administration ever will.

Bob
k5qwg

>
> "yea right" <spam@spam.spam> wrote in message
>news:pan.2004.06.05.07.04.03.720063@spam.spam...
>> If you value radio, this may be the last and only chance to have your
>> voice heard to stop BPL from destroying your hobby. The FCC has extended
>> the comment period for BPL.
>>
>> It is VERY simple to file a FCC comment. Click the link below and enter
>>
>> 03-104
>>
>> in box #1 (proceeding number) and fill in the blanks. The simplest way to
>> comment is to type your comment into the box on the bottom of the form.
>>
>> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
>>
>>
>> If you can't think of any thing to type or wish to make this as painless

>> as possible, you can cut-n-paste the comment I typed below.
>
>Thanks for the info & the FCC link. AK
>

3657. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 21:24:58 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
Message-ID: <40c62fc2$1_6@corp.newsgroups.com>
Source record: 93812

Walter Maxwell wrote:
> Cecil, you've hit the problem on the nose. Until a few posts past I didn't
> realize you were using a 150-ohm line.

I've only explained and presented it about ten times now.

The impedances are irrelevant, Walt. The equations have to
work no matter what the impedances.

I have presented ASCII schematics of what I was discussing.
Would you be so kind as to do likewise? I am getting sick
and tired of this run-around.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3658. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 21:38:09 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <5lqxc.1710$K45.610@fed1read02>
Source record: 93813

"Fractenna" <fractenna@aol.com> wrote

> No. I do not consider 'radio' a hobby. I appreciate the fact that others
do.

> I clearly do not understand that eavesdropping on the marine band with a
> unidirectional antenna is a hobby. I invite Richard to expound its
virtues;
> tell us who does it; tell us how such hobbyists meet; discuss their fun
info;
> and so on.
>
> This is a new one, relatively, to me.
>
> BTW, I have been a ham since 1966; have won various contests; have DXCC
honor
> Rolls; 8BDXCC (equivalent); #1 DXCC Honor Roll; and so on.
>
> I have also done various public service stuff as a ham, BTW.
>
> I've been around the pike, so to speak.
>
> 73
> Chip N1IR

Not the pike that several thousand hobbyists enjoy, perhaps most of whom are
licenced amateurs!

Try http://www.wunclub.com/ and really dig around, you'll find that marine
listening is a close second only to military aircraft monitoring, maybe
commercial aircraft after that.

IF the claims about BPL were accurate, it would have such a profound effect
on so many major forms of government and commercial communications, that the
BPL lifespan might be about a week after full scale exposure. So like
yourself, I am watching with open eyes and ears for more tests to prove it's
a boon or a bane.

73,

Jack Painter
Virginia Beach Va

3659. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 21:43:04 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
Message-ID: <40c63404_6@corp.newsgroups.com>
Source record: 93814

Walter Maxwell wrote:
> This means that the system is matched and thus the re-reflected
> voltage equals the reflected voltage.

No! NO! NO! The voltage re-reflected from any physical impedance discontinuity equals the reflected voltage times the physical reflection coefficient. That is the S-parameter term s22(a2). s22 is the physical reflection coefficient. a2 is the reflected voltage incident upon port 2.

If the reflected voltage is 70.7V and the physical voltage reflection coefficient is 0.5, then the re-reflected voltage is 35.35V. This is all explained in HP's AN 95-1 on S-parameter analysis.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3660. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 22:24:39 UTC
From: fractenna@aol.com
Message-ID: <20040608182439.11399.00000639@mb-m11.aol.com>
Source record: 93815

>I expect monitoring the marine band
>could get pretty boring, and might get you a charter membership in the
>dull men's club, but little else. Of course, if you own a boat that's
>another
>story.
>73,
>Tom Donaly, KA6RUH
>

That's my anecdotal sense as well, Tom. Hence my natural curiousity as to why someone with an apparent sense of advanced skills would consider this worthwhile, and exhort us to 'benefit a service'. I would still like to 'get it'. I am open to it. I am puzzled why I am not getting an answer from the person who started this thread.

Kindly fill us in, Richard. We're friendly.

73,
Chip N1IR

3661. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 22:29:03 UTC
From: fractenna@aol.com
Message-ID: <20040608182903.11399.00000640@mb-m11.aol.com>
Source record: 93816

>Not the pike that several thousand hobbyists enjoy, perhaps most of whom are
>licenced amateurs!
>
>Try http://www.wunclub.com/ and really dig around, you'll find that marine
>listening is a close second only to military aircraft monitoring, maybe
>commercial aircraft after that.
>
>IF the claims about BPL were accurate, it would have such a profound effect
>on so many major forms of government and commercial communications, that the
>BPL lifespan might be about a week after full scale exposure. So like
>yourself, I am watching with open eyes and ears for more tests to prove it's
>a boon or a bane.
>
>73,
>
>Jack Painter
>Virginia Beach Va
>
>

The licensed amateur part doesn't sound right, but your link is very helpful.

Wouldn't it make more sense to make construction info available on an
appropriate site to those who are more likely to see it? Perhaps a newsletter?
Trade pub ? Monitoring Times?

This request seems to have come out of no where, with no context. It has the
appearance of a bait, but that's a personal opinion.

73,
Chip N1IR

3662. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 22:34:26 UTC
From: fractenna@aol.com
Message-ID: <20040608183426.11399.00000641@mb-m11.aol.com>
Source record: 93817

>Re: BPL - impact on radio communications
>As tests and any sort of technical common sense would make obvious,
>broadband transmissions on miles of unshielded power lines will create havoc
>with the reception of micro-volt level radio communication signals. The
>concept is pure nonsense to anyone with a technical background. My BSEE
>(with communications specialization) and top FCC commercial and amateur
>radio licenses does not make me a great expert, but anyone with a
>comprehension of radio transmission and reception knows that the BPL concept
>does not work, unless basic MF & HF radio is sacrificed. BPL is a poorly
>thought out concept, with the unlikely potential for profit driving this
>otherwise unfathomable concept. Please get some honest technical input
>before allowing this BPL debacle to continue.
>Sincerely, AK
>
> "yea right" <spam@spam.spam> wrote in message
>news:pan.2004.06.05.07.04.03.720063@spam.spam...
>> If you value radio, this may be the last and only chance to have your
>> voice heard to stop BPL from destroying your hobby. The FCC has extended
>> the comment period for BPL.
>>
>> It is VERY simple to file a FCC comment. Click the link below and enter
>>
>> 03-104
>>
>> in box #1 (proceeding number) and fill in the blanks. The simplest way to
>> comment is to type your comment into the box on the bottom of the form.
>>
>> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
>>
>>
>> If you can't think of any thing to type or wish to make this as painless
>> as possible, you can cut-n-paste the comment I typed below.
>
>Thanks for the info & the FCC link. AK
>
>

Play devil's advocate: how do we, as 'hams' convince others that increased QRM and QRN --prevents-- our use of licensed privileges.

To wit: consider HF mobile. Why should anyone care if a roving 'ham' gets blasted by QRM when driving underneath a power line? The emergency comm argument has limited viability: most emergency comm happens at VHF or UHF these days, especially mobile.

Provide a compelling answer and you've certainly made it difficult to justify BPL. Don't make a case and you've thrown the focus on the necessity of certain HF 'ham' activities in a broader context.

Hope this helps.

73,
Chip N1IR

3663. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 22:50:53 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <0ffcc0pc0o85ata0gaeebeds6845l0n6gp@4ax.com>
Source record: 93818

On Tue, 08 Jun 2004 16:43:04 -0500, Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
wrote:

>Walter Maxwell wrote:
>> This means that the system is matched and thus the re-reflected
>> voltage equals the reflected voltage.
>
>No! NO! NO! The voltage re-reflected from any physical impedance
>discontinuity equals the reflected voltage times the physical reflection
>coefficient. That is the S-parameter term s22(a2). s22 is the physical
>reflection coefficient. a2 is the reflected voltage incident upon port 2.
>
>If the reflected voltage is 70.7V and the physical voltage reflection
>coefficient is 0.5, then the re-reflected voltage is 35.35V. This is
>all explained in HP's AN 95-1 on S-parameter analysis.

Cecil, when a mismatched line is matched at the input with a tuner the
reflection coefficient at the matching point in the tuner is 1.0 when the tuner
is matched, thus the re-reflected voltage wave must be equal to that of the
reflected wave. My statements are all based in these conditions.

These conditions are in effect when using an antenna tuner, so any equations
that work in general must work with the tuner setup. When the tuner is matched
the re-reflected voltage is in phase with the source wave. Then, according to
the conditions Steve set forth to use Eq 13 this equation should be viable for
use with conditions set up with the tuner, but it doesn't. You say this equation
is valid, so can you come up with the correct answers using it with a tuner
matching the mismatched line?

Unfortunately, my S-parameter texts are behind in Florida, and I've forgotten
the significance of the 'a' and 'b' terms.

3664. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-08 23:51:03 UTC
From: JJ <radiobuff99@mailcity.moc>
Message-ID: <w8idnb8ySYS7_FvdRVn-uw@gbronline.com>
Source record: 93726
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

AK wrote:

> Re: BPL - impact on radio communications
> As tests and any sort of technical common sense would make obvious,
> broadband transmissions on miles of unshielded power lines will create havoc
> with the reception of micro-volt level radio communication signals. The
> concept is pure nonsense to anyone with a technical background. My BSEE
> (with communications specialization) and top FCC commercial and amateur
> radio licenses does not make me a great expert, but anyone with a
> comprehension of radio transmission and reception knows that the BPL concept
> does not work, unless basic MF & HF radio is sacrificed. BPL is a poorly
> thought out concept, with the unlikely potential for profit driving this
> otherwise unfathomable concept. Please get some honest technical input
> before allowing this BPL debacle to continue.
> Sincerely, AK

Unfortunately the folks at the FCC that are pushing BPL have zero comprehension of radio transmission or reception, in fact have zero comprehension of anything technical. They are a bunch of lawyers who only comprehend money. Chairman Powell wouldn't know a transistor from a doorknob, I doubt he can turn on a tv without help. He will probably leave the FCC after BPL gets rolling for some cushy outrageous paying position at some BPL intenty as his reward for helping to push this debacle down everyone's throats.

3665. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 00:06:30 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <awsxc.17938$4S5.15367@attbi_s52>
Source record: 93819
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:73bcc017644n37dgd89u0arkaobvqttpvf@4ax.com...

> Nice letter, but it will fall on deaf ears -- FCC head Michael Powell
> is a cheerleader for BPL.

Sadly, I am aware of that. Either he's been paid off, or the people pulling his strings have been paid off by the power company special interest reps. My "but anyone with a comprehension of radio transmission and reception knows that the BPL concept does not work" and "unfathomable concept" comments were certainly directed Powell's way. Oh for the good ol' days when at least one or two of the FCC Commissioners were ex-FCC field engineers who understood something about the medium they were supposed to be in charge of.

AK

3666. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 00:17:44 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
Message-ID: <40c65841_5@corp.newsgroups.com>
Source record: 93820

Walter Maxwell wrote:
> Cecil, when a mismatched line is matched at the input with a tuner the
> reflection coefficient at the matching point in the tuner is 1.0 when the tuner
> is matched, thus the re-reflected voltage wave must be equal to that of the
> reflected wave. My statements are all based in these conditions.

That is NOT true of an S-parameter analysis, Walt, which is essentially what Dr. Best is using in his article. In a system with reflections the S-parameter reflection coefficients are NEVER equal to 1.0. How can I make you understand that you and Dr. Best are using entirely different systems of analysis and yours has no bearing on his.

Here's your arguments:

Steve: "It's a plant."

Walt: "No, it's a tree."

Steve: "No, no, it's a plant."

Walt: "No, no, it's a tree."

In the following matched system, the reflection coefficient in Dr. Best's system of analysis is ALWAYS |0.5| and is NEVER 1.0. This is also true for an S-parameter analysis. The only difference between Dr. Best's analysis and an S-parameter analysis is that he didn't normalize his voltages to SQRT(Z0). I presented that fact a couple of postings ago.

100W XMTR---50 ohm line---x---1/2WL 150 ohm line---50 ohm load.

Nowhere at no time is Dr. Best's reflection coefficient equal to anything except |0.5|. It is an absolute constant whether the XMTR is off, in the transient state, or in the steady-state. Please read this paragraph over and over until it soaks in. In Dr. Best's system of analysis, the only time that the reflection coefficient is 1.0 is in a system with a short, open, or pure reactance. In his system of analysis, a reflection coefficient of 1.0 NEVER occurs at a matched or mismatched impedance discontinuity if the impedances are not zero or infinite (or purely reactive).

> Unfortunately, my S-parameter texts are behind in Florida, and I've forgotten
> the significance of the 'a' and 'b' terms.

The HP AN 95-1 ap note is available at:

http://www.sss-mag.com/pdf/hpan95-1.pdf

The S-parameter reflection coefficients are constant and do NOT change as the reflected power changes. They are the same with no signal applied, or during

the transient state, or during the steady-state. The S-parameter reflection coefficient is *NEVER* 1.0 when there exists an impedance discontinuity.

You and Dr. Best are NOT USING THE SAME REFLECTION COEFFICIENTS!!!!
You and Dr. Best are NOT USING THE SAME SYSTEM OF ANALYSIS!!!!
Nothing you say about your system of analysis is relevant to the system of analysis that Dr. Best used.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3667. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 00:22:42 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40c6585d$0$433$5cbedd26@news.real-time.com>
Source record: 93721

Cecil Moore wrote:

> I am from the old school, Ken. I believe that power is a scalar and
> doesn't possess phase. IMO, any phase calculation that you see being
> used on power originates from the voltage phase and/or current phase
> associated with that power. It is done all the time in optics.

Interesting comment, however the "power" companies would have a great
difference of opinion with you.

And no, I'm not about to enter this very silly argument you wish to
continue, apparently until the protons all decay.

tom
K0TAR

3668. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 00:33:48 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <9dmcc0t9m282tl314nuu0uds8i11rl25c1@4ax.com>
Source record: 93722
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

On Wed, 09 Jun 2004 00:06:30 GMT, "AK" <ak-in-nc@mchsi.com> wrote:

>
>"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
>news:73bcc017644n37dgd89u0arkaobvqttpvf@4ax.com...
>
>> Nice letter, but it will fall on deaf ears -- FCC head Michael Powell
>> is a cheerleader for BPL.
>
>Sadly, I am aware of that. Either he's been paid off, or the people pulling
>his strings have been paid off by the power company special interest reps.

When Powell travels to industry functions/conventions, his hotel
room/suite is usually paid for by broadcast reps. He hangs out with
them, parties with them. As an attorney, he used to represent media
conglomerates. His preferences are well known.

Bob
k5qwg

>My "but anyone with a comprehension of radio transmission and reception
>knows that the BPL concept does not work" and "unfathomable concept"
>comments were certainly directed Powell's way. Oh for the good ol' days when
>at least one or two of the FCC Commissioners were ex-FCC field engineers who
>understood something about the medium they were supposed to be in charge of.
>
>AK
>

3669. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 00:40:02 UTC
From: John Randall <cowboy747@yahoo.com>
Message-ID: <57c006d07a7edf9c95f41584deb37337@news.bubbanews.com>
Source record: 93723

Dear J. McLaughlin, self proclaimed newsgroup cop. If you don't know the answer to his question, why did you bother to answer him? Just wanted to "dig" on him a bit because he didn't post his call? You posted yours and you still came off sounding like a pompous know it all ass.
Or was that your intention?

On Sat, 5 Jun 2004 09:59:36 -0400, "J. McLaughlin" <JCM@Power-Net.Net> wrote:

>Dear Richard - no full name - no call - no location - probably not a
>real E-mail address:
>
> Let me see if I understand: You have the strange idea that someone
>who has the experience and skill to craft for you an expensive design
>(for free) is looking for something to do. Strange indeed.
> Mac N8TT

3670. Re: Reflected power ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 00:41:27 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
Message-ID: <40c65dd0$1_5@corp.newsgroups.com>
Source record: 93724

Tom Ring wrote:
> Cecil Moore wrote:
>
>> I am from the old school, Ken. I believe that power is a scalar and
>> doesn't possess phase. IMO, any phase calculation that you see being
>> used on power originates from the voltage phase and/or current phase
>> associated with that power. It is done all the time in optics.
>
> Interesting comment, however the "power" companies would have a great
> difference of opinion with you.

My degree is in Power Engineering and I learned the above at
Texas A&M. Of course, Volt-Amps have a phase, but power always
lies along the real axis. What would be the physical meaning of
25 watts at 45 degrees?
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3671. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 00:46:17 UTC
From: Cougercat <felix1063@comcast.net>
Message-ID: <t5txc.64281$eY2.8355@attbi_s02>
Source record: 93725

A fence pold remover can be used. One can be had at Home Depot or Lowes for
several "clams"

--
"Gary Boyer" <gboyer@columbus.rr.com> wrote in message
news:0ZJvc.20287$DG4.13504@fe2.columbus.rr.com...
> I have two ground rods I am thinking about moving to another location, is
> this practical or would it be easier to just poundem in the ground and buy
> new rods....does anyone have an easy method for taking the rods out of the
> ground...I am not interested in building any equipment to do this removal
> project...please advise..thanks..Gary, K8BY
>
>

3672. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 01:13:05 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <4qmcc0deob1n2dq8vnqjfeqtnsc8et65ug@4ax.com>
Source record: 93727

Cecil, Steve's equations are out there for all to see as general equations. Nowhere has he made any caviats to the contrary, or that they only work for reflection coefficients of 0.5. If they only work for one specific coefficient it should be so noted that they are not for general use. And if equations are not valid for general use they are then invalid.

Can you explain this?

Walt

3673. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 01:25:56 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40c66724$0$441$5cbedd26@news.real-time.com>
Source record: 93728

Bob,

I have to give that a very big "but we don't know that".

As a non-attorney, guess what I'd like to say.

tom
K0TAR

Bob Miller wrote:

>
> When Powell travels to industry functions/conventions, his hotel
> room/suite is usually paid for by broadcast reps. He hangs out with
> them, parties with them. As an attorney, he used to represent media
> conglomerates. His preferences are well known.
>
> Bob
> k5qwg

3674. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 01:48:27 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <gtqcc0hnj806n2rl5t6ft6r5siub9gsb5q@4ax.com>
Source record: 93729

On Tue, 08 Jun 2004 20:25:56 -0500, Tom Ring <news0000@taring.org>
wrote:

>Bob,
>
>I have to give that a very big "but we don't know that".

Tom, no we don't know that for sure, but it was reported in various
news stories, around the time Powell was pushing to increase the
number of media outlets a conglomerate could own.

Bob
k5qwg

>
>As a non-attorney, guess what I'd like to say.
>
>tom
>K0TAR
>
>Bob Miller wrote:
>
>>
>> When Powell travels to industry functions/conventions, his hotel
>> room/suite is usually paid for by broadcast reps. He hangs out with
>> them, parties with them. As an attorney, he used to represent media
>> conglomerates. His preferences are well known.
>>
>> Bob
>> k5qwg

3675. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 02:10:02 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
Message-ID: <40c67293_3@corp.newsgroups.com>
Source record: 93731

Walter Maxwell wrote:
> Cecil, Steve's equations are out there for all to see as general equations.
> Nowhere has he made any caviats to the contrary, or that they only work for
> reflection coefficients of 0.5. If they only work for one specific coefficient
> it should be so noted that they are not for general use. And if equations are
> not valid for general use they are then invalid.
>
> Can you explain this?

They do work for any reflection coefficient, Walt. He chose 0.5 for
his examples because a 0.5 voltage reflection coefficient reflects
half of the voltage and that's easy to do in your head. The S-parameter
analysis will work for any reflection coefficient.

If you will take the time to perform an S-parameter analysis, you
will understand Steve's equations. His analysis is completely
different from yours.

Here's one with a voltage reflection coefficient of 0.707. You
can pick any Z0 for the 1/2WL line below and therefore choose
any reflection coefficient you want.

100W XMTR---50 ohm line---x---1/2WL 291.5 ohm line---50 ohm load
VF1=70.7V--> VF2=241.45V-->
<--VR1=0V <--VR2=170.7V

Dr. Best's V1 = VF1(1+rho) = 70.7(1.707) = 120.7V

Dr. Best's V2 = VR2(rho) = 170.7(0.707) = 120.7V

VF2 = V1 + V2 = 120.7V + 120.7V = 241.4V (200W forward)

This is just an S-parameter analysis without normalizing to the
square root of Z0. In fact, we can *derive* Dr. Best's equations
from the S-parameter equations simply by multiplying by the
square root of Z0.

b2 = s21(a1) + s22(a2)

b2*Sqrt(Z0) = s21(a1)Sqrt(Z0) + s22(a2)Sqrt(Z0)

VF2 = b2*Sqrt(Z0), V1 = s21(a1)Sqrt(Z0), V2 = s22(a2)Sqrt(Z0)

VF2 = V1 + V2
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3676. F.S. New 10 meter beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 02:11:18 UTC
From: wa4uso@aol.com
Message-ID: <20040608221118.13190.00000439@mb-m20.aol.com>
Source record: 93730

I have one KLM 28-30-6 six element 10 meter beam (new in the box) for sale, price $85.00 or best offer plus shipping. Can be picked up in Louisville KY or shipped Fedx.
Interested, please email WA4USO@aol.com TNX D Darby

3677. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 02:52:41 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <4ntcc0lms1ern2a36lotuqbho4bfrbmvp6@4ax.com>
Source record: 93732

Cecil, how about doing me a favor and humor me a little.

How about solving my example, the one that Steve took from Reflections and then trashed. To repeat, 100 w, 70.71 v source, 50-ohm lossline terminated in a 3:1 mismatch and perfectly matched at the input with a rho = 1.0.

Vfwd = 81.65 v and Vref = 40.83 V. Please solve this using Steve's method of solution, Eqs 5 thru 13.

If this problem can't be solved with Steve's method, his method must be invalid, not general.

Walt

3678. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 03:09:55 UTC
From: yea right <spam@spam.spam>
Message-ID: <pan.2004.06.09.03.10.35.577709@spam.spam>
Source record: 93733

On Tue, 08 Jun 2004 11:39:39 +0000, Fractenna wrote:
>
> Working together with BPL is the best course for ham radio.

Unfortunately, everybody knows that BPL will hinder HF. There is no argument here as all testing shows this. The question is really how much is acceptable. 5db/m increase in noise floor at 500M nor 9uV/m at 10M of interference is not acceptably to me on any HF freq. Goodbye QRP, especially if you live in the sticks! You may never hear distant shortwave broadcast again unless you live miles from a powerline.

Testing in the united states has not been truthful, utilizing Shoody test techniques and deception. They even picked a test community with underground power lines and no nearby amateurs. I'm willing to bet that all the people are on cable/DBS TV and nobody had a shortwave radio.

BPL is bad and the FCC knows it. So does FEMA, the military and the coastguard. That is why they have provisions in the regulations for them (and them only) to restrict BPL away from their facilities. Hams will not have this protection. Both the British and Germans pulled BPL when field test revealed the true nature of the interference.

Why wait until it's too late to do anything about. If you wait, you lose. The WSJ (Wall Street Journal)is there to promote business. BPL is business and amateur radio is not. I will let others painfully expand about these politics on many vectors. ;-)

Please, if you value radio, it only takes a few minutes to fill out a FCC comment.... better safe than sorry.

www.vambo.org/a

3679. Re: Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 03:40:40 UTC
From: * <*@*.com>
Message-ID: <2inf5dFp40vqU1@uni-berlin.de>
Source record: 93734

some take 4 years,

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0406070836.5defdbc6@posting.google.com...
> I notice that the STEPPIR antenna patent is still "Pending"
> I thought that "pending" meant that the patent has been awarded
> and awaiting printing! Fluid motions have been stating Patent pending
> for more than a few months (year)now and I have yet to see a release.
> Anybody have any info on this ? I also noticed that another thread on
> unconventional antenna design that the news release also stated
> "patent pending"!
> Has " patent pending "replaced the term "patent applied for" or has
> the revised patent procedure and the USPTO fallen flat on its face ?
> Art

3680. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 03:46:08 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <t9ednWZS5bGcFVvdRVn-uw@comcast.com>
Source record: 93735

You're in your own little world, aren't you?

"Fractenna" <fractenna@aol.com> wrote in message
news:20040608151315.16591.00000688@mb-m15.aol.com...
> >Surely you realize that there are people that listen to things on radio.
> >Shortwave, VHF, UHF. Military comms, utilities, ect. You do actually
> >participate in the radio hobby, don't you?
>
> No. I do not consider 'radio' a hobby. I appreciate the fact that others
do.
>
> Amateur radio is a service, for example.
>
> I clearly do not understand that eavesdropping on the marine band with a
> unidirectional antenna is a hobby. I invite Richard to expound its
virtues;
> tell us who does it; tell us how such hobbyists meet; discuss their fun
info;
> and so on.
>
> This is a new one, relatively, to me.
>
> BTW, I have been a ham since 1966; have won various contests; have DXCC
honor
> Rolls; 8BDXCC (equivalent); #1 DXCC Honor Roll; and so on.
>
> I have also done various public service stuff as a ham, BTW.
>
> I've been around the pike, so to speak.
>
> 73
> Chip N1IR

3681. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 04:00:02 UTC
From: * <*@*.com>
Message-ID: <2ing9mFp942cU1@uni-berlin.de>
Source record: 93736

Glad you did something on this! I sent mine in (added to yours some);

I recommend that the FCC ask for a technical showing that BPL will
not interfere with other existing communications in these bands
before establishing Rules and Regulations. I also recommend that
the FCC ask for a technical showing signal losses (of BPL) on
distribution grids in a city. These losses are substantial, and can
indicate that BPL works in only very limited cases, making it
basically unusable in urban and suburban areas.

Existing Emergency communications will be hindered to levels
directly responsible for the loss of life, because of a raised
noise floor or excessive leakage in various locations.

There are many technologies that make BPL unnecessary. BPL will
never be able to carry the high bandwidth demands for mass
distribution of video much less the up-and-coming HDTV.

Please do not destroy the foundation of radio communications below
50 MHz for a unproven technology that is suspected of causing
widespread interference.

In Writing, I wish to persuade the FCC from allowing BPL to be
implemented. The destruction or at the least, deterioration of the
shortwave bands is not only a violation of ITU laws that protect
international broadcasters from interference and jamming, it will
be destroying many people's life hobby. Amateur radio will be
reduced to users with high-power amplifiers and large antennas.

Thank you.

"yea right" <spam@spam.spam> wrote in message
news:pan.2004.06.09.03.10.35.577709@spam.spam...
> On Tue, 08 Jun 2004 11:39:39 +0000, Fractenna wrote:
> >
> > Working together with BPL is the best course for ham radio.
>
> Unfortunately, everybody knows that BPL will hinder HF. There is no
> argument here as all testing shows this. The question is really how much
> is acceptable. 5db/m increase in noise floor at 500M nor 9uV/m at 10M of
> interference is not acceptably to me on any HF freq. Goodbye QRP,
> especially if you live in the sticks! You may never hear distant shortwave
> broadcast again unless you live miles from a powerline.
>
> Testing in the united states has not been truthful, utilizing Shoody test
> techniques and deception. They even picked a test community with

> underground power lines and no nearby amateurs. I'm willing to bet that
> all the people are on cable/DBS TV and nobody had a shortwave radio.
>
> BPL is bad and the FCC knows it. So does FEMA, the military and the
> coastguard. That is why they have provisions in the regulations for them
> (and them only) to restrict BPL away from their facilities. Hams will not
> have this protection. Both the British and Germans pulled BPL when field
> test revealed the true nature of the interference.
>
> Why wait until it's too late to do anything about. If you wait, you lose.
> The WSJ (Wall Street Journal)is there to promote business. BPL is business
> and amateur radio is not. I will let others painfully expand about these
> politics on many vectors. ;-)
>
> Please, if you value radio, it only takes a few minutes to fill out a FCC
> comment.... better safe than sorry.
>
> www.vambo.org/a
>

3682. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 04:09:32 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
Message-ID: <40c68e99_3@corp.newsgroups.com>
Source record: 93737

Walter Maxwell wrote:
> Cecil, how about doing me a favor and humor me a little.
>
> How about solving my example, the one that Steve took from Reflections and then
> trashed. To repeat, 100 w, 70.71 v source, 50-ohm lossline terminated in a 3:1
> mismatch and perfectly matched at the input with a rho = 1.0.

Here's the configuration.

100W XMTR--50 ohm line--x-tuner-y--1wl 50 ohm line---150 ohm load

The tuner function is replaced by a 1/4WL series section which
performs *exactly* the same function so we can see what is really
happening inside the tuner. The match point is at 'x', not at 'y'.
The system is NOT matched at 'y'. Therefore, Dr. Best's system is
not matched at the output of the tuner. His choice to use a tuner
for that illustration, instead of a 1/4WL transformer, was a very
bad one and has obviously led to a lot of confusion and misunderstanding.

rho=0.268 rho=-0.268 rho=0.5
100W XMTR---50 ohm line---x---1/4WL 86.6 ohm line--y--1wl 50 ohm line---150 ohm load
VF1=70.7V--> VF2=96.58V--> VF3=81.65V-->
<--VR1=0V <--VR2=25.9V <--VR3=40.82V
PF1=100W--> PF2=107.76W--> PF3=133.33W-->
<--PR1=0W <--PR2=7.76W <--PR3=33.33W

The mismatched impedance discontinuity at 'y' is interesting because
we have forward power and reflected power flowing to/from both directions.
That's what happens at a tuner output. The actual match point is at the
tuner input at 'x'.

At point 'y' on the 50 ohm line we have a V1y of 70.7V corresponding to
the 100W forward power that made it through the impedance discontinuity.
This can also be calculated by using the transmission coefficient. Since
the impedance is a step-down impedance, tau = 1-rho

V1y = VF2(1-rho) = 96.58(0.732) = 70.7V

V2y will be VR3(rho) = 40.82(0.268) = 10.94V

VF3 = 70.7V + 10.94V = 81.65V. (133.33W)

The modified S-parameter analysis works once again and this time it
is at an unmatched impedance discontinuity at point 'y'.

We could also do the modified S-parameter analysis at point 'x'.

V1x = VF1(1+rho) = 70.7V(1.268) = 89.6V

V2x = VR2(rho) = 25.9V(0.268) = 6.94V

VF2 = V1 + V2 = 89.64V + 6.94V = 96.58V (107.7W)
--
73, Cecil http://www.qsl.net/w5dxp

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3683. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 04:53:27 UTC
From: Old Ed <eXseniorsDeleteThisAndTheX@earthlink.net>
Message-ID: <bJwxc.7551$uX2.4436@newsread2.news.pas.earthlink.net>
Source record: 93738

Chip -

I respectfully suggest you think again about emergency comm's...
this time slightly outside the most literal "box."

Amateur radio already suffers from an aging base of licensees, and
recruiting new ones is difficult. A very high percentage of the "fun"
involved in amateur radio is HF operation. Providing VHF/UHF
emergency comm's is more like work... our payback for spectrum use.

If the Government says "To Hell with amateur radio--use their HF
spectrum for flaky and redundant ISP service," then many amateurs
will quit--AND leave their VHF/UHF emergency service as well.
I'm likely to be one of them.

And what would the recruiting line be then? "Become an Amateur
Radio operator, and you can spend your time working bicycle
races, and hope to get a cross-town emergency gig some day?"
Whoop-de-do, what fun!

I doubt the FCC will have to hire more staff to process Amateur
applications, with exciting prospects like that driving what's left
of the hobby.

73,

Ed, W6LOL

"Fractenna" <fractenna@aol.com> wrote in message
news:20040608183426.11399.00000641@mb-m11.aol.com...
> <snip>
> To wit: consider HF mobile. Why should anyone care if a roving 'ham' gets
> blasted by QRM when driving underneath a power line? The emergency comm
> argument has limited viability: most emergency comm happens at VHF or UHF
> these days, especially mobile.
>
> Provide a compelling answer and you've certainly made it difficult to
> justify BPL. Don't make a case and you've thrown the focus on the
necessity
> of certain HF 'ham' activities in a broader context.
>
> Hope this helps.
>
> 73,
> Chip N1IR

3684. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 04:56:52 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
Message-ID: <40c699ad_4@corp.newsgroups.com>
Source record: 93739

yea right wrote:
> Unfortunately, everybody knows that BPL will hinder HF.

Will it hinder coherent CW and PACTOR II?
--
73, Cecil http://www.qsl.net/w5dxp

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3685. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 05:31:27 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40C6A0AF.36A2@wt.net>
Source record: 93740

CW wrote:
>
> You're in your own little world, aren't you?

He's on the small moon Fractanus...A so far, undisclosed moon of the planet Uranus. "The U.S government refuses to acknowledge the existance of the object" A cover up? Fodder for the next Drudge report I suspect...
As *most* know, people on the planet Earth listen to everything. "If you broadcast it, he will listen" There are probably people that monitor pager transmissions for obtuse tone variations...:/ People listen to boats, marine phone patches, cabs, police, utility co's, biz radio, airplanes, baby monitors, yada, yada, yada, till the freq range runs out...He surely knows this. I think he just wants to appear above it all....Gives him an opportunity to flash his Fractanal ham radio contest resume...Like that really helps the marine band listener to receive better...:+
Fractanions do not listen to much VHF public service band radio evidently. I guess from that far distance, even the oft touted fractal antenna is useless...:(Been around the pike huh...I guess that makes you a piker...
:/ MK

--
http://web.wt.net/~nm5k

3686. Looking for a crappy antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 07:02:19 UTC
From: Mike Painter <mddotpainter@sbcglobal.net>
Message-ID: <%Byxc.68690$5N1.53623@newssvr29.news.prodigy.com>
Source record: 93741

Well, sort of.
I want to broadcast an FM radio signal playing MP3 files in a variety of buildings from single story homes to multistoried buildings.
Small dwellings are no problems but the larger ones present a problem. The location of the broadcast unit may be mandated by factors beyond my control. The power needed to reach the opposite corner might be to high.
Is there any way to use internal wiring as a short range antenna that would be limited to the building for all practical purposes.

Another possible solution that I can't find an answer to would be to put the signal on an unused TV channel if the building is wired for cable.

I've done a lot of Google searching but can't find anything specific.

Thanks.

3687. 4ft diameter indoor mag loop works on 160m!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 07:42:12 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <40c6be89@news.alphalink.com.au>
Source record: 93742

Amazing but true!

Best DX with 5w SSB has been about 300km. With 10w AM distances between 10 and 30 km are common.

The antenna also operates on all HF bands up to 21 MHz.

http://www.alphalink.com.au/~parkerp/project.htm (Project 33)

73, Peter

--

Peter Parker
E-mail: parkerp @ alphalink . com . au

URL: http://www.alphalink.com.au/~parkerp Amateur Radio VK3YE - Melbourne
Transport - Writing

3688. Improving antenna sensitivity by jury-rigging

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 07:55:19 UTC
From: mmcnabb@yahoo.com
Message-ID: <45f44589.0406082355.620eda25@posting.google.com>
Source record: 93743

I had a thought the other night. My wireless keyboard has limited range when my Home Theater PC (HTPC) is enclosed in a cabinet. I have already tapped into the keyboard receiver to access the antenna trace on the circuit board by adding a long wire which I string away and outside of the cabinet. This improved the range. Then I had my thought, what about wiring my external antenna wire into the ground of a 3-prong power outlet. I thought about testing the voltage and current between the antenna wire and ground prong but decided what the heck it is suppose to be grounded. Well, the range is well extended now, but I am wondering what are the risks? I am probably risking damage to my keyboard receiver but so far it works great. I am a very amateur electronics person so I know some stuff but I don't know what would be the best solution to protecting the receiver from damage, if it is needed at all. My questions are why shouldn't I do this, what are the risks, and is there anyway to do this while minimizing the risks?

Also, what about 802.11b? I am thinking that is even more risky since the AP is both a receiver and transmitter and grounding the transmitter signal would probably diminish its range substantially.

Thanks!

3689. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 10:15:05 UTC
From: fractenna@aol.com
Message-ID: <20040609061505.19141.00000844@mb-m02.aol.com>
Source record: 93744

>Dear J. McLaughlin, self proclaimed newsgroup cop. If you don't know
>the answer to his question, why did you bother to answer him? Just
>wanted to "dig" on him a bit because he didn't post his call? You
>posted yours and you still came off sounding like a pompous know it
>all ass.
>Or was that your intention?
>
>
>
>On Sat, 5 Jun 2004 09:59:36 -0400, "J. McLaughlin" <JCM@Power-Net.Net>
>wrote:
>
>>Dear Richard - no full name - no call - no location - probably not a
>>real E-mail address:
>>
>> Let me see if I understand: You have the strange idea that someone
>>who has the experience and skill to craft for you an expensive design
>>(for free) is looking for something to do. Strange indeed.
>> Mac N8TT
>

Hmmm, Mac made sense to me. He always does, come to think of it.

73,
Chip N1IR

3690. Re: Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 10:16:24 UTC
From: fractenna@aol.com
Message-ID: <20040609061624.19141.00000845@mb-m02.aol.com>
Source record: 93745

>some take 4 years,
>

Some take 7 years; some take 8 years; some take 1 year.

No significance to 4.

73,
Chip N1IR

3691. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 10:20:32 UTC
From: fractenna@aol.com
Message-ID: <20040609062032.19141.00000846@mb-m02.aol.com>
Source record: 93746

>
>AK wrote:
>
>> Re: BPL - impact on radio communications
>> As tests and any sort of technical common sense would make obvious,
>> broadband transmissions on miles of unshielded power lines will create
>havoc
>> with the reception of micro-volt level radio communication signals. The
>> concept is pure nonsense to anyone with a technical background. My BSEE
>> (with communications specialization) and top FCC commercial and amateur
>> radio licenses does not make me a great expert, but anyone with a
>> comprehension of radio transmission and reception knows that the BPL
>concept
>> does not work, unless basic MF & HF radio is sacrificed. BPL is a poorly
>> thought out concept, with the unlikely potential for profit driving this
>> otherwise unfathomable concept. Please get some honest technical input
>> before allowing this BPL debacle to continue.
>> Sincerely, AK
>
>Unfortunately the folks at the FCC that are pushing BPL have zero
>comprehension of radio transmission or reception, in fact have zero
>comprehension of anything technical. They are a bunch of lawyers who
>only comprehend money.

Actually, from what I've seen, the FCC is both very technically savvy; well informed; and progressive.

Its emphasis on the law is because it advises , implements, and enforces it. There are plenty of technical folks , BTW.

73,
Chip N1IR

3692. Re: Improving antenna sensitivity by jury-rigging

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 11:11:17 UTC
From: Bob Bob <bcnntp@optusnet.com.au>
Message-ID: <lr7jp1-lm3.ln1@p400bob.lse.com.au>
Source record: 93749

Hi Michael

Well it isnt something I'd ever do to 2.4GHz signals. <grin>

Given the frequecy in use there is going to be pretty severe attenuation in any length of open wire so the fact that the ground wire is "grounded" is probably superfluous. I do know however that there are warnings on WiFi equipment about interference from fluro's and other electrical equipment in close proximity so I'd guess that with those kind of induced voltages on the RX antenna it could in fact work not as well.

Would the voltages hanging around the earth line as noise be damaging to the WiFI RX? I'd say yes but it would depend on the protection (if any) at the RX front end. Obviously depends on what electrically noisy things you also have connected to the mains and how much output there is on 2.4GHz.A hard call, sorry!

If I was trying to increase the range I'd build a antenna inside a tin can of the receiving unit "pointed" in the direction where I would sit with the keyboard. The keyboard I would also modify so that it had at least a half wavelength dipole on the outside of its case on the top/far edge.

There are lots of 2.4GHz antenna building ideas on the internet.. Go for it!

802.11b? I'd stick to purpose built antennas, Home made or commercial.

Cheers Bob VK2YQA

Michael McNabb wrote:
> I had a thought the other night. My wireless keyboard has limited
> range when my Home Theater PC (HTPC) is enclosed in a cabinet. I have
> already tapped into the keyboard receiver to access the antenna trace
> on the circuit board by adding a long wire which I string away and
> outside of the cabinet. This improved the range. Then I had my
> thought, what about wiring my external antenna wire into the ground of
> a 3-prong power outlet. I thought about testing the voltage and
> current between the antenna wire and ground prong but decided what the
> heck it is suppose to be grounded. Well, the range is well extended
> now, but I am wondering what are the risks? I am probably risking
> damage to my keyboard receiver but so far it works great. I am a very
> amateur electronics person so I know some stuff but I don't know what
> would be the best solution to protecting the receiver from damage, if
> it is needed at all. My questions are why shouldn't I do this, what
> are the risks, and is there anyway to do this while minimizing the

> risks?
>
> Also, what about 802.11b? I am thinking that is even more risky since
> the AP is both a receiver and transmitter and grounding the
> transmitter signal would probably diminish its range substantially.
>
> Thanks!

3693. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 11:33:23 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <Hz1HFn.MqE@bath.ac.uk>
Source record: 93748

Chuck...K1KW wrote:

> Anyone know anything about the "technology" in the article below?
>
> http://www.uri.edu/news/releases/?id=2659
>

Melted the antenna with 100 W. Could it be just a tad lossy?
Efficiency claims are clearly bogus.

vy 73

Andy, M1EBV

3694. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 11:38:49 UTC
From: fractenna@aol.com
Message-ID: <20040609073849.09603.00000792@mb-m11.aol.com>
Source record: 93747

>in fact, that was the article that raised all the questions ;-)
>I found it interesting, but wanted to know if hams are really using it!
>
>Kind regards,
>
>Jan, ON5DOA

Not to my knowledge, Jan.

The presently and easily available (that is, free) info on fractal antennas for hams is poor in content and often factually inaccurate, in my opinion, and this is likely to remain so. In the world we live in today, this makes a lot of a sense in its own quirky fashion.

Commercial uses are a different story, however. Of course, that's not what this NG is about.

When hams switch to software radios in a big way then fractal antennas targeted to hams might be worth making more widely known. With some luck, they'll be a few of us 'hams' left then!

73,
Chip N1IR

3695. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 12:55:07 UTC
From: Alex <I_lost_on_Jeporday@alex.com>
Message-ID: <40C708A9.CAA9915D@alex.com>
Source record: 93750
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Hi,

Almost all the fcc commissioners, Mr. Powell included, have legal backgrounds,
experience writing legislation for communciations industry (lobbyists ??)
special interests and working for members in congress.

Three of the comm. have received degrees from universities in
north carolina.

You are correct, it is about the money.

They tried this back in the late 1970's here in ny,
they wanted to eliminate the meter readers to save money
but that did not work out.

Don't know why they want to use the hf regions, why not 10 gig ?

Plus, dsl just dropped the price here another $ 5.00 per month to
be less expensive the the cable co. road runner net.

I don't have a tech degree or work in rf but the harmonics
over miles of cable and the expense of these repeaters and or filters
seems too expensive to turn a profit in rural areas that bpl was pushing for.

BTW, one city in MD has parted ways with their bpl partner and is looking
for another one, after spending lots of money to wire up their city.

alex

AK wrote:

> Re: BPL - impact on radio communications
> As tests and any sort of technical common sense would make obvious,
> broadband transmissions on miles of unshielded power lines will create havoc
> with the reception of micro-volt level radio communication signals. The
> concept is pure nonsense to anyone with a technical background. My BSEE
> (with communications specialization) and top FCC commercial and amateur
> radio licenses does not make me a great expert, but anyone with a
> comprehension of radio transmission and reception knows that the BPL concept
> does not work, unless basic MF & HF radio is sacrificed. BPL is a poorly
> thought out concept, with the unlikely potential for profit driving this
> otherwise unfathomable concept. Please get some honest technical input
> before allowing this BPL debacle to continue.
> Sincerely, AK
>
> "yea right" <spam@spam.spam> wrote in message
> news:pan.2004.06.05.07.04.03.720063@spam.spam...

> > If you value radio, this may be the last and only chance to have your
> > voice heard to stop BPL from destroying your hobby. The FCC has extended
> > the comment period for BPL.
> >
> > It is VERY simple to file a FCC comment. Click the link below and enter
> >
> > 03-104
> >
> > in box #1 (proceeding number) and fill in the blanks. The simplest way to
> > comment is to type your comment into the box on the bottom of the form.
> >
> > http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
> >
> >
> > If you can't think of any thing to type or wish to make this as painless
> > as possible, you can cut-n-paste the comment I typed below.
>
> Thanks for the info & the FCC link. AK

3696. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 12:56:05 UTC
From: Alex <I_lost_on_Jeporday@alex.com>
Message-ID: <40C708E3.EF302421@alex.com>
Source record: 93751
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

FCC Comm. have terms,
half are dem and other half are rep.

Powell will be there for a while.
He has connections.

Bob Miller wrote:

> On Tue, 08 Jun 2004 19:47:48 GMT, "AK" <ak-in-nc@mchsi.com> wrote:
>
> >Re: BPL - impact on radio communications
> >As tests and any sort of technical common sense would make obvious,
> >broadband transmissions on miles of unshielded power lines will create havoc
> >with the reception of micro-volt level radio communication signals. The
> >concept is pure nonsense to anyone with a technical background. My BSEE
> >(with communications specialization) and top FCC commercial and amateur
> >radio licenses does not make me a great expert, but anyone with a
> >comprehension of radio transmission and reception knows that the BPL concept
> >does not work, unless basic MF & HF radio is sacrificed. BPL is a poorly
> >thought out concept, with the unlikely potential for profit driving this
> >otherwise unfathomable concept. Please get some honest technical input
> >before allowing this BPL debacle to continue.
> >Sincerely, AK
>
> Nice letter, but it will fall on deaf ears -- FCC head Michael Powell
> is a cheerleader for BPL.
>
> My suggestion: vote for John Kerry on Nov. 2nd. Kerry does not like
> Powell. Powell will be out. And we can start afresh with a new FCC
> head, one who might worry more about the consequences of BPL than this
> business-friendly administration ever will.
>
> Bob
> k5qwg
>
> >
> > "yea right" <spam@spam.spam> wrote in message
> >news:pan.2004.06.05.07.04.03.720063@spam.spam...
> >> If you value radio, this may be the last and only chance to have your
> >> voice heard to stop BPL from destroying your hobby. The FCC has extended
> >> the comment period for BPL.
> >>
> >> It is VERY simple to file a FCC comment. Click the link below and enter
> >>

> >> 03-104
> >>
> >> in box #1 (proceeding number) and fill in the blanks. The simplest way to
> >> comment is to type your comment into the box on the bottom of the form.
> >>
> >> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
> >>
> >>
> >> If you can't think of any thing to type or wish to make this as painless
> >> as possible, you can cut-n-paste the comment I typed below.
> >
> >Thanks for the info & the FCC link. AK
> >

3697. Re: Looking for a crappy antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 13:03:38 UTC
From: Alex <I_lost_on_Jeporday@alex.com>
Message-ID: <40C70AA8.E5C15D4D@alex.com>
Source record: 93752

hi mike,

How much output power are you planning on using ?

One thing to watch out for is if these mp3 files are of
copyrighted work, you may have to pay to broadcast
these files.

You could try using two antenna, each cut for the FM
frequency you want to use. Connect them with a long
section of good coax, you just built a passive repeater.

Locate one antenna outside the building and the other
inside and thay could work for some or all building.

alex

Mike wrote:

> Well, sort of.
> I want to broadcast an FM radio signal playing MP3 files in a variety of
> buildings from single story homes to multistoried buildings.
> Small dwellings are no problems but the larger ones present a problem. The
> location of the broadcast unit may be mandated by factors beyond my control.
> The power needed to reach the opposite corner might be to high.
> Is there any way to use internal wiring as a short range antenna that would
> be limited to the building for all practical purposes.
>
> Another possible solution that I can't find an answer to would be to put the
> signal on an unused TV channel if the building is wired for cable.
>
> I've done a lot of Google searching but can't find anything specific.
>
> Thanks.

3698. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 13:04:37 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <FVDxc.51767$_k3.1296645@bgtnsc05-news.ops.worldnet.att.net>
Source record: 93753
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:73bcc017644n37dgd89u0arkaobvqttpvf@4ax.com...
>
> Nice letter, but it will fall on deaf ears -- FCC head Michael Powell
> is a cheerleader for BPL.
>
> My suggestion: vote for John Kerry on Nov. 2nd. Kerry does not like
> Powell. Powell will be out. And we can start afresh with a new FCC
> head, one who might worry more about the consequences of BPL than this
> business-friendly administration ever will.
>
> Bob
> k5qwg
>

Why do you think Kerry thinks any different than Bush on BPL? Bush has already gone on record as being "pro-choice" on BPL. Has Kerry staked out the opposite side of the issue?

Which politician, of either party, is against BPL? Which FCC commissioner, of either party, is against BPL?

Frank Dresser

3699. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 13:04:48 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <QVDxc.51769$_k3.1297172@bgtnsc05-news.ops.worldnet.att.net>
Source record: 93754
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"AK" <ak-in-nc@mchsi.com> wrote in message
news:awsxc.17938$4S5.15367@attbi_s52...
>
>
> Sadly, I am aware of that. Either he's been paid off, or the people
pulling
> his strings have been paid off by the power company special interest reps.
> My "but anyone with a comprehension of radio transmission and reception
> knows that the BPL concept does not work" and "unfathomable concept"
> comments were certainly directed Powell's way. Oh for the good ol' days
when
> at least one or two of the FCC Commissioners were ex-FCC field engineers
who
> understood something about the medium they were supposed to be in charge
of.
>
> AK
>
>

Great. If BPL is unworkable, let it fail in the marketplace. Do you really think any politician will vote to preempt a failure? Let's say politician A blocks BPL. Politician B says "Mr. A wants to restrict your freedom to choose! I say every American has the God given right to pick which ever high speed internet access plan he can get!!" Then sleazeball campaigner B starts a whispering campaign -- "Who's pocket is A in? The phone company's? The cable company's? The satellite company's? All of them? Well, there must be some reason he wants to restrict your freedom!!" The upcoming election might be close, and nobody is going to restrict "Freedom" this year.

Note that I used the non-partisan terms A and B to describe the politicians. I know there people around who think one party or another is the Repository of Morality and the other is the Heart of Evil, but I ain't one of 'em.

Frank Dresser

3700. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 14:16:57 UTC
From: Doug Smith W9WI <w9wi@invalid.invalid>
Message-ID: <40C71BCD.5090203@invalid.invalid>
Source record: 93755
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Alex wrote:
> FCC Comm. have terms,
> half are dem and other half are rep.

Which Commissioner do we split in half?<grin>

There are five Commissioners. No more than three may be members of the same party.

http://www.fcc.gov/aboutus.html

Unfortunately I wouldn't count on a Democratic Presidency stopping BPL. Firstly, they're just as susceptible to campaign contributions as Republicans. Secondly, the GOP Congress has a record of overturning FCC decisions if they offend enough lobbyists. (witness the anti-LPFM legislation - which was enacted despite a Democratic President who opposed it)

Democratic Congresses in my lifetime never had a record of trying anything that blatant. Doesn't mean they haven't learned from the GOP since then.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

3701. Re: Improving antenna sensitivity by jury-rigging

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 14:31:26 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <3bFxc.4806$K45.4556@fed1read02>
Source record: 93756

"Michael McNabb" <mmcnabb@yahoo.com> wrote

> I had a thought the other night. My wireless keyboard has limited
> range when my Home Theater PC (HTPC) is enclosed in a cabinet. I have
> already tapped into the keyboard receiver to access the antenna trace
> on the circuit board by adding a long wire which I string away and
> outside of the cabinet. This improved the range. Then I had my
> thought, what about wiring my external antenna wire into the ground of
> a 3-prong power outlet. I thought about testing the voltage and
> current between the antenna wire and ground prong but decided what the
> heck it is suppose to be grounded. Well, the range is well extended
> now, but I am wondering what are the risks? I am probably risking
> damage to my keyboard receiver but so far it works great. I am a very
> amateur electronics person so I know some stuff but I don't know what
> would be the best solution to protecting the receiver from damage, if
> it is needed at all. My questions are why shouldn't I do this, what
> are the risks, and is there anyway to do this while minimizing the
> risks?

Hi Michael, you are correct there is no voltage on your home ground wiring under normal conditions. And there is normally no more noise on ground than is also present on the line and neutral wiring. But, if you are in an area prone to thunderstorms, or if there are equipments in your home capable of generating surge currents, AND you use standard MOV-type surge protecting "power strips" there is a risk. Any transisent surge voltages on your circuits could be referenced to ground by those surge protectors and right into your receiver's front end.

> Also, what about 802.11b? I am thinking that is even more risky since
> the AP is both a receiver and transmitter and grounding the
> transmitter signal would probably diminish its range substantially.

It could also cause harmful interference to other equipment including it's own receiver.

Best regards,

Jack Painter
Virginia Beach, Va

3702. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 14:42:19 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <flFxc.1843$2i5.155@attbi_s52>
Source record: 93757
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Frank Dresser" <analogdial@worldnet.att.net> wrote in message
news:QVDxc.51769$_k3.1297172@bgtnsc05-news.ops.worldnet.att.net...
>
> "AK" <ak-in-nc@mchsi.com> wrote in message
> news:awsxc.17938$4S5.15367@attbi_s52...
> >
> >
> > Sadly, I am aware of that. Either he's been paid off, or the people
> pulling
> > his strings have been paid off by the power company special interest
reps.
> > My "but anyone with a comprehension of radio transmission and reception
> > knows that the BPL concept does not work" and "unfathomable concept"
> > comments were certainly directed Powell's way. Oh for the good ol' days
> when
> > at least one or two of the FCC Commissioners were ex-FCC field engineers
> who
> > understood something about the medium they were supposed to be in charge
> of.
> >
> > AK
> >
> >
>
> Great. If BPL is unworkable, let it fail in the marketplace.

That's one of those nonsense comments that sounds good, but doesn't work. Once "the marketplace" gets tested, amateur radio and most of the other users of HF and MF radio reception will be out of business - never to bounce back once destroyed. Meanwhile, BPL will be "workable" for those areas that never had good cable access and where people were too cheap to use satellite or telephone alternatives. BPL isn't "unworkable" - it's the "unreasonable" sacrifices that must be made to allow nationwide radio spectrum disruption for some trivial gain to a few people and a few big businesses.

> Do you really
> think any politician will vote to preempt a failure? Let's say politician
A
> blocks BPL. Politician B says "Mr. A wants to restrict your freedom to
> choose! I say every American has the God given right to pick which ever
> high speed internet access plan he can get!!"

You must be that same guy that thought he had a God given right to dump whatever he wanted into the Nashua river when I lived along it. His

corporate garbage killed all the fish and stunk-up the river for the rest of the world, but using the river for his personal dumping ground was his "right"! Some good ol' New England Yankee took on this "my-rights-over-everyone-else" guy by paying a cement truck to dump a full load of concrete in the guy's drainage canal to the river. The sheriff was called, saw what was done, heard why it was done, and went home without issuing any citation. Too bad that a load of concrete won't stop BPL.

ak

3703. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 14:43:44 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c7233c_3@corp.newsgroups.com>
Source record: 93758

Cecil Moore wrote:

Continuing and calculating interference energy at point 'y':

> V1y = VF2(1-rho) = 96.58(0.732) = 70.7V (100W)
>
> V2y will be VR3(rho) = 40.82(0.268) = 10.94V (2.39W)
>
> VF3 = 70.7V + 10.94V = 81.65V. (133.33W)

The power equation at point 'y' looking toward the load is:

PF3 - P1y - P2y = constructive interference

Note that P2y + constructive interference = re-reflected power.

133.33W - 100W - 2.39W = +30.94W

A '+' sign on the interference term indicates constructive
interference.

There is 30.49 watts of constructive interference at 'y' looking
toward the load. That energy must come from somewhere.

Therefore, there is 30.49 watts of destructive interference at
'y' looking toward the source. The flow of energy from the
destructive interference event to the constructive interference
event is an interference-caused reflection.

The total re-reflected power at 'y' is 2.39W + 30.94W = 33.33W
In this case, everything except P1y is re-reflected. This is in
agreement with Walter Maxwell and in disagreement with Dr. Best.

> V1x = VF1(1+rho) = 70.7V(1.268) = 89.6V (88.09W)
>
> V2x = VR2(rho) = 25.9V(0.268) = 6.94V (0.556W)
>
> VF2 = V1 + V2 = 89.64V + 6.94V = 96.58V (107.7W)

The power equation at point 'x' looking toward the load is:

PF2 - P1 - P2 = constructive interference

107.7W - 88.09W - 0.556W = +18.42W

The '+' sign tells us that there is 18.42 watts of constructive
interference at 'x' looking toward the load. That energy must
come from somewhere.

Therefore, there is 18.42 watts of destructive interference at
'x' looking toward the source. This is also an interference
reflection.

The total re-reflected power at 'x' is 0.556W + 18.42W = 18.98W
Everything except P1 is re-reflected at a match point.

Using the S-parameter equations:

b1 = s11(a1) + s12(a2)

b2 = s21(a1) + s22(a2)

s21(a1) is the only voltage term that doesn't get reflected
at least once.

s11(a1), s12(a2), and s22(a2) are all reflected terms. If the
energy in these terms winds up at the load, they have all been
re-reflected.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3704. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 14:53:12 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <tvFxc.4907$K45.3986@fed1read02>
Source record: 93759

"Fractenna" <fractenna@aol.com> wrote

> >Try http://www.wunclub.com/ and really dig around, you'll find that
marine
> >listening is a close second only to military aircraft monitoring, maybe
> >commercial aircraft after that.

> Wouldn't it make more sense to make construction info available on an
> appropriate site to those who are more likely to see it? Perhaps a
newsletter?
> Trade pub ? Monitoring Times?
>
> This request seems to have come out of no where, with no context. It has
the
> appearance of a bait, but that's a personal opinion.

Hi Chip, yes there are websites, monitoring lists and circulars that specialize in utility listening. The WUN is just the biggest, not the only by any means. It has been my experience in the last 12 years of that part of the hobby, that about 90% of the "members" are anonymous non-posters. When the mailing addresses of list members were once public, they included almost every government agency. Monitoring marine safety on VHF and HF by hobbyists has definite public safety benefits very similar to licensed amateur groups such as the Maritime Mobile Net that works 14.300 mHz. The post may have been bait, and most of us would have chosen a little different form of explanation of what/where/why, etc. But there are very few affordable antennas manufactured for the bands commonly referred to as "Utility" (non-ham bands), and this is a logical place to ask for help in that area.

73,

Jack Painter
Virginia Beach, Va

3705. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 14:59:49 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <Hz1qzp.8JE@bath.ac.uk>
Source record: 93761

k4wge wrote:

> PORTLAND, Ore. ï¿½ A four-year skunk works effort

So that's what they're smoking. I guess that explains the claims. ;-)

vy 73

Andy, M1EBV

3706. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 15:04:23 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <2k9ec0lun31100jkrmscvli1gmk2a4gp8j@4ax.com>
Source record: 93760

On Tue, 08 Jun 2004 23:09:32 -0500, Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
wrote:

>Walter Maxwell wrote:
>> Cecil, how about doing me a favor and humor me a little.
>>
>> How about solving my example, the one that Steve took from Reflections and then
>> trashed. To repeat, 100 w, 70.71 v source, 50-ohm lossline terminated in a 3:1
>> mismatch and perfectly matched at the input with a rho = 1.0.

Thanks, Cecil, I'll be studying it carefully. Using a 1/4 wl transformer seems
like a great idea. I hadn't thought of that.

Walt

3707. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 15:06:12 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <Hz1rAC.8xE@bath.ac.uk>
Source record: 93762

Fractenna wrote:

> When hams switch to software radios in a big way then fractal antennas targeted
> to hams might be worth making more widely known. With some luck, they'll be a
> few of us 'hams' left then!
>
>

Maybe this is a naive question, but how does an antenna, fractal or
otherwise, know what kind of transmitter is driving it? Why are
software radios more suited to this design?

vy 73

Andy, M1EBV

3708. Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 15:53:40 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ioq3fFp9f7rU1@uni-berlin.de>
Source record: 93763

http://www.boulder.nist.gov/timefreq/general/pdf/451.pdf

Can someone please comment on the following statements and questions?
Thanks.

1 The reflector and director element lengths and spacings of Table 1 are good for a yagis where d/lambda is 0.0085 and boom is non conducting.

2 You make a correction to the lengths when d/lambda of your reflector and director element diameters are other than 0.0085.

3 When you use a metallic boom, you have to make corrections to the element lengths as per Table 10.

4 I take it that whatever you put in place for DE, all spacing and reflector and director elements continue to remain correct. So you can place whatever you want for DE, hertz dipole, folded dipole, gamma match, T match, DE with 1/"4 dia tube or 1.2" dia tube -it does not matter, parasitic element lengths once calculated need not be changed whatever you DE you place in the design. Spacing always remain the same.

5 How do you go about designing for DE?

6 Do the element length corrections due to use of a metalic boom assume a particular element fixing method? Such as through the boom or on top of the boom?

7 The designs are maximised for gain.

8 What is the bandwidth of a NBS designed antenna?

9 Has anyone written a program specifically for an NBS antenna so you can calculate the element lengths without relying on tables and graphs?

10 Once designed the NBS design will probably work very close to parameters. But strictly speaking the antenna will only work very close to parameters if the antenna is 3 wavelenghts above ground. But for reception purposes on VHF, you can probably ignore effect of ground and no further design is probably necessary. (Lets face it with most bought antennas for receivimng, you just put them up. You don't start altering element spacings etc.)

3709. Re: Looking for a crappy antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 16:11:38 UTC
From: K7JEB <k7jeb@no_spam.qsl.net>
Message-ID: <pFGxc.16793$1c4.6772@fed1read06>
Source record: 93764

"Mike Painter" <mddotpainter@sbcglobal.net> wrote

> Well, sort of. I want to broadcast an FM radio
> signal playing MP3 files in a variety of buildings
> from single story homes to multistoried buildings.

From this, may one assume you envision having one
transmitter per building?

> Small dwellings are no problems but the larger
> ones present a problem. The location of the
> broadcast unit may be mandated by factors beyond
> my control.

> The power needed to reach the opposite corner
> might be to high.Is there any way to use
> internal wiring as a short range antenna that
> would be limited to the building for all
> practical purposes.

This is practical for the AM broadcast band,
usually towards the low end around 550 kHz.
Search Google for "carrier current" radio
stations to get info on this technique.

Due to the relatively short wavelength of the
FM broadcast frequencies, a power line would
be too good an antenna and your signals would
be propagated beyond the confines of the
building. And they still might not reach where
you want them too. Still, it might work if
you could select the "right" power line to
excite.

The usual technique for limited-range VHF
(which is what FM broadcasting is) transmissions
is to install leaky transmission lines throughout
the desired coverage area. I have seen this
done to provide FM broadcast coverage inside
tunnels. In this scheme, a coaxial cable is
constructed with holes in its outer shield.
This couples a small amount of signal from
inside the cable to the outside surface of the
shield from where it is radiated into the
space immediately adjacent to the cable.

The obvious drawback of this scheme is the large
cable installation necessary for an extensive
coverage area.

> Another possible solution that I can't find
> an answer to would be to put the signal on
> an unused TV channel if the building is wired
> for cable.

Or combine a milliwatt-level FM transmitter output
into the other RF sources (TV channels) driving
the cable system. FM radios near the cable
outlets would pick up the signal from cable leakage.

> I've done a lot of Google searching but can't
> find anything specific.

Yeah, you need key words. Other than "carrier current",
or "leaky transmission lines", I can't come up
with any. I'll bet somebody else here can, though.

Jim, K7JEB

3710. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 16:21:35 UTC
From: fractenna@aol.com
Message-ID: <20040609122135.15248.00000404@mb-m26.aol.com>
Source record: 93765

>Maybe this is a naive question, but how does an antenna, fractal or
>otherwise, know what kind of transmitter is driving it? Why are
>software radios more suited to this design?
>
>vy 73
>
>Andy, M1EBV
>

True frequency and waveform agility is the goal in SDR . Wideband, or controlled multiband, is needed. Ham requirements are well met at present with a variety of antenna designs that are nearly periodic in a fairly narrow frequency coverage, a fairly easy problem to solve.
73,
Chip N1iR

3711. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 16:31:19 UTC
From: tdonaly@aol.com
Message-ID: <20040609123119.20481.00000796@mb-m07.aol.com>
Source record: 93766

Jack wrote,
>
>Hi Chip, yes there are websites, monitoring lists and circulars that
>specialize in utility listening. The WUN is just the biggest, not the only
>by any means. It has been my experience in the last 12 years of that part of
>the hobby, that about 90% of the "members" are anonymous non-posters. When
>the mailing addresses of list members were once public, they included almost
>every government agency. Monitoring marine safety on VHF and HF by hobbyists
>has definite public safety benefits very similar to licensed amateur groups
>such as the Maritime Mobile Net that works 14.300 mHz. The post may have
>been bait, and most of us would have chosen a little different form of
>explanation of what/where/why, etc. But there are very few affordable
>antennas manufactured for the bands commonly referred to as "Utility"
>(non-ham bands), and this is a logical place to ask for help in that area.
>
>73,
>
>Jack Painter
>Virginia Beach, Va
>

Sounds like a business opportunity.
73,
Tom Donaly, KA6RUH

3712. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 16:32:31 UTC
From: dplatt@radagast.org
Message-ID: <10ceesvb1nnl6af@corp.supernews.com>
Source record: 93767
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

In article <flFxc.1843$2i5.155@attbi_s52>, AK <ak-in-nc@mchsi.com> wrote:

>> Great. If BPL is unworkable, let it fail in the marketplace.
>
>That's one of those nonsense comments that sounds good, but doesn't work.
>Once "the marketplace" gets tested, amateur radio and most of the other
>users of HF and MF radio reception will be out of business - never to bounce
>back once destroyed. Meanwhile, BPL will be "workable" for those areas that
>never had good cable access and where people were too cheap to use satellite
>or telephone alternatives. BPL isn't "unworkable" - it's the "unreasonable"
>sacrifices that must be made to allow nationwide radio spectrum disruption
>for some trivial gain to a few people and a few big businesses.

There's an interesting analogy to this situation playing out in the airwaves right now. My understanding of this situation is as follows (and may be a bit incorrect).

Some years ago, the FCC decided to allow a company which I believe was called Fleet Telecommunications to set up some digital-packet-oriented communication on a set of frequencies in the 800 MHz range. These frequencies were located quite close to the 800 MHz narrow-band FM channels allocated to publics-safety ground (trunked police and fire systems, etc.).

There was concern expressed at the time that these digital channels might cause interference with the existing analog channels (intermodulation and receiver desensing, I think). The FCC agreed to allow the allocations, on the condition that the digital operator ensure that interference to existing allocations would not occur or would be abated.

Subsequently (I'm hazy on the details) Fleet either went out of business or was bought up... in either case, Nextel ended up as the owner of these 800 MHz digital allocations. Nextel has used them as the basis of much of its current-generation cellphone system.

The result: significant, and sometimes very severe, interference to public-safety radio operations. There have been numerous reports of police and firefighters being unable to use their radios successfully, when in proximity to Nextel cellular sites. This has resulted in very real danger to life-and-limb for police officers and firefighters.

Nextel has taken some steps to abate specific instances of this (reducing power) when it's called to their attention, but the problem remains.

There's a whole massive brouhaha taking place now, about "rebanding" the 800 MHz spectrum. This will probably involve consolidating the public-safety frequencies (requiring modification or replacement of much equipment - Nextel has offered to pay $billions to do this but there's concern that it'll cost twice that much), and moving at least some of Nextel's cellular allocations upwards to a higher frequency band. Nextel wants a big block of spectrum space in compensation, while other companies claim that the FCC has no legal authority to simply hand over that space to Nextel and that the law requires the spectrum to be auctioned to the highest bidder. No matter what the FCC decides to do, it's likely to end up being challenged in Federal court and delayed for years.

It's a horrible mess. Some claim that the FCC *could* have acted, on its own authority, to order Nextel to shut down operations in the interleaved bands, because their system is apparently violating the "we will not cause interference to other licensed operations" clauses which were part of the original Fleet allocation grant. The FCC has apparently asserted that it doesn't have authority to act on its own in the absence of a formal legal complaint from a public-safety radio organization... and no city or county or state has been willing to file such a complaint (perhaps because the cost of pursuing it against a deep-pockets company like Nextel would be very high indeed).

I agree that if BPL is rolled out en mass, it _is_ likely to cause serious interference with HF operations (amateur and otherwise), and that the momentum of "Hey, we've invested billions to field BPL, you can't just shut us down" is likely to override the original "No, there won't be interference" promised.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

3713. Re: Improving antenna sensitivity by jury-rigging

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 16:42:55 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <ca7eqp$8u7$1@newshost.mot.com>
Source record: 93769

"Michael McNabb" <mmcnabb@yahoo.com> wrote in message
news:45f44589.0406082355.620eda25@posting.google.com...
> ...My wireless keyboard has limited
> range ... I have
> already tapped into the ...antenna trace
> on the circuit board by adding a long wire ...
> outside of the cabinet. This improved the range....
> what about wiring my external antenna wire into the ground of
> a 3-prong power outlet.

A few comments.

This "ground" wire, for all intents and purposes, is just a wire running around your house -- as far as this RF signal is concerned (I assume it is in the 2GHz 802.11 range) Whether you use this wire or run any old wire around the place, you have the same type of thing -> as far as your desired RF is concerned.
You must have a small capacitor in this line, however. I would think that anything between 1 pF and 50 pF is ok. This will greatly help with most problems in connecting up to the building power line ground system mentioned in ther posts.

--
Steve N, K,9;d, c. i My email has no u's.

3714. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 17:10:05 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <NvHxc.34271$Gx4.6445@bgtnsc04-news.ops.worldnet.att.net>
Source record: 93768
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"AK" <ak-in-nc@mchsi.com> wrote in message
news:flFxc.1843$2i5.155@attbi_s52...
>
>
> That's one of those nonsense comments that sounds good, but doesn't work.
> Once "the marketplace" gets tested, amateur radio and most of the other
> users of HF and MF radio reception will be out of business - never to
bounce
> back once destroyed.

NEVER to bounce back? Shortwave radio is that fragile? Must not be much keeping it going right now.

> Meanwhile, BPL will be "workable" for those areas that
> never had good cable access and where people were too cheap to use
satellite
> or telephone alternatives. BPL isn't "unworkable" - it's the
"unreasonable"
> sacrifices that must be made to allow nationwide radio spectrum disruption
> for some trivial gain to a few people and a few big businesses.

If there's more people who actually want BPL more than SW radio, then maybe they should have it. However, I seem to have less faith than you that BPL actually works. I do have faith that people won't spend money on a system which is unreliable.

>
> You must be that same guy that thought he had a God given right to dump
> whatever he wanted into the Nashua river when I lived along it. His
> corporate garbage killed all the fish and stunk-up the river for the rest
of
> the world, but using the river for his personal dumping ground was his
> "right"!

You assume wrong. I'm not the same guy. I've never dumped anything toxic in the Nashua river, even when you weren't living along it. In fact, I've never been anywhere around the Nashua river.

>Some good ol' New England Yankee took on this
> "my-rights-over-everyone-else" guy by paying a cement truck to dump a full
> load of concrete in the guy's drainage canal to the river. The sheriff was
> called, saw what was done, heard why it was done, and went home without
> issuing any citation. Too bad that a load of concrete won't stop BPL.
>
> ak

>
>

Stopping BPL is simple. It's a political numbers game. Unfortunately, there's more potential customers for high speed internet access than there are SW hobbyists. I'm sure you've noticed that no Democrat is taking an anti-BPL stance. BPL has already been approved in a couple of areas.

Or, just maybe, the politicans expect BPL to fail or succeed on it's own merits. If it fails on it's own, then nobody gets the blame for keeping it away from the customers.

Frank Dresser

3715. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 17:39:14 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <$O9j++BCt0xAFAkF@ifwtech.co.uk>
Source record: 93770

Richard wrote:
>http://www.boulder.nist.gov/timefreq/general/pdf/451.pdf
>
>Can someone please comment on the following statements and questions?
>Thanks.
>
>1 The reflector and director element lengths and spacings of Table 1 are
>good for a yagis where d/lambda is 0.0085 and boom is non conducting.
>
Good for those particular yagi designs, maybe, but not necessarily good
for all.

>2 You make a correction to the lengths when d/lambda of your reflector
>and director element diameters are other than 0.0085.
>
Yes, you must do that for any yagi design.

>3 When you use a metallic boom, you have to make corrections to the
>element lengths as per Table 10.
>
That's Figure 10. Those corrections will only apply if you use the same
method as they did for mounting an element on a round metal boom...
which they don't specify in detail, so Fig 10 is almost worthless.

>4 I take it that whatever you put in place for DE, all spacing and
>reflector and director elements continue to remain correct. So you can place
>whatever you want for DE, hertz dipole, folded dipole, gamma match, T
>match, DE with 1/"4 dia tube or 1.2" dia tube -it does not matter,
>parasitic element lengths once calculated need not be changed whatever you
>DE you place in the design. Spacing always remain the same.
>
It does in the NBS designs; but not in most more modern designs.

>5 How do you go about designing for DE?
>
Too big a subject - look it up teh basic principles and some practical
examples in various antenna handbooks, and then go and get your hands
dirty.

>6 Do the element length corrections due to use of a metalic boom assume a
>particular element fixing method? Such as through the boom or on top of the
>boom?
>
No, they *demand* a particular fixing method! (See 3.)

>7 The designs are maximised for gain.
>
As well as NBS could do it with the tools available to them at the time
(a hacksaw, mostly). Almost 40 years later - the work was actually done
in the mid-1960s - we have much better tools and wouldn't say those are
optimised designs any more.

>8 What is the bandwidth of a NBS designed antenna?
>
With or without losses due to the bandwidth of the matching circuit?
You'd have to model it; but the NBS designs are not noted for being
wideband.

>9 Has anyone written a program specifically for an NBS antenna so you can
>calculate the element lengths without relying on tables and graphs?
>
I'm sure someone did, back in the MBASIC days - go search for it.

>10 Once designed the NBS design will probably work very close to
>parameters. But strictly speaking the antenna will only work very close to
>parameters if the antenna is 3 wavelenghts above ground. But for reception
>purposes on VHF, you can probably ignore effect of ground and no further
>design is probably necessary. (Lets face it with most bought antennas for
>receivimng, you just put them up. You don't start altering element spacings
>etc.)
>
In order: yes; yes; it depends how on the particular yagi, the
particular installation, and how much performance you're prepared to
sacrifice; certainly lots of people do; but that doesn't make it right.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3716. Re: Looking for a crappy antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 18:18:12 UTC
From: Mike Painter <mddotpainter@sbcglobal.net>
Message-ID: <EvIxc.7656$rg7.6984@newssvr27.news.prodigy.com>
Source record: 93671

"Alex" <I_lost_on_Jeporday@alex.com> wrote in message
news:40C70AA8.E5C15D4D@alex.com...
> hi mike,
>
> How much output power are you planning on using ?

As little as possible (and legal) to reach everybody.

> One thing to watch out for is if these mp3 files are of
> copyrighted work, you may have to pay to broadcast
> these files.
These are all in the public domain

>
> You could try using two antenna, each cut for the FM
> frequency you want to use. Connect them with a long
> section of good coax, you just built a passive repeater.
>
> Locate one antenna outside the building and the other
> inside and thay could work for some or all building.
>
Thanks, the intent is to stay within the building as much as possible.

> alex
>
> Mike wrote:
>
> > Well, sort of.
> > I want to broadcast an FM radio signal playing MP3 files in a variety of
> > buildings from single story homes to multistoried buildings.
> > Small dwellings are no problems but the larger ones present a problem.
The
> > location of the broadcast unit may be mandated by factors beyond my
control.
> > The power needed to reach the opposite corner might be to high.
> > Is there any way to use internal wiring as a short range antenna that
would
> > be limited to the building for all practical purposes.
> >
> > Another possible solution that I can't find an answer to would be to put
the
> > signal on an unused TV channel if the building is wired for cable.
> >
> > I've done a lot of Google searching but can't find anything specific.
> >

> > Thanks.
>

3717. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 18:42:02 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <_RIxc.24979$Sw.12360@attbi_s51>
Source record: 93672
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Frank Dresser" <analogdial@worldnet.att.net> wrote in message
news:NvHxc.34271$Gx4.6445@bgtnsc04-news.ops.worldnet.att.net...

> Stopping BPL is simple. It's a political numbers game. Unfortunately,
> there's more potential customers for high speed internet access than there
> are SW hobbyists. I'm sure you've noticed that no Democrat is taking an
> anti-BPL stance. BPL has already been approved in a couple of areas.
>
> Or, just maybe, the politicans expect BPL to fail or succeed on it's own
> merits. If it fails on it's own, then nobody gets the blame for keeping
it
> away from the customers.

I see, Frank. You are just a might-&-money makes right sort of guy. Maybe if
the FCC will just authorize all U.S. hams to run 10KW on MF and HF
frequencies, and give us full immunity to any interference claims, amateur
radio can co-exist with BPL.

ak

3718. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 18:52:10 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <u%Ixc.62158$3x.40574@attbi_s54>
Source record: 93673
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Dave Platt" <dplatt@radagast.org> wrote in message
news:10ceesvb1nnl6af@corp.supernews.com...
> In article <flFxc.1843$2i5.155@attbi_s52>, AK <ak-in-nc@mchsi.com> wrote:
>
> >> Great. If BPL is unworkable, let it fail in the marketplace.
> >
> >That's one of those nonsense comments that sounds good, but doesn't work.
> >Once "the marketplace" gets tested, amateur radio and most of the other
> >users of HF and MF radio reception will be out of business - never to
bounce
> >back once destroyed. Meanwhile, BPL will be "workable" for those areas
that
> >never had good cable access and where people were too cheap to use
satellite
> >or telephone alternatives. BPL isn't "unworkable" - it's the
"unreasonable"
> >sacrifices that must be made to allow nationwide radio spectrum
disruption
> >for some trivial gain to a few people and a few big businesses.
>
> There's an interesting analogy to this situation playing out in the
> airwaves right now. My understanding of this situation is as follows
> (and may be a bit incorrect).
>
> Some years ago, the FCC decided to allow a company which I believe was
> called Fleet Telecommunications to set up some digital-packet-oriented
> communication on a set of frequencies in the 800 MHz range. These
> frequencies were located quite close to the 800 MHz narrow-band FM
> channels allocated to publics-safety ground (trunked police and fire
> systems, etc.).
>
> There was concern expressed at the time that these digital channels
> might cause interference with the existing analog channels
> (intermodulation and receiver desensing, I think). The FCC agreed to
> allow the allocations, on the condition that the digital operator
> ensure that interference to existing allocations would not occur or
> would be abated.
>
> Subsequently (I'm hazy on the details) Fleet either went out of
> business or was bought up... in either case, Nextel ended up as the
> owner of these 800 MHz digital allocations. Nextel has used them as
> the basis of much of its current-generation cellphone system.
>

> The result: significant, and sometimes very severe, interference to
> public-safety radio operations. There have been numerous reports of
> police and firefighters being unable to use their radios successfully,
> when in proximity to Nextel cellular sites. This has resulted in very
> real danger to life-and-limb for police officers and firefighters.
>
> Nextel has taken some steps to abate specific instances of this
> (reducing power) when it's called to their attention, but the problem
> remains.
>
> There's a whole massive brouhaha taking place now, about "rebanding"
> the 800 MHz spectrum. This will probably involve consolidating the
> public-safety frequencies (requiring modification or replacement of
> much equipment - Nextel has offered to pay $billions to do this but
> there's concern that it'll cost twice that much), and moving at least
> some of Nextel's cellular allocations upwards to a higher frequency
> band. Nextel wants a big block of spectrum space in compensation,
> while other companies claim that the FCC has no legal authority to
> simply hand over that space to Nextel and that the law requires the
> spectrum to be auctioned to the highest bidder. No matter what the
> FCC decides to do, it's likely to end up being challenged in Federal
> court and delayed for years.
>
> It's a horrible mess. Some claim that the FCC *could* have acted, on
> its own authority, to order Nextel to shut down operations in the
> interleaved bands, because their system is apparently violating the
> "we will not cause interference to other licensed operations" clauses
> which were part of the original Fleet allocation grant. The FCC has
> apparently asserted that it doesn't have authority to act on its own
> in the absence of a formal legal complaint from a public-safety radio
> organization... and no city or county or state has been willing to
> file such a complaint (perhaps because the cost of pursuing it
> against a deep-pockets company like Nextel would be very high indeed).
>
> I agree that if BPL is rolled out en mass, it _is_ likely to cause
> serious interference with HF operations (amateur and otherwise), and
> that the momentum of "Hey, we've invested billions to field BPL, you
> can't just shut us down" is likely to override the original "No, there
> won't be interference" promised.

That's real interesting about Nextel. My experience with the 800 MHz bands (LTR trunking systems) ended before digital cell phones existed, but I can certainly believe that frequency spreading must cause some com channel interference if you are near the transmitter site. Well, anyone who really believes that the FCC will mitigate interference to amateur radio that is caused by big-lobbying power companies should also believe in "temporary taxes" and Santa Clause.

AK

3719. K1DFT New Antenna Technology

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 18:53:04 UTC
From: fractenna@aol.com
Message-ID: <20040609145304.02451.00000804@mb-m01.aol.com>
Source record: 93674

FYI,

I have been in communication with Mr. Vincent. There are two pieces of info which I have acquired which I find intriguing:

1) Mr. Vincent states that testing is now occuring at a facility that is well known for viable, independent testing (not a ham facility) (I am familiar with the facility);

2) Mr. Vincent will be giving a talk at the August Boxboro NE Hamfest.

I applaude him for these two efforts and am looking forward to seeing his results.

73,
Chip N1IR

3720. Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 18:57:35 UTC
From: galt_57@hotmail.com
Message-ID: <5591d176.0406091057.b155e02@posting.google.com>
Source record: 93675

The answer must be here but after some searching I can't find it.
There is all sorts of conversation about ground rods and dissimilar
metals but I can't find the basic answer I need -- How do you make the
steel to copper connection? Do you simply clamp galvanized steel to
copper? Thanks.

3721. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 19:16:39 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <61oec0ppvcdmr3ls4rfmhp6c45au9o6cdm@4ax.com>
Source record: 93676

Hi Cecil,

Man, when I ask for you to humor me you certainly do it up brown!!

You've performed a magnificent job of detailing all the reflections and re-reflections in the 1/4 wl transformer replacing the tuner. That performance really took a lot of work, and I greatly appreciate it.

I haven't yet finished reviewing it to the point of verifying in my mind all the various voltages, but I appreciate that the numbers came out correct.

However, I have another request for you. Can you find any forward voltages that are appropriate to plug into Steve's Eq 9 and obtain 133.33 watts PFtotal ?

Walt

3722. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 19:50:21 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <0apec0hh279ltq2sjm25fd0au2urfvfegg@4ax.com>
Source record: 93677

On Wed, 09 Jun 2004 19:16:39 GMT, Walter Maxwell <w2du@iag.net> wrote:

>Hi Cecil,
>
>Man, when I ask for you to humor me you certainly do it up brown!!
>
>You've performed a magnificent job of detailing all the reflections and
>re-reflections in the 1/4 wl transformer replacing the tuner. That performance
>really took a lot of work, and I greatly appreciate it.
>
>I haven't yet finished reviewing it to the point of verifying in my mind all the
>various voltages, but I appreciate that the numbers came out correct.
>
>However, I have another request for you. Can you find any forward voltages that
>are appropriate to plug into Steve's Eq 9 and obtain 133.33 watts PFtotal ?
>
>Walt

Cecil, I found the two Vfwd's we're looking for. They are derived from V1y and V2y. 70.7 v and 10.94 v. The interesting part is that 10.94 v is the exact increase in voltage resulting from adding 33.333 w to 100 w. This I knew many moons ago. But one would never find this Vfwd without performing the complete reflection analysis you performed. With this, plus the fact that a reflection analysis on a stub matching configuration would not reveal this forward voltage still makes Steve's Eq 9 invalid for general use. This is because the re-reflected forward voltage there, 40.82 v added to the source voltage 70.71 v does not equal the real total forward voltage of 81.65 v.

Therefore, my final comment on Eq 9 is that it works in specific cases but it certainly is not valid in general.

Thanks again, Cecil, for the elegant reflection analysis, bravo!

Walt

3723. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 19:53:21 UTC
From: dplatt@radagast.org
Message-ID: <10ceqlhmsqh691b@corp.supernews.com>
Source record: 93678
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

In article <Xns95039E8D0F9E7a216b130c132d203@63.218.45.21>,
-=jd=- <jd770YOUR@HATpostmark.net> wrote:

>You lost me there - if a public safety radio org (or anyone else for that
>matter) files a formal complaint with the FCC, does the FCC bill the
>complainant for any subsequent investigation and/or enforcement expenses?

The FCC's likely to look to the complaining, and responding, parties
to present evidence and research and expert testimony about the issue,
I believe. The big communications companies can afford to throw large
amounts of money at their side of the issue, churning up large amounts
of paperwork, studies, and so forth. In order to hope to win the
case, the public-safety organization would have to try to refute these
studies and reports-from-experts with their own. I suspect it'd run
into a lot of money.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3724. Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 19:59:25 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <x_Jxc.5407$kT5.594@newssvr22.news.prodigy.com>
Source record: 93679

I know that a shorted 1/4 wave stub exhibits a very high impedance. But for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low impedance or a short. There are claims that this can be used to filter the even harmonics. Shorts can't diisipate power and must reflect, so how does a stub work?

--
73
Hank WD5JFR

3725. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 20:09:37 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <58Kxc.52853$_k3.1317601@bgtnsc05-news.ops.worldnet.att.net>
Source record: 93680
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"AK" <ak-in-nc@mchsi.com> wrote in message
news:_RIxc.24979$Sw.12360@attbi_s51...
>
> "Frank Dresser" <analogdial@worldnet.att.net> wrote in message
> news:NvHxc.34271$Gx4.6445@bgtnsc04-news.ops.worldnet.att.net...
>
> > Stopping BPL is simple. It's a political numbers game. Unfortunately,
> > there's more potential customers for high speed internet access than
there
> > are SW hobbyists. I'm sure you've noticed that no Democrat is taking an
> > anti-BPL stance. BPL has already been approved in a couple of areas.
> >
> > Or, just maybe, the politicans expect BPL to fail or succeed on it's own
> > merits. If it fails on it's own, then nobody gets the blame for keeping
> it
> > away from the customers.
>
> I see, Frank. You are just a might-&-money makes right sort of guy.

Well, as scurrilous libel goes, that's a step up from toxic waste dumper, but you've missed the mark again. I was making a democracy arguement. The voters who want high speed access vastly outnumber the voters who are radio hobbyists. If BPL can actually deliver on it's big promises, radio hobbyists will have slim clout in Washington. Being a radio hobbyist isn't a God given right, or a natural right, or even a constitutional right.

But I think there's more to the democratic free choice arguement. What if BPL is really a goofy idea which won't work? What's the gain for any politician to block a popular, yet doomed approach? His opponent will grab the the glittering promises that the BPL folk are making, and use those promises to take votes from the "anti-BPL choice" candidate. Don't think the voters really know the difference.

I see two possible scenerios:

1) BPL works as promised. It delivers high speed internet access to millions of users at a competitive price. Since cable, DSL, microwave and sattelite providers also have to compete with the BPL providers, every user of high speed access benefits from BPL. Thousands of radio hobbyists lose. Neither the Democrats nor Republicans choose the thousands of hobbyists over the millions of internet users.

2) BPL flops. It can't provide adequate bandwidth for more than a small number of users. The small number of users can't make up the costs of the system and BPL goes the way of the personal jet pack. Politicians who might

have opposed "system choice" before it proved itself unworkable come out smelling like a rose.

>Maybe if
> the FCC will just authorize all U.S. hams to run 10KW on MF and HF
> frequencies, and give us full immunity to any interference claims, amateur
> radio can co-exist with BPL.
>
> ak
>
>

Hmmm. Do you think radio amateurs have enough friends in Washington to get anything like that? Or maybe, if amateur radio interferes with a BPL system which benefits millions, the FCC will restrict amateur radio to protect BPL?

But, if you're convinced BPL is workable and won't flop, let me suggest you join the dark side and invest in BPL. Dump your entire networth into BPL. Borrow more and toss that in too! Rewards go to those the bold who see the truth, while timid fellows such as myself stand on the sidelines. Thanks to your clear foresight, you'll soon be able to buy all the accouterments of capitalism. Buy a diamond handle cane. Buy that Top Hat you've always wanted. Buy a hand-made Isotta-Fraschini touring car with leopard skin upholstery and gold plated hardware. Don't forget to buy a chauffeur!! You'll forget about SW in no time!

http://www.prospectstreet.com/portfolio_listing.htm

Oh wait. Manassas dumped Prospect Street. Seems like they could only get 200 workable BPL connections in 6 months.

Nevermind.

Frank Dresser

3726. inverted L or 1/2 size g5rv

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 20:22:43 UTC
From: David Browne <dddd@ddd>
Message-ID: <20040609162229.465$D1@news.newsreader.com>
Source record: 93681

hi, what would work best a, 54.45 feet,with a MHz trap,inverted L, up about
25-30feet above ground,with no radials ,just the ground,ps, i live in the uk
with good soil, or a 1/2 size g5rv up 25-30 feet high
thanks Dave Browne

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.701 / Virus Database: 458 - Release Date: 07/06/2004

3727. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 20:28:42 UTC
From: "Dee D. Flint" <deeflint01@comcast.net>
Message-ID: <H8udnTEtP4Id7lrdRVn-jw@comcast.com>
Source record: 93682
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Frank Dresser" <analogdial@worldnet.att.net> wrote in message
news:NvHxc.34271$Gx4.6445@bgtnsc04-news.ops.worldnet.att.net...
>
> "AK" <ak-in-nc@mchsi.com> wrote in message
> news:flFxc.1843$2i5.155@attbi_s52...
> >
> >
> > That's one of those nonsense comments that sounds good, but doesn't
work.
> > Once "the marketplace" gets tested, amateur radio and most of the other
> > users of HF and MF radio reception will be out of business - never to
> bounce
> > back once destroyed.
>
> NEVER to bounce back? Shortwave radio is that fragile? Must not be much
> keeping it going right now.
>
>
>
> > Meanwhile, BPL will be "workable" for those areas that
> > never had good cable access and where people were too cheap to use
> satellite
> > or telephone alternatives. BPL isn't "unworkable" - it's the
> "unreasonable"
> > sacrifices that must be made to allow nationwide radio spectrum
disruption
> > for some trivial gain to a few people and a few big businesses.
>

I saw an analysis somewhere on the web (didn't mark the URL) that indicates BPL will not be cheaper the dial-up or various other types of service unless it is subsidized. Perhaps they plan to increase the electric rates to make it up?

Dee D. Flint, N8UZE

3728. Re: K1DFT New Antenna Technology

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 20:31:21 UTC
From: K7JEB <k7jeb@no_spam.qsl.net>
Message-ID: <TsKxc.20169$1c4.6637@fed1read06>
Source record: 93683

Another press write-up:

http://www.planetanalog.com/news/showArticle.jhtml?articleID=21402311

Jim, K7JEB

3729. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 20:55:29 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <ca7tk1bmb1@newshost.mot.com>
Source record: 93685

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:x_Jxc.5407$kT5.594@newssvr22.news.prodigy.com...
> I know that a shorted 1/4 wave stub exhibits a very high impedance. But
> for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
impedance
> or a short. There are claims that this can be used to filter the even
> harmonics. Shorts can't diisipate power and must reflect, so how does a
> stub work?
> 73 Hank WD5JFR
>

Put a Tee on a coax line and connect the stub there. At the H2 there is
a short and reflectinonback up-stream.
Common filters you see everywhere are "reflective" by nature / design as
well. They have other than Zo off frequency and therefore reflect the
unwanted stuff back to the source. It has to be able to handle it.

Help any?
--
Steve N, K,9;d, c. i My email has no u's.

3730. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 21:14:52 UTC
From: jgboyles@aol.com
Message-ID: <20040609171452.09837.00000855@mb-m06.aol.com>
Source record: 93684

>I know that a shorted 1/4 wave stub exhibits a very high impedance. But
>for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low impedance
>Shorts can't diisipate power and must reflect, so how does a
>stub work?
Hi Hank, A 1/2 wave shorted stub looks like a series resonant circuit. It
makes a good notch filter, which is one of the Amateur applications that I have
used. You are right, they don't dissipate any power since Power=I**2*R and R
equals zero.

73 Gary N4AST

3731. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 21:45:56 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <ca80ek$e15$1@sparta.btinternet.com>
Source record: 93686

> Hi Hank, A 1/2 wave shorted stub looks like a series resonant circuit.
It
> makes a good notch filter, which is one of the Amateur applications that I
have
> used. You are right, they don't dissipate any power since Power=I**2*R
and R
> equals zero.
>
> 73 Gary N4AST
============================

R is not zero. It can be several ohms. And lots of amps can flow.

Just to add a 1/2-wave shorted stub also makes a mess of the tuning of the remainder of the antenna system at all other frequencies. It must be designed "in".

3732. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 21:59:09 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <NKLxc.5427$7C6.4347@newssvr22.news.prodigy.com>
Source record: 93687

Just get a good clamp out of steel or copper and really torque it so you get good contact. Good contact means there's metal-to-metal with no space for air or water. Not all strands will get this molecular contact but most touching will. Make sure the clamp is a cheap pot metal one as it'll corrode and fall off if it doesn't break while your torquing it. If you hve any Thermit, it'll make a better joint.

--
73
Hank WD5JFR

"Dave" <galt_57@hotmail.com> wrote in message
news:5591d176.0406091057.b155e02@posting.google.com...
> The answer must be here but after some searching I can't find it.
> There is all sorts of conversation about ground rods and dissimilar
> metals but I can't find the basic answer I need -- How do you make the
> steel to copper connection? Do you simply clamp galvanized steel to
> copper? Thanks.

3733. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 22:11:43 UTC
From: jgboyles@aol.com
Message-ID: <20040609181143.09837.00000857@mb-m06.aol.com>
Source record: 93688

>R is not zero. It can be several ohms. And lots of amps can flow.
>

OK Reg, but in this ideal rf environment we Amateurs live in R is zero.

>Just to add a 1/2-wave shorted stub also makes a mess of the tuning of the
>remainder of the antenna system at all other frequencies. It must be
>designed "in".

That should be fairly obvious to the most casual observer. :-).
In the receive applications that I have used a 1/2 wave shorted stub as a
notch filter, I can assure you I did not have lots of Amps flowing.

73 Gary N4AST

3734. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-09 22:23:24 UTC
From: 14313 is finally dead <herb888hos@wans.net>
Message-ID: <9fca2$40c78e06$d1cc7c5c$29382@snip.allthenewsgroups.com>
Source record: 93689
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Alex" <I_lost_on_Jeporday@alex.com> wrote in message
news:40C708E3.EF302421@alex.com...
> FCC Comm. have terms,
> half are dem and other half are rep.
>
> Powell will be there for a while.
> He has connections.

HERE IS EXACTLY WHAT I THINK OF
FCC CHAIRMAN POWELL AND HIS
ALLEGED " CONNECTIONS ".....

here: http://www.misternicehands.com/

(after URL loads CLICK anywhere on it....)

3735. Re: inverted L or 1/2 size g5rv

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 00:27:14 UTC
From: k9sqg@aol.com
Message-ID: <20040609202714.02623.00000784@mb-m28.aol.com>
Source record: 93690

In this particular case, the G5RV might be a better choice. In many other instances other antennas will far out perform the G5RV and be easier to match across all bands without being picky on some bands like the G5RV is. You'll have fun in either case.

73s,

Evan

3736. Re: Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 00:28:52 UTC
From: k9sqg@aol.com
Message-ID: <20040609202852.02623.00000785@mb-m28.aol.com>
Source record: 93691

Sometimes companies use "patent pending" to discourage people from copying the design when in fact no application has been filed. If you ask for a copy of the application, application number, etc. and they refuse to give it to you, that could be a tipoff...

3737. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 00:52:12 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <mubfc0p93bhg1h0mgvcicgkbjpmabpt8fh@4ax.com>
Source record: 93692
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

On Wed, 9 Jun 2004 16:28:42 -0400, "Dee D. Flint"
<deeflint01@comcast.net> wrote:

>
>>
>
>I saw an analysis somewhere on the web (didn't mark the URL) that indicates
>BPL will not be cheaper the dial-up or various other types of service unless
>it is subsidized. Perhaps they plan to increase the electric rates to make
>it up?
>
>Dee D. Flint, N8UZE

Actually, they have a better idea than increasing electricity rates.
The highly effusive BPL story that ran in Time Magazine recently said
BPL will bundle internet access with telephone service and
video-on-demand.

We hams got a hell of a fight on our hands.

bob
k5qwg

3738. Re: K1DFT New Antenna Technology

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 01:05:26 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040609210526.13391.00000688@mb-m04.aol.com>
Source record: 93693

>Another press write-up:
>
> http://www.planetanalog.com/news/showArticle.jhtml?articleID=21402311
>
>
>Jim, K7JEB
>

>>Where is says:
"With my technique, I reduce the inductive loading that is normally required to resonate the antenna by as much as 75 percent . . . by utilizing the distributed capacitance around the antenna," he explained.

"I looked at all the different approaches used to make antennas smaller, and there seemed to be good and bad aspects" to each, Vincent said. "A helix antenna is normally known to be a core radiator, because the current profile drops off rapidly; they are just an inductor, and inductance does not like to see changes in current, so it's going to buck that.

"What I found was that for any smaller antenna, if you place a load coil in the middle you can normalize and make the current through the helix unity; that is, you can maximize it and linearize it," he added. <<

Let me guess, he "snaked" the part of the radiator in the plane, rather than winding it as a coil, then added loading coil and and perhaps capacitive/inductive top hat (like Force 12 uses and old Ukrainian patent)

Cecil, have you noticed the statement about the loading coil current? Buck that!

Yuri, K3BU.us

3739. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 01:13:59 UTC
From: Brenda Ann Dyer <brendad@shinbiro.com>
Message-ID: <ca89kb$d0g$1@news1.kornet.net>
Source record: 93694
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:mubfc0p93bhg1h0mgvcicgkbjpmabpt8fh@4ax.com...
> On Wed, 9 Jun 2004 16:28:42 -0400, "Dee D. Flint"
> <deeflint01@comcast.net> wrote:
>
> >
> >>
> >
> >I saw an analysis somewhere on the web (didn't mark the URL) that
indicates
> >BPL will not be cheaper the dial-up or various other types of service
unless
> >it is subsidized. Perhaps they plan to increase the electric rates to
make
> >it up?
> >
> >Dee D. Flint, N8UZE
>
> Actually, they have a better idea than increasing electricity rates.
> The highly effusive BPL story that ran in Time Magazine recently said
> BPL will bundle internet access with telephone service and
> video-on-demand.
>
> We hams got a hell of a fight on our hands.

Video on demand??? They gotta be outta their pea-pickin' minds.. Where they gonna get the sort of bandwidth they need to provide all those services? It's not like they're going to have ADSL type bandwidths available to every home (and the more homes they connect, the less bandwidth they will have available for each).. and I have problems at times with Video on Demand with my ADSL line (supposedly 10 Mbit, but I rarely acheive download speeds greater than about 400Kbit).

3740. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 01:29:57 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c7bab2_5@corp.newsgroups.com>
Source record: 93695

Walter Maxwell wrote:
> On Tue, 08 Jun 2004 23:09:32 -0500, Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com>
> wrote:
>
>
>>Walter Maxwell wrote:
>>
>>> Cecil, how about doing me a favor and humor me a little.
>>>
>>>How about solving my example, the one that Steve took from Reflections and then
>>>trashed. To repeat, 100 w, 70.71 v source, 50-ohm lossline terminated in a 3:1
>>>mismatch and perfectly matched at the input with a rho = 1.0.
>
> Thanks, Cecil, I'll be studying it carefully. Using a 1/4 wl transformer seems
> like a great idea. I hadn't thought of that.

It's easier to do it in steps.

Step 1.
100W XMTR---50 ohm line---x---1/4WL 86.6 ohm line---150 ohm load

Calculate all the forward and reflected components.

Step 2.
100W XMTR---50 ohm line---x---1/4WL 86.6 ohm line---y---1WL 50 ohm line---150 ohm load

All other forward and reflected components remain the same.
Calculate the forward and reflected components on the 50 ohm line
going to the load.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3741. Re: New antenna technology???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 01:35:33 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c7bc01$1_5@corp.newsgroups.com>
Source record: 93696

k4wge wrote:
> It uses basically a helix plus a load coil."

I see those all the time on 18-wheelers. Aren't they
called firesticks or something like that?
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3742. Re: K1DFT New Antenna Technology

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 01:39:41 UTC
From: Al Hearn <aldhearn@bellsouth.net>
Message-ID: <9XOxc.1683$Kd5.667@bignews4.bellsouth.net>
Source record: 93697

Here's some info about Rob Vincent:
http://www.phys.uri.edu/people/rob.html

Al WA4GKQ

3743. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 01:42:33 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40c7bf80_4@news1.prserv.net>
Source record: 93698

Dave:

An exposed copper to galvanized steel connection will quickly lose the zinc, and the steel will rust profusely. So, whatever approach you use, put lots of weatherproofing over the joint. Personally, I use thin stainless steel between the two dissimilar metals along with Penetrox and then weatherproof with roofing tar. The professionals use a special crimp connector or a purpose designed CadWeld connection.

--
Crazy George
Remove N O and S P A M imbedded in return address
"Dave" <galt_57@hotmail.com> wrote in message
news:5591d176.0406091057.b155e02@posting.google.com...
> The answer must be here but after some searching I can't find it.
> There is all sorts of conversation about ground rods and dissimilar
> metals but I can't find the basic answer I need -- How do you make the
> steel to copper connection? Do you simply clamp galvanized steel to
> copper? Thanks.

3744. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 01:50:39 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c7bf8c_5@corp.newsgroups.com>
Source record: 93699

Walter Maxwell wrote:
> However, I have another request for you. Can you find any forward voltages that
> are appropriate to plug into Steve's Eq 9 and obtain 133.33 watts PFtotal ?

Here is a quote from an earlier posting:

Continuing and calculating interference energy at point 'y':

V1y = VF2(1-rho) = 96.58(0.732) = 70.7V (100W)

V2y will be VR3(rho) = 40.82(0.268) = 10.94V (2.39W)

VF3 = 70.7V + 10.94V = 81.65V. (133.33W)

--- So ---

PFtotal = |VFtotal|^2/Z0 = 81.65V^2/50ohms = 133.33W

PFtotal = |V1+V2|^2/Z0 = (70.7V+10.94V)^2/Z0 = 133.33W

How's that?
--
73, Cecil http://www.qsl.net/w5dxp

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3745. Identify beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 02:00:15 UTC
From: t_ashland@yahoo.com
Message-ID: <6e6aeba9.0406091800.3b5cdcd9@posting.google.com>
Source record: 93700

Hi,
I may be acquiring a tower and beam from an SK. I am having problems trying to figure out what kind of beam it is. I think its been up there awhile. It is a 4 element beam with two driven elements spaced about 1 to 2' apart. Its probably a 10-15-20 beam. Any help would be appreciated.
73,
Terry, WK0F

3746. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 02:01:29 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40c7c0f9$0$436$5cbedd26@news.real-time.com>
Source record: 93701

1) DSL in any form on the market today is not capable of 10Mbps. 7.1 is it at present, and rare. Most DSL in my area is sold as 256/256, the next step, which just changed here (old was 620/256) in Qwest country, is 1500/768. Most non-business DSL circuits don't go beyond this.

2) If you are not getting the BW your ISP and local loop provider show in your Terms of Service agreements, and they have not attempted to remedy the problem (assuming you complained), you have grounds to complain to your local PUC. As well as the Better Business Bureau, etc.

This is a decent DSL info link -

http://www.dslreports.com/faq

tom
K0TAR

Brenda Ann Dyer wrote:

> Video on demand??? They gotta be outta their pea-pickin' minds.. Where they
> gonna get the sort of bandwidth they need to provide all those services?
> It's not like they're going to have ADSL type bandwidths available to every
> home (and the more homes they connect, the less bandwidth they will have
> available for each).. and I have problems at times with Video on Demand with
> my ADSL line (supposedly 10 Mbit, but I rarely acheive download speeds
> greater than about 400Kbit).
>

3747. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 02:07:33 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c7c382_5@corp.newsgroups.com>
Source record: 93702

Walter Maxwell wrote:
> Cecil, I found the two Vfwd's we're looking for. They are derived from V1y and
> V2y. 70.7 v and 10.94 v. The interesting part is that 10.94 v is the exact
> increase in voltage resulting from adding 33.333 w to 100 w.

Yes, that's superposition of voltages in action. All it takes to exist is
some constructive interference energy without which, superposition would
not occur. Without the constructive interference, the two waves are not
coherent and add like two incoherent waves.

> This is because the
> re-reflected forward voltage there, 40.82 v added to the source voltage 70.71 v
> does not equal the real total forward voltage of 81.65 v.

Let me say it again. Your re-reflected voltage and Steve's re-reflected
voltage are not the same quantities because they have completely
different definitions.

Think about that. Why would you expect your re-reflected voltage and Steve's
re-reflected voltage to be the same value when they have completely different
definitions?

> Therefore, my final comment on Eq 9 is that it works in specific cases but it
> certainly is not valid in general.

It is valid for Steve's definition of re-reflected voltage. It is not valid
for your definition of re-reflected voltage. You guys are NOT using the
same analysis model. I don't know how to say it any clearer than that.
Steve's analysis model works for him. Your completely different analysis
model works for you. You both get the same answers but you are using
different models to get there.

Jim Kelley, as a physicist, defines energy transfer different than I, as
an engineer, do. Therefore, his values of energy transferred and mine will
NEVER agree. You and Dr. Best are in the same position. Your re-reflected
voltages and powers will NEVER agree because you define them differently.
If you accept his definitions, you will get the same results that he does.
If he accepts your definitions, he will get the same results that you do.
But neither one of you is willing to budge an inch.
--
73, Cecil http://www.qsl.net/w5dxp

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3748. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 02:20:53 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406091820.42ce5a6f@posting.google.com>
Source record: 93703

Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.com> wrote in message
news:<40c699ad_4@corp.newsgroups.com>...
> yea right wrote:
> > Unfortunately, everybody knows that BPL will hinder HF.
>
> Will it hinder coherent CW and PACTOR II?

Fill the gas tank and wine cooler and take an HF mobile rig into a BPL "test area" and tune around like I did and come to your own conclusions Cecil. My direct experience with the stuff clearly indicates the utter destruction of HF radio within large radii anywhere it's deployed.

Luv the "we need to cooperate . . yadda, yadda, with the power utilities . . yadda, yadda . ." sugestions. Yeah right: I've also "interfaced" with a power utility or two in my time on the general topic of "Broadband RF interference: . . Might as well have tried to cut "mitigation" deals with Al Queda.

The good news however is that it's basically an artifact technolgy, it's time will never come. In the meanwhile we have to keep leaning on the sumbitches so keep shipping monies into the ARRL Spectrum Defense Fund.

w3rv

3749. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 02:38:18 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c7cab8_5@corp.newsgroups.com>
Source record: 93704

Henry Kolesnik wrote:

> I know that a shorted 1/4 wave stub exhibits a very high impedance. But
> for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low impedance
> or a short. There are claims that this can be used to filter the even
> harmonics. Shorts can't diisipate power and must reflect, so how does a
> stub work?

Consider the following configuration:

```
Source----ideal 1 WL feedline-----------+-----matched load
|
|Stub
|
|
open
```

If the stub is 1/4WL, the forward voltage and reflected voltage in the
stub is the same as on the feedline. At the mouth of the stub, they
are 180 degrees out of phase and superpose to zero volts which obeys
Ohm's law and delivers zero power to the load.

Double the frequency. That makes the stub 1/2WL. The forward voltage and
reflected voltage are essentially the same as in the 1/4WL stub but this
time they are in phase and superpose to a maximum value which obeys Ohm's
law and delivers maximum power to the load.

Absolutely nothing except superposition and interference happens at the
mouth of a stub. All the reflected action happens at the physical open
circuit. Virtual impedances are only a V/I ratio and CANNOT cause
reflections. Absolutely no reflections are happening at the mouth of
the stub (unless a physical impedance discontinuity exists there).

Consider this. If a stub really presented an infinite impedance, you could
simply remove it and nothing would change. Something inside the stub happens
to cause that infinite virtual impedance. Hint: Stubs have a near-infinite SWR.
To understand that assertion, consider how much voltage exists at a voltage
minimum inside a stub. It is nearly zero.
--
73, Cecil http://www.qsl.net/w5dxp

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3750. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 02:46:29 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c7cca3$1_5@corp.newsgroups.com>
Source record: 93705

JGBOYLES wrote:
> Hi Hank, A 1/2 wave shorted stub looks like a series resonant circuit. It
> makes a good notch filter, which is one of the Amateur applications that I have
> used. You are right, they don't dissipate any power since Power=I**2*R and R
> equals zero.

Stubs dissipate the maximum amount of power possible since the SWR on a
stub is nearly infinite. If you don't believe it, hang a Bird Wattmeter
halfway down a stub. The ratio of Vmax/Vmin and Imax/Imin is very high.
If the stub were lossless, the SWR inside a stub would be infinite.
After all, a stub is merely a shorted or open piece of transmission line.
--
73, Cecil http://www.qsl.net/w5dxp

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3751. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 02:50:22 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c7cd8a$1_5@corp.newsgroups.com>
Source record: 93706

JGBOYLES wrote:
> That should be fairly obvious to the most casual observer. :-).
> In the receive applications that I have used a 1/2 wave shorted stub as a
> notch filter, I can assure you I did not have lots of Amps flowing.

Have you ever measured it? Have you any idea of the magnitude of
current measurable at the shorted point in a stub during transmit?
--
73, Cecil http://www.qsl.net/w5dxp

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3752. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 03:05:20 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <QdQxc.26209$Sw.14324@attbi_s51>
Source record: 93707
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Frank Dresser" <analogdial@worldnet.att.net> wrote in message
news:58Kxc.52853$_k3.1317601@bgtnsc05-news.ops.worldnet.att.net...

> Hmmm. Do you think radio amateurs have enough friends in Washington
> to get anything like that?

Nope.

> Or maybe, if amateur radio interferes with a BPL system which
> benefits millions, the FCC will restrict amateur radio to protect BPL?

I doubt the "benefits millions" bit, but will the FCC restrict amateur radio
if it interferes with big-business political contributors' operations ? Of
course it will.

ak

3753. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 03:05:47 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <3ihfc0djoueijqu03vpdlraan08j0q7acp@4ax.com>
Source record: 93708

>Let me say it again. Your re-reflected voltage and Steve's re-reflected
>voltage are not the same quantities because they have completely
>different definitions.
>
>Think about that. Why would you expect your re-reflected voltage and Steve's
>re-reflected voltage to be the same value when they have completely different
>definitions?

Where are the completely different definitions?

>> Therefore, my final comment on Eq 9 is that it works in specific cases but it
>> certainly is not valid in general.
>
>It is valid for Steve's definition of re-reflected voltage. It is not valid
>for your definition of re-reflected voltage. You guys are NOT using the
>same analysis model. I don't know how to say it any clearer than that.
>Steve's analysis model works for him. Your completely different analysis
>model works for you. You both get the same answers but you are using
>different models to get there.

Cecil, I don't recall defining re-reflection, nor do I recall seeing any definition of it by Steve. A re-reflection is a re-reflection. It's simply a reflection of a wave established when an EM wave encounters a discontinuity in its otherwise smooth path. How else can it be defined?

A forward traveling EM wave that is a result of re-reflection has no different characteristics than any other EM wave, and therefore cannot be distinguished from any othe EM wave.

Now let's take another look at Steve's Eqs 7 and 8. There is no question here that there is anything different from being general. In fact, they're straightforward, valid, and viable. They are general, and are understood in exactly the same manner by any engineer speaking transmssion line language.

Now let's look at Eq 9. It too, is straigtforward, and it is entirely general if the user knows that V1 and V2 are each delivered by two different sources of energy. However, in general, V1 and V2 cannot be added, or superposed if the energy involved comes from only one source. Note the operative word is 'in general'. If there is a specific case, as in the 1/4 wl transformer where there are two reflections that are re-reflected into the forward direction, the Eq works, but it doesn't work in the configuration that was replaced by the 1/4 wl transformer. Consequently, Eq 9 must be invalid in general.

I simply can't accept that there can be more than one definition of re-reflection. Furthermore, anyone reading Steve's paper and encounters Eq 9 believing it valid in general, and applies it to a general case, he has no

assurance he's going to get the correct answer. The chances are he won't, the same as I and others did. If Eq 9 is Steve's piece of cake he can't have it and eat it too.

And as I said in a much earlier postI must remind you that Steve made a vital error when he said:

"When two forward-traveling waves add, general superposition theory and Kirchhoff's voltage law require that the vector sum of the individual forward-traveling voltages such that VFtotal = V1 + V2."

This statement is not true in general. This statement would be true in general if you replace 'forward-traveling waves' with 'voltage', and specified that the statement is following simple circuit theory. This is because only in special cases will it be true where the voltages are forward-traveling waves. You know very well there are cases involving transmission lines where circuit theory fails and transmission-line theory must be involved to obtain the correct solution to a problem.

This is what makes Eq 9 clearly invalid in general.

Walt

3754. Re: Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 03:53:44 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406091953.e709523@posting.google.com>
Source record: 93709

"Rick Karlquist N6RK" <richard@karlquist.removethis.com> wrote in message
news:<M5bxc.14440$HG.13166@attbi_s53>...
snip
>
> IMHO, I don't see how they can patent the basic concept of
> the SteppIR, but then I'm not a patent attorney. There
> is the "Cliff Dweller" adjustable dipole as prior art, but will
> the examiner ever find that. Maybe they are just patenting the idea of
> the tape in the hollow tube.
>
> Rick N6RK

Well I remember doing the same thing using a Mercedes car antenna
which had a nice drive on it where the plastic cord was changed to
wire. Worked O.K. when running the wire thru telescopic fishing poles.
The first printing of this sort of design was one described in
in many electrical journals in early 1970 . The antenna was sold by
Racal
(type AE3062) which was an all frequency monopole.
They used a glass fibre column and at the base were two driven spools
one of which had a flat silver coated copper tape and the other had a
flat insulator tape. These tapes were both joined to form one complete
tape which was driven up the mast (fibre glass tube column). In one
version they had a frequency discriminating bridge sensor for an
automatically tuned servo-system.They had two forms of antennas for
commercial and military aplications, 2-30 Mhz and 4- 30 mHZ with poles
65 foot high and 125 foot high. Unfortunately it does require a ground
plane to cover all frequencies a problem I over came with my
particular antenna by using a full dipole structure.
Like you I cannot see how a moveable conducting tape inside a fibre
glass tube
can be seen as a new invention or antenna device when the above
description
was so widely printed in the U.S. and sold commercially to boot!
Regards
Art

>
>
>
>
> "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> news:85ed38d.0406070836.6ed22d98@posting.google.com...
> > I notice that the STEPPIR antenna patent is still "Pending"

3755. Re: Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 03:53:56 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406091953.2aeb265d@posting.google.com>
Source record: 93710

"Rick Karlquist N6RK" <richard@karlquist.removethis.com> wrote in message
news:<M5bxc.14440$HG.13166@attbi_s53>...
snip
>
> IMHO, I don't see how they can patent the basic concept of
> the SteppIR, but then I'm not a patent attorney. There
> is the "Cliff Dweller" adjustable dipole as prior art, but will
> the examiner ever find that. Maybe they are just patenting the idea of
> the tape in the hollow tube.
>
> Rick N6RK

Well I remember doing the same thing using a Mercedes car antenna
which had a nice drive on it where the plastic cord was changed to
wire. Worked O.K. when running the wire thru telescopic fishing poles.
The first printing of this sort of design was one described in
in many electrical journals in early 1970 . The antenna was sold by
Racal
(type AE3062) which was an all frequency monopole.
They used a glass fibre column and at the base were two driven spools
one of which had a flat silver coated copper tape and the other had a
flat insulator tape. These tapes were both joined to form one complete
tape which was driven up the mast (fibre glass tube column). In one
version they had a frequency discriminating bridge sensor for an
automatically tuned servo-system.They had two forms of antennas for
commercial and military aplications, 2-30 Mhz and 4- 30 mHZ with poles
65 foot high and 125 foot high. Unfortunately it does require a ground
plane to cover all frequencies a problem I over came with my
particular antenna by using a full dipole structure.
Like you I cannot see how a moveable conducting tape inside a fibre
glass tube
can be seen as a new invention or antenna device when the above
description
was so widely printed in the U.S. and sold commercially to boot!
Regards
Art

>
>
>
>
> "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> news:85ed38d.0406070836.6ed22d98@posting.google.com...
> > I notice that the STEPPIR antenna patent is still "Pending"

3756. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 03:55:45 UTC
From: Wes <n7ws@_yahoo.com>
Message-ID: <vcmfc0tclru39p32ot0rirlhalf9gn697k@4ax.com>
Source record: 93711

On Wed, 9 Jun 2004 20:42:33 -0500, "Crazy George"
<muNnscOh@attSglPobaAl.nMet> wrote:

|Dave:
|
|An exposed copper to galvanized steel connection will quickly lose the zinc,
|and the steel will rust profusely. So, whatever approach you use, put lots
|of weatherproofing over the joint. Personally, I use thin stainless steel
|between the two dissimilar metals along with Penetrox and then weatherproof
|with roofing tar.

Same approach here, without the tar. On my Rohn 45 I replaced the
smaller bolts at the bottom with stainless and used double
nuts/washers to attach the copper ground wiring. Of course, it seldom
rains here and the low humidity helps in the corrosion department.

Purists will refer to the galvanic tables and go from there, but this
works for me.

Maybe Barry Ornitz will answer this for you. If not Google him.

3757. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 04:03:27 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40c7e23e_2@news1.prserv.net>
Source record: 93713

I think Barry got fed up reading some of this junk. I haven't seen a post
from him in quite a long time.

--
Crazy George
Remove N O and S P A M imbedded in return address
"Wes" <n7ws@_yahoo.com> wrote in message
news:vcmfc0tclru39p32ot0rirlhalf9gn697k@4ax.com...

<snip>
>
> Maybe Barry Ornitz will answer this for you. If not Google him.

3758. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 04:07:03 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c7df84_6@corp.newsgroups.com>
Source record: 93712

Walter Maxwell wrote:

>W5DXP wrote:
>>Think about that. Why would you expect your re-reflected voltage and Steve's
>>re-reflected voltage to be the same value when they have completely different
>>definitions?
>
> Where are the completely different definitions?

Steve defines re-reflected voltage as voltage reflected from the load
multiplied by the rearward-looking physical reflection coefficient,
(Z1-Z2)/(Z1+Z2). That's certainly not the definition of your reflection
coefficient for reflected voltage. Why are you surprised that you two
guys get different values of re-reflected voltage when you are using
entirely different voltage reflection coefficients?

> Cecil, I don't recall defining re-reflection, nor do I recall seeing any
> definition of it by Steve.

And that, in a nutshell, is the entire problem. You implied your definition
of re-reflection in _Reflections_. Steve implied his definition of re-reflection
in his QEX article. They are NOT the same definitions. Your definition of re-
reflected voltage involves a reflection coefficient of 1.0 at your virtual short.
Steve's reflection coefficient is the *physical reflection coefficient*, not the
virtual reflection coefficient and is NEVER equal to 1.0.

> However, in general, V1 and V2 cannot be added, or superposed if the
> energy involved comes from only one source.

True for your model - not true for Steve's model. You guys are NOT
using the same model. You are as far apart as the wave/particle
controversy.

> I simply can't accept that there can be more than one definition of
> re-reflection.

But there is, Walt. The S-parameter analysis defines re-reflection differently
than you do. In the equation, b2 = s21(a1) + s22(a2), the s22(a2) term is
the re-reflected voltage. It is defined as the voltage reflected from the
load multiplied by the physical reflection coefficient looking into port 2
when the source is replaced by Z0. That is NOT the way you define re-reflected
voltage.

> And as I said in a much earlier postI must remind you that Steve made a vital
> error when he said:
>
> "When two forward-traveling waves add, general superposition theory and

> Kirchhoff's voltage law require that the vector sum of the individual
> forward-traveling voltages such that VFtotal = V1 + V2."
>
> This statement is not true in general.

That statement is true in general for an S-parameter analysis. You and
Dr. Best are not using the same analysis model.

> This is what makes Eq 9 clearly invalid in general.

Eq 9 is valid for an S-parameter analysis. I doubt that you are going
to be able to discredit the entire field of S-parameter analysis so
you might as well accept the fact that you are calling a shrub a "tree"
and Steve is calling a shrub a "plant". Either both of your are right
or both or you are wrong.
--
73, Cecil http://www.qsl.net/w5dxp

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3759. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 04:18:38 UTC
From: Wes <n7ws@_yahoo.com>
Message-ID: <18ofc093lgsb7f6dretmjbgpqnq1pkg35v@4ax.com>
Source record: 93714

On Wed, 9 Jun 2004 23:03:27 -0500, "Crazy George"
<muNnscOh@attSglPobaAl.nMet> wrote:

|I think Barry got fed up reading some of this junk. I haven't seen a post
|from him in quite a long time.

Me neither. I think you're probably correct.

3760. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 05:38:28 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <ca8s4k$gm5$1@titan.btinternet.com>
Source record: 93715

Unless you want the connection to last for 20 years, use a simple clamp.

As for me, like many others, I've never kept an antenna for longer than 6 months.

==========

"Dave" wrote
> The answer must be here but after some searching I can't find it.
> There is all sorts of conversation about ground rods and dissimilar
> metals but I can't find the basic answer I need -- How do you make the
> steel to copper connection? Do you simply clamp galvanized steel to
> copper? Thanks.

3761. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 09:59:50 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2iqpntFqce5dU1@uni-berlin.de>
Source record: 93716

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2ioq3fFp9f7rU1@uni-berlin.de...
> http://www.boulder.nist.gov/timefreq/general/pdf/451.pdf
>
> Can someone please comment on the following statements and questions?
> Thanks.
>
> 1 The reflector and director element lengths and spacings of Table 1
are
> good for a yagis where d/lambda is 0.0085 and boom is non conducting.
>
> 2 You make a correction to the lengths when d/lambda of your reflector
> and director element diameters are other than 0.0085.
>
> 3 When you use a metallic boom, you have to make corrections to the
> element lengths as per Table 10.
>
> 4 I take it that whatever you put in place for DE, all spacing and
> reflector and director elements continue to remain correct. So you can
place
> whatever you want for DE, hertz dipole, folded dipole, gamma match, T
> match, DE with 1/"4 dia tube or 1.2" dia tube -it does not matter,
> parasitic element lengths once calculated need not be changed whatever you
> DE you place in the design. Spacing always remain the same.
>
> 5 How do you go about designing for DE?
>
> 6 Do the element length corrections due to use of a metalic boom assume
a
> particular element fixing method? Such as through the boom or on top of
the
> boom?
>
> 7 The designs are maximised for gain.
>
> 8 What is the bandwidth of a NBS designed antenna?
>
> 9 Has anyone written a program specifically for an NBS antenna so you
can
> calculate the element lengths without relying on tables and graphs?
>
> 10 Once designed the NBS design will probably work very close to
> parameters. But strictly speaking the antenna will only work very close to
> parameters if the antenna is 3 wavelenghts above ground. But for reception

> purposes on VHF, you can probably ignore effect of ground and no further
> design is probably necessary. (Lets face it with most bought antennas for
> receivimng, you just put them up. You don't start altering element
spacings
> etc.)

Further:

Reason why I looked at technical note 688 was because I thought I could avoid using models in antenna computer programs. As far as I can see in 4nec2 and Eznec you *cannot* input boom data. So, I thought following note 688 I can more easily design an antenna because it includes a table so you can take account of the boom. The test people obviously constructed the yagi designed for maximum gain and used a boom to figure out the boom corrections. This is dandy or looks good when somone like me does not want to spend ages designing.

The way it reads is that if you follow note 688 you can easily design your own antenna.

But, as always I get stuck with DE. Whether looking at note 688 or when I'm messing with 4nec2.

I see now that in the original test yagi, DE was a 1/2 wavelength folded dipole with the test element diameter of 1/4" matched to 50 Ohms with a double stubb tuner. There is not enough information as to the construction of the folded dipole to be able to replicate one to use as DE. Who knows if 468/f was used to get length for DE, who knows what the spacing between the elements of the folded dipole were.

Yet, I think whoever wrote note 688 expects a "designer" to put almost whatever he wants for DE, and is expected to keep the calculated dimensions regarding the parasitic elements.Obviously that is how note 688 reads. The problem is this though isn't it, it's okay if DE is in the clear of any parasitic elements, because then there is no influence on DE and you can l look in textbooks to calculate what the dimentions should be etc etc. DE would be a simple dipole on it's own in free space or whatever. But of course in a yagi DE is immersed in the fields created by the parasitic elements which influence a lot of things to do with DE. So how on earth can you design DE and establish Z etc without some sophisticated mathematics that take into account the effect of the parasitic elements on DE. Could you (whoever is reading this) know what to do with DE?. Could you calculate Z and dimensions for DE just looking at the information given in note 688?

(I think it's possibly implied that whatever DE is, it ought to be a folded dipole - maybe. Not a simple hertz dipole for instance.)

Anyway reasons why looking at note 688 is a ruse: I'm wanting a wideband antenna and I'n not sure if a design for 159 Mhz will have a bandwidth of 6 Mhz. I wanted NOT to use a folded dipole so an NBS design is no good. And can you actually make a design relying on the procedure in note 688 anyway. Possibly though a basis of a model in an antenna program.

All this is part of my learning curve BTW.

3762. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 10:02:52 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2iqptlFptrf9U1@uni-berlin.de>
Source record: 93717

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2iqpntFqce5dU1@uni-berlin.de...

> Yet, I think whoever wrote note 688 expects a "designer" to put almost
> whatever he wants for DE,

I'm not really sure about that. Maybe this is not expected, rather perhaps
there is an implication DE ought to be a folded dipole.

3763. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 10:37:54 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2iqrvbFq095mU1@uni-berlin.de>
Source record: 93718

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:$O9j++BCt0xAFAkF@ifwtech.co.uk...
> Richard wrote:
> >3 When you use a metallic boom, you have to make corrections to the
> >element lengths as per Table 10.
> >
> That's Figure 10. Those corrections will only apply if you use the same
> method as they did for mounting an element on a round metal boom...
> which they don't specify in detail, so Fig 10 is almost worthless.

That's why Iasked the question could I could appreciate this issue.

> >4 I take it that whatever you put in place for DE, all spacing and
> >reflector and director elements continue to remain correct. So you can
place
> >whatever you want for DE, hertz dipole, folded dipole, gamma match, T
> >match, DE with 1/"4 dia tube or 1.2" dia tube -it does not matter,
> >parasitic element lengths once calculated need not be changed whatever
you
> >DE you place in the design. Spacing always remain the same.
> >
> It does in the NBS designs; but not in most more modern designs.
>
> >5 How do you go about designing for DE?

> Too big a subject - look it up teh basic principles and some practical
> examples in various antenna handbooks, and then go and get your hands
> dirty.

Whenever anyone produces a design for a yagi, who has built a practical
model, whether a test model like NBS did, or whether a model built by Joe
Ham, then the DE is already designed. Most people who want to build a yagi
don't want to design from scratch, they just want to be presented with a
design methodology that's simple, that allows for some slight variation in
materials or method of fixing.

So the design methodologies that appeal are:

Copying exactly someone else's design.(No design involved)

Trying to design with Technical Note 688. (Looked promising at first).

Taking someone's design and adjusting for variation in element diameter and
boom size using some program or other. (This involves ELE.EXE I think).

Taking a model and designing with that with a program. But I've got the
impression, rightly or wrongly, that going this route is getting away from

the concept of "simple design methodology". I think that stems from my inability to have noted these programs allowing boom parameters to be inputed, and I'm totally in the dark about DE in these programs.

All the really simple methodologies have as starting point a practical proven design. All one is doing is making certain kinds of alterations: frequency, boom size, element diameters, and if you really want to adventurous, alter element fixing method, but that could be an alteration too far. That's the only things I'm interested in messing with. And I'm looking for the design methodologies that allow me to make these kinds of alterations. I'm not really wanting to be in the business of designing DE or spending hours experimenting.

I've yet to determine whether I can classsify using models in an antenna program as being a "simple design methodolgy" given the kinds of alterations I might want to make.

> >6 Do the element length corrections due to use of a metalic boom assume a
> >particular element fixing method? Such as through the boom or on top of the
> >boom?
> >
> No, they *demand* a particular fixing method! (See 3.)

This is a key to understanding for me.

3764. Re: K1DFT New Antenna Technology

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 10:39:49 UTC
From: fractenna@aol.com
Message-ID: <20040610063949.05521.00000656@mb-m17.aol.com>
Source record: 93719

>>>Where is says:
>"With my technique, I reduce the inductive loading that is normally required
>to
>resonate the antenna by as much as 75 percent . . . by utilizing the
>distributed capacitance around the antenna," he explained.
>

To linearize the current you need to place capacitance at the top.

His design-as stated in the press release --calls for about 0.4 waves electrical length as a helix (0.008 inches x 100 turns @ 1 Ghz). This is electrically long for a 1/4 monopole configuration. So the design is electrically long but very physically short: Stated 15 inches high for 15 meters. (This means that if you don't slow the wave, there is more than one current max.) This will drive the feedpoint impedance up and improve bandwidth. It also increases ohmic loss. Thus the tradeoff.

A loading coil on the helix will help linearize it--I'm there so far. Distributing the capacitance is trickier.

In fairness, we don't know the design, but there is nothing new that appears to me--in my opinion--in these stated approache(s).

The press releases claim high efficiency and broad bandwidth.Of course, these are relative terms. 1/15 wave high monopoles with excess of 10% BW with gains of -1.5 dBd are prior art. If you make a bit taller then it becomes much more interesting.

BUT we don't live in a single band world anymore. In fact, we don't live very much in a monopole world anymore: the trend is ground independent, wideband antennas, or at least multiband ones..

There's a lot more to antenna issues: anyone who thinks the issue with RFID antennas is gain and size doesn't understand the issues with RFID, for example. Right, Wayne:-)?

Losses are a huge concern in very compact designs--placing them on substrates loads them intractably, for example.

Also, knowledge of the prior art is essential for making a claim of 'revolutionary' antenna technology. I have not seen anything in the press releases that --in my opinion--indicates a good knowledge of the prior art by the inventor. He may have it, but it is not apparent from these statements. He obviously has a good working knowledge of the problem. That's not the same thing.

Anyway, fun stuff. The bottom line on what appears--to me-- as the claim relevant to hams: If you need a -1 to -2 dBd short monopole that covers the CW portion of 40M, for example, this may be useful, in my opinion. If you want to stick it on your roof then be prepared to have a big roof:-).

73,
Chip N1IR

3765. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 10:57:05 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2iqt3cFqj4luU1@uni-berlin.de>
Source record: 93720

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2iqrvbFq095mU1@uni-berlin.de...

> I've yet to determine whether I can classsify using models in an antenna
> program as being a "simple design methodolgy" given the kinds of
> alterations I might want to make.

The point being of course that if someone gives me a model, what do I know about the practical construction associated with that model. Does the model file (NEC or EX file) include data about element fixing method for instance. Probably not. So unless I can input these practical parameters into the program, and these paramters serve to make alterations to the elements, diameter and spacings, how can I arrive at a practical design having followed a "simple design methodolgy".

This is why Technical Note 688 looked so promising at first. The design methodology is simple and you can input details or alterations concerning the boom size and element diameters and end up with a practical design in no time at all. There are apparant problems with Note 688, as you say with Table 10 being possibly practically useless without there being a detailed specification of element fixing.

3766. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 11:12:23 UTC
From: jgboyles@aol.com
Message-ID: <20040610071223.04323.00000794@mb-m13.aol.com>
Source record: 93621

>Have you ever measured it? Have you any idea of the magnitude of
>current measurable at the shorted point in a stub during transmit?

No Cecil I don't, should I? The only experience I have with a shorted 1/2 wave stub is in receive applications. I have swept them with a homebrew spectrum analyzer and tracking generator and can say they look like series resonant circuits. At the micro watt level will I still have several Amps in the stub? How would you measure the current in the stub during transmit using equipment the average ham (like me) has laying around the shack ?
73 Gary N4AST

3767. Call for a *practical* design for a 5 or 6 element wideband yagi using a hertz dipole as DE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 11:37:20 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2iqvepFpqso0U1@uni-berlin.de>
Source record: 93622

Hi. I'm wanting to "design" using a "simple design methodolgy". As far as I can tell that means avoiding using models and antenna programs because I think designing a practical yagi from a model is *not* a simple design methodology. That's my impression.

So I think the best option I have is to take a practical design and use the principle of scaling, and using a program that will make adjustments to the element lengths for an alteration in element diameters and a program that will make adjustments in element lengths for alteration in boom size. I'm pretty sure element spacings will need not to be altered given some reasonable alteration in either element diamters or boom size.

(Do these correction programs assume a particular element fixing method I wonder!!. Where are these programs. I only know of ELE.EXE)

I'm looking for a practical design that uses a hertz dipole as DE, not a folded dipole. And it ought to be wideband well, a bandwidth of about 4% of the center frequency.

Boom needs to be metal.

I'm looking to make the center frequency 159 Mhz. So any practical design I suppose is likely to be a VHF yagi not too far removed from 159 Mhz.

There can be a balun arrangement or not, but I don't want to feed a balanced DE with unbalanced coax.

My antenna is to be a receiving antenna.

My email is:

hobby_electronics@REMOVEntlworld.com

Please remove REMOVE.

Thanks.

3768. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 11:39:22 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <KLXxc.38815$Gx4.714@bgtnsc04-news.ops.worldnet.att.net>
Source record: 93623
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"AK" <ak-in-nc@mchsi.com> wrote in message
news:QdQxc.26209$Sw.14324@attbi_s51...
>
[snip]

>
> I doubt the "benefits millions" bit, but will the FCC restrict amateur
radio
> if it interferes with big-business political contributors' operations ? Of
> course it will.
>
> ak
>
>

OK -- I'll go through it.

If BPL works as promised, it will benefit millions. The BPL folk promise high speed internet access at under $30.00 a month. Every other high speed access provider will have to compete with that price. More than that, BPL promises continual power line monitoring and millions of dollars for local governments. That's what BPL promises. If BPL can come through on these promises, BPL will benefit millions.

Can BPL come through on their promises? I sure don't think so. Most people with a technical background don't think so. There's a hundred reasons to think that BPL won't be able to fulfill it's promises.

But how can it be PROVEN that BPL will fail? By talk? By computer simulations? I'm sure my opinion doesn't cut it. The ONLY way to prove that BPL cannot fulfill it's glittering promises is to -- let it fail.

BPL is being allowed. That hardly means that BPL will wipe out the SW bands. Approval was the easy part. All it took was promises.

But now, it's put up or shut time for BPL. So far, BPL's reality check doesn't seem to be going very well.

Please name the politician who would stand in the way of the BPL promises. If they did block the BPL promises, then they would hear from the thickheaded knee-jerks would be ABSOLUTELY CERTAIN that the FCC was in the pockets of the fat cats who want to keep access prices high.

I hope I've made my point clearly.

Frank Dresser

3769. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 12:14:35 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c851ca_7@corp.newsgroups.com>
Source record: 93624

JGBOYLES wrote:
>>Have you ever measured it? Have you any idea of the magnitude of
>>current measurable at the shorted point in a stub during transmit?
>
> No Cecil I don't, should I? The only experience I have with a shorted 1/2 wave
> stub is in receive applications. I have swept them with a homebrew spectrum
> analyzer and tracking generator and can say they look like series resonant
> circuits. At the micro watt level will I still have several Amps in the stub?

Of course not for receive. Here's the statement to which I was objecting:

"... they don't dissipate any power since Power=I**2*R and R equals zero."

R is not zero half-way into a shorted 1/2WL stub. For a lossless stub, R
is infinite at the half-way point. Stubs have considerable I^2*R losses
during transmit. Of course, if you are using them to notch filter out
unwanted receive signals, you want them to be lossy.

> How would you measure the current in the stub during transmit using equipment
> the average ham (like me) has laying around the shack ?

Wrap ten turns of pickup wire on a ferrite toroid. Use a dummy load
to calibrate it by running the dummy load wire through it. Then install
the shorted stub wire through the ferrite toroid and make the measurement.
Roy Lewallen describes how to measure RF current in his article in "The
ARRL Antenna Compendium", vol 1, in "Baluns: What They Do and How They
Do It."

Or install a one ohm resistor at the stub short and measure the voltage.
An oscilloscope will do. You don't need super high accuracy.

For the following stub, we can estimate the value of the current at
the short in the stub assuming a lossless line. The source is a 100W
Signal Generator equipped with a perfect Circulator and Load

```
100W SGCL----50 ohm feedline-----------+---50 ohm load
|
|1/2WL Stub
|50 ohms
|
short
```

No current reaches the load. The forward current is 1.414 amps and the
reflected current is 1.414 amps on the feedline and inside the stub.
100 watts of reflected power is being dissipated in the circulator load
resistor. The RMS current at the short is 2.828 amps, the in-phase sum
of the forward and reflected currents. The peak-to-peak current at the

short is 8 amps.

The only reflection point in the entire above system is at the short
at the end of the stub. No reflections occur at '+'.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3770. Simple practical designing with antenna modeling programs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 12:38:08 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ir30fFpnd30U1@uni-berlin.de>
Source record: 93625

Are these points true?

The following is the simplest way of obtaining a practical yagi design using an antenna modeling program:

1 If you use a non conducting boom then you can build a practical model using the element lengths in the model.

2 For a VHF yagi in the clear you can assume freespace.

3 A simple straight wire in your model that is made source is DE and is treated as a simple hertz dipole by the program. So the values given for R and J are the values you would measure having a hertz dipole as DE. This is true for the model and would be fairly accurate if the boom was non conducting and reasonably in the clear in the practical design.

4 It is easy to scale for frequency in antenna programs.

5 It is fairly easy to alter element diameters in antenna programs and to obtain a redesign that maintains the original performance characteristics.*

It seems to me that if one is prepared to use a non conducting boom, a hertz dipole as DE, then the model is pretty much the practical design.

Not sure about impact of a balun or the feedline.

---
*
http://www.cebik.com/32m.html

The second kind of answer involves adapting a given antenna design to a new diameter material. Suppose that a designers specifies 0.1875" (3/16" or 4.76 mm) elements. The builder has a stock of either 0.125" (1/8" or 3.18 mm) rods or 0.25" (1/4" or 6.35 mm) rods. Will he or she need to adjust the element lengths of spacings?

The answer is "yes." In fact, without making such adjustments, the antenna will not perform as originally designed. There are two major reasons for this result. In general and first, both driver and parasitic elements lengths require adjustment with every change of diameter. The general goal is to arrive at elements whose self-resonant frequencies are the same as in the original array. Second, the inter-element coupling changes for a given spacing of two elements if we change the element diameter. Element spacing does not change as rapidly as the element length for a given level of coupling when we change element diameter. However, it changes enough so that we cannot ignore the effects.

One of the simplest ways to accommodate a revised element diameter is to resort to a Yagi optimizing program. We simply plug into the program the existing design and specify the new element diameter. The program then churns out the revised design.

More antenna builders have general antenna modeling programs than have optimizing programs. There is a procedure that we can use to reoptimize a design for a new element diameter, although it has a pitfall from which we must guard ourselves. Here is how the procedure works.

1. Create a model of the original design and establish its operational characteristics.

2. Revise the model to use the new element diameter.

3. Find the frequency at which the new model shows the same operating characteristics as the original model did at its initial design frequency. If we are moving to a larger-diameter element, the new frequency will be lower than the old one. If we are moving to a smaller-diameter element, the new frequency will be higher than the old one.

4. Frequency scale the revised antenna model from the new design center to the original design center. Retain the new element diameter: the amount of performance change occasioned by the small frequency movement will usually not require a reiteration of this step. However, when enlarging or shrinking elements by more than a factor of 2, it may pay to make the change in two steps of scaling and checking.

At this stage, check the performance of the antenna across the passband used by the original design. In many instances, the model will suggest that we need not make any further changes. However, in some cases, we may need to adjust some element lengths to center the gain, front-to-back, and SWR curves as closely as possible to their original form (assuming that the original curves are the most desirable ones for our application). The driver length will have the greatest effect upon the SWR curve. Juggling the reflector length and the most forward director lengths can smooth out the performance across the passband, although rechecking the SWR curve may be necessary. For a given band-edge adjustment, alter the element that moves gain and/or front-to-back performance values in the desired direction with least adverse affect on the SWR curve. Finally, when reducing element diameters, you may need to increase the reflector spacing from the driver to raise the general impedance level back to that of the larger elements with which you began.

The pitfall in this procedure involves stopping at this point. Although the initial detection of the revised design center frequency and scaling that back to the original center produced element lengths that are very close to optimum, the element spacing moved in the wrong direction. The thin-element model increased element spacing, while the fat element model decreased the spacing. However, as element diameter increases, element spacing must increase to maintain the same level of coupling. Because we have adjusted element lengths, the spacing adjustments may not be dramatic, but they will be noticeable. Therefore, we need one more step.

5. If increasing element diameter, increase the spacing among elements by about twice the amount that the initial scaling decreased them. If decreasing the element diameter, do the opposite. Do not use a simple additive method, but instead find a multiplier based on the scaling ratio used in step 4. Take into account any revised positioning of the reflector in step 4. As well, check the driver, reflector, and most forward director lengths to re-establish the performance curves for the array.

(From Notes on 6-Element Wide-Band 2-Meter Yagis by L. B. Cebik, W4RNL)

3771. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 12:41:38 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <6GYxc.214$Di3.171@bgtnsc05-news.ops.worldnet.att.net>
Source record: 93626
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Dee D. Flint" <deeflint01@comcast.net> wrote in message
news:H8udnTEtP4Id7lrdRVn-jw@comcast.com...
>
>
> I saw an analysis somewhere on the web (didn't mark the URL) that
indicates
> BPL will not be cheaper the dial-up or various other types of service
unless
> it is subsidized.

Yeah, that gets to the heart of an important issue. Will BPL somehow be
profitable?

The quality of the reporting on BPL is, more often than not, poor:

http://moneycentral.msn.com/content/P81685.asp

That guy doesn't seem to have a clue about the technical problems that the
BPL system has to overcome. I suppose he figures that since the FCC doesn't
seem much worried about cranky old hams, then BPL is on easy street. I'd
think the financial press would have wised up after the dotcom blowout.

I did see a technically literate investment write up on BPL last year. That
guy thought BPL was a loser.

The ARRL is doing a great job making themselves available to reporters. The
better stories devote a significant part to the ARRL point of view. Still,
the stories often come down to BPL vs ARRL.

Here's a pretty good antiBPL site:

http://gobpl.com/

An interesting page from that site:

http://gobpl.com/sharkbites.html

> Perhaps they plan to increase the electric rates to make
> it up?
>
> Dee D. Flint, N8UZE
>

Please, don't give the welfare party and the corparate subsidy party any
ideas!!

Frank Dresser

3772. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 13:16:15 UTC
From: "Dee D. Flint" <deeflint01@comcast.net>
Message-ID: <18udncF_f70CwlXd4p2dnA@comcast.com>
Source record: 93627
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Frank Dresser" <analogdial@worldnet.att.net> wrote in message
news:6GYxc.214$Di3.171@bgtnsc05-news.ops.worldnet.att.net...
>
> "Dee D. Flint" <deeflint01@comcast.net> wrote in message
> news:H8udnTEtP4Id7lrdRVn-jw@comcast.com...
> [snip]
>
> The quality of the reporting on BPL is, more often than not, poor:
>
> http://moneycentral.msn.com/content/P81685.asp
>
> That guy doesn't seem to have a clue about the technical problems that the
> BPL system has to overcome. I suppose he figures that since the FCC
doesn't
> seem much worried about cranky old hams, then BPL is on easy street. I'd
> think the financial press would have wised up after the dotcom blowout.
>

Nor does he have a clue about how people choose to spend their money. For example he mentions that there is good market potential since 80% of the internet users are still on dial up. He seems to think that they will switch to BPL. But let's look at why they are on dial up. It is cost. Dial up is still the cheapest access and it will be cheaper than the projected cost for BPL. Unless they can get much closer to dial up in price, most will NOT switch. There's a dial up service around here that is only about $10 per month. Even the most expensive dial up in this area tops out at $20 per month. BPL won't be able to snag a major share of the dial users no matter what anyone would like to believe assuming their projected costs are accurate.

Dee D. Flint, N8UZE

3773. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 13:19:00 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <8dZxc.6418$H65.529@nwrddc02.gnilink.net>
Source record: 93628

"Cecil Moore" <w5dxp@hotmail.com> wrote in message
news:40c7cca3$1_5@corp.newsgroups.com...
> JGBOYLES wrote:
> > Hi Hank, A 1/2 wave shorted stub looks like a series resonant circuit.
It
> > makes a good notch filter, which is one of the Amateur applications that
I have
> > used. You are right, they don't dissipate any power since Power=I**2*R
and R
> > equals zero.
>
> Stubs dissipate the maximum amount of power possible since the SWR on a
> stub is nearly infinite. If you don't believe it, hang a Bird Wattmeter
> halfway down a stub. The ratio of Vmax/Vmin and Imax/Imin is very high.
> If the stub were lossless, the SWR inside a stub would be infinite.
> After all, a stub is merely a shorted or open piece of transmission line.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
I would have to agree Cecil. The point is proven by the fairly shallow notch
afforded by a single stub (approx -20dB at VHF). I can do better with a
quality L-C combination.

Dale W4OP

3774. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 13:43:48 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <20ngc0pujdn0cut4s0fj5tbq9j2taduq3i@4ax.com>
Source record: 93629

On Wed, 09 Jun 2004 23:07:03 -0500, Cecil Moore <w5dxp@hotmail.com> wrote:

>Walter Maxwell wrote:
>
> >W5DXP wrote:
>>>Think about that. Why would you expect your re-reflected voltage and Steve's
>>>re-reflected voltage to be the same value when they have completely different
>>>definitions?
>>
>> Where are the completely different definitions?
>
>Steve defines re-reflected voltage as voltage reflected from the load
>multiplied by the rearward-looking physical reflection coefficient,
>(Z1-Z2)/(Z1+Z2). That's certainly not the definition of your reflection
>coefficient for reflected voltage. Why are you surprised that you two
>guys get different values of re-reflected voltage when you are using
>entirely different voltage reflection coefficients?

Cecil, the only difference that can obtain between reflection coefficents is in
magnitude and phase. It matters not whether a reflection is established by a
physical discontinuity or wave interference, the result is identical.
>
>> Cecil, I don't recall defining re-reflection, nor do I recall seeing any
>> definition of it by Steve.
>
>And that, in a nutshell, is the entire problem. You implied your definition
>of re-reflection in _Reflections_. Steve implied his definition of re-reflection
>in his QEX article. They are NOT the same definitions. Your definition of re-
>reflected voltage involves a reflection coefficient of 1.0 at your virtual short.
>Steve's reflection coefficient is the *physical reflection coefficient*, not the
>virtual reflection coefficient and is NEVER equal to 1.0.

Now I see your problem, Cecil, and that is because you still don't understand
why a reflect ion coefficient of 1.0 IS established when two waves equal in
magnitude but of equal and opposite phase occur at the match point. If the two
waves are of unequal magnitude the coefficient is simply less than 1.0. So I
repeat for emphasis, it matters not whether the reflection is established by
physical or virtual means. This is another error in Steve's article. He disputes
this established fact, saying incorrectly that a physical short is required to
establish reflections--totally wrong.

>> However, in general, V1 and V2 cannot be added, or superposed if the
>> energy involved comes from only one source.
>
>True for your model - not true for Steve's model. You guys are NOT

>using the same model. You are as far apart as the wave/particle
>controversy.

True in general, period.

>> I simply can't accept that there can be more than one definition of
>> re-reflection.
>
>But there is, Walt. The S-parameter analysis defines re-reflection differently
>than you do. In the equation, b2 = s21(a1) + s22(a2), the s22(a2) term is
>the re-reflected voltage. It is defined as the voltage reflected from the
>load multiplied by the physical reflection coefficient looking into port 2
>when the source is replaced by Z0. That is NOT the way you define re-reflected
>voltage.

Cecil, to perform an S-parameter test on an antenna tuner one would first
adjust it to match the input impedance of the line connecting it to the antenna
then disconnect it from the line and replace the line with a pure resistance =
to Zo. Now the input impedance is measured. Then the setup is reversed, placing
the Zo termination at the input and measuring the impedance looking rearward
into the output. These measurements yield the transfer impedance of the tuner,
but they don't yield the input and output impedances established during
operation. The reflections are not defined differently in either case.

>> And as I said in a much earlier post I must remind you that Steve made a vital
>> error when he said:
>>
>> "When two forward-traveling waves add, general superposition theory and
>> Kirchhoff's voltage law require that the vector sum of the individual
>> forward-traveling voltages such that VFtotal = V1 + V2."
>>
>> This statement is not true in general.
>
>That statement is true in general for an S-parameter analysis. You and
>Dr. Best are not using the same analysis model.
>
>> This is what makes Eq 9 clearly invalid in general.
>
>Eq 9 is valid for an S-parameter analysis. I doubt that you are going
>to be able to discredit the entire field of S-parameter analysis so
>you might as well accept the fact that you are calling a shrub a "tree"
>and Steve is calling a shrub a "plant". Either both of your are right
>or both or you are wrong.

Cecil, we don't need to argue the conditions concerning S-parameter analysis,
because I've put my finger on the problem you're having with this entire
discussion, that is you're (and Steve's) unwillingness to understand that wave
interference can establish a reflection coefficient of 1.0 without any physical
means.

This vital error in Steve's belief that physical means is required to establish
reflections is why he wrote his article for the express purpose of trying to

prove my writings in Reflection incorrect. The material in his article hasn't proven them wrong because they aren't wrong, he has merely shown the world that he doesn't understand the wave mechanics involved in impedance matching.

Walt

3775. Re: inverted L or 1/2 size g5rv

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 13:55:11 UTC
From: K7MEM <k7mem@myrealbox.com>
Message-ID: <40C8683F.8030402@myrealbox.com>
Source record: 93631

David Browne wrote:
> hi, what would work best a, 54.45 feet,with a MHz trap,inverted L, up about
> 25-30feet above ground,with no radials ,just the ground,ps, i live in the uk
> with good soil, or a 1/2 size g5rv up 25-30 feet high
> thanks Dave Browne

In your situation I think you would be better off with the g5rv. With a good tuner you should be able to run on all the HF bands.

I have found, in the past, that a inverted L doesn't work very well without ground radials. I experimented with one that was fed at ground level, traveled up for 25 feet, headed east to a tree branch, and then south to another tree branch. Total length was about 96 feet. I first tried to run with only a ground rod but couldn't get a stable match. Then I started to add ground radials. They were just random lengths of wire, around 25 feet long, buried about 1 or 2 inched in the ground. As I added radials the matching became more stable and at around 5 radials everything matched up great and the antenna worked great.

I live in the desert so my ground conditions are different than yours, but you still may need the radials.

Martin

--
Martin E. Meserve
k7mem@myrealbox.com
http://www.k7mem.150m.com

3776. Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 14:01:37 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ir7t9FprravU1@uni-berlin.de>
Source record: 93630

Anyone have experience of making VHF antennas with non conducting booms?

I think I ought to be able to employ a non conducting boom for a yagi design that is no more than about 50" (1.27 meters) in length. Must have sufficient rigidity.

I was thinking about using a square boom made out of some synthetic material (NOT wood). Obviously tthe material must not degrade over time in an outdoor environment.

Thanks if you can suggest a product.

3777. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 14:06:35 UTC
From: j999w@aol.com
Message-ID: <20040610100635.15979.00000844@mb-m16.aol.com>
Source record: 93632

Wood works fine ... just give 'er a good coat of latex paint. I've got some 432 Quagis that are about 6 years old ... still work great.

jw
K9RZZ

3778. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 14:16:27 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2ir8orFqe087U1@uni-berlin.de>
Source record: 93633

"J999w" <j999w@aol.com> wrote in message
news:20040610100635.15979.00000844@mb-m16.aol.com...
> Wood works fine ... just give 'er a good coat of latex paint. I've got
some 432
> Quagis that are about 6 years old ... still work great.
>
> jw
> K9RZZ

Have I discarded the wood option prematurely. Maybe. :c)

3779. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 14:35:23 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40c8706a.479885171@news.galilei.com>
Source record: 93634

Hi Dave

For searching the web, use Cathodic Protection as your search key.

As far as steel to copper, nickel is a good go between between the two metals. You can weld to steel with nickel and put a nickel coating on the binding area of the steel rod.

TTUL
Gary

3780. Re: Call for a *practical* design for a 5 or 6 element wideband yagi using a hertz dipole as DE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 14:36:29 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <OI_xc.9311$K45.4284@fed1read02>
Source record: 93635

"Richard" <nearlynews_email@ntlworld.com> wrote

> I'm looking to make the center frequency 159 Mhz. So any practical design
I
> suppose is likely to be a VHF yagi not too far removed from 159 Mhz.
> My antenna is to be a receiving antenna.

Richard, I thought you wanted a marine-band antenna? The center should be at
156.300 to 156.800 mHz and will cover above that fine, but not well below
it.

Jack

3781. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 14:37:51 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40c87145.480104187@news.galilei.com>
Source record: 93636

Hi Richard

If you can get some Cypress lumber to make your boom, it will last longer than you do!

We had 12 acres under glass, all of the greenhouses were made from Cypress rails which held the glass in place. They were 71 years old when we sold the place to a shopping mall developer.

These rails were only 2x2s with two dado's cut out for the glass and a decorative slot cut down each of the inside portions. They held the weight of glass just fine for all those years.

TTUL
Gary

3782. Re: Call for a *practical* design for a 5 or 6 element wideband yagi using a hertz dipole as DE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 15:07:39 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2irbosFppmccU1@uni-berlin.de>
Source record: 93637

"Jack Painter" <223bthp@cox.net> wrote in message
news:Ol_xc.9311$K45.4284@fed1read02...
>
> "Richard" <nearlynews_email@ntlworld.com> wrote
>
> > I'm looking to make the center frequency 159 Mhz. So any practical
design
> I
> > suppose is likely to be a VHF yagi not too far removed from 159 Mhz.
> > My antenna is to be a receiving antenna.
>
> Richard, I thought you wanted a marine-band antenna? The center should be
at
> 156.300 to 156.800 mHz and will cover above that fine, but not well below
> it.
>
> Jack

I'm following two threads with my antenna muses, I don't know which one is
going to come out on top:

engaging in applying scaling, and tackling what is required when changes are
made in element diameter and boom size of a tried and tested *practical
design* one that employs a metal boom,

or following the track that seems to involve simply scaling with a *model*
and the making of other adjustments to the model, (arising from element
diameter changes) where in practical terms the model is sufficiently
equivalent to a "practical design" by virtue of the employment of a non
conducting boom in the construction of the yagi.

But to your point:

Marine band is from 156-162 Mhz. Center 159 Mhz.

3783. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 15:10:41 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0406100710.2483554f@posting.google.com>
Source record: 93638

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:<2iqptlFptrf9U1@uni-berlin.de>...
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
> news:2iqpntFqce5dU1@uni-berlin.de...
>
>
> > Yet, I think whoever wrote note 688 expects a "designer" to put almost
> > whatever he wants for DE,
>
> I'm not really sure about that. Maybe this is not expected, rather perhaps
> there is an implication DE ought to be a folded dipole.

I doubt I would use a folded DE myself. More work...:(Normally, I
would just use a grounded DE, but in your case, you need to consider
how you would tune the antenna. IE: gamma match, etc...If you have no
radio that transmits, or an antenna analyser, it might be tricky..In
that case, probably the simpliest method would be to use a split,
carefully cut dipole DE, and hope for the best. The dimensions,
spacings, etc, are critical yes, but I don't think as critical as you
think. IE: I don't really worry too much about element mounting
methods, etc, when I build a yagi. Almost anything you slap together
should work pretty well as long as you measured carefully. When I once
made one for that purpose, I didn't have a transmitter. And I did use
a gamma match. I had no decent way to tune it up. So I just
guesstimated, and tuned the match for max signal, noise, etc..I don't
know how well it came out as far as the match, but the antenna worked
great.
A simple fast way to design an NBS yagi for any freq, is to use the
eznec demo. It has a NBS yagi as a demo, and it can be easily scaled
for any freq. MK

3784. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 15:16:31 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2irc9hFqmt4rU1@uni-berlin.de>
Source record: 93639

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0406100710.2483554f@posting.google.com...
> "Richard" <nearlynews_email@ntlworld.com> wrote in message
news:<2iqptlFptrf9U1@uni-berlin.de>...
> > "Richard" <nearlynews_email@ntlworld.com> wrote in message
> > news:2iqpntFqce5dU1@uni-berlin.de...
> >
> >
> > > Yet, I think whoever wrote note 688 expects a "designer" to put almost
> > > whatever he wants for DE,
> >
> > I'm not really sure about that. Maybe this is not expected, rather
perhaps
> > there is an implication DE ought to be a folded dipole.
>
> I doubt I would use a folded DE myself. More work...:(Normally, I
> would just use a grounded DE, but in your case, you need to consider
> how you would tune the antenna. IE: gamma match, etc...If you have no
> radio that transmits, or an antenna analyser, it might be tricky..In
> that case, probably the simpliest method would be to use a split,
> carefully cut dipole DE, and hope for the best. The dimensions,
> spacings, etc, are critical yes, but I don't think as critical as you
> think. IE: I don't really worry too much about element mounting
> methods, etc, when I build a yagi. Almost anything you slap together
> should work pretty well as long as you measured carefully. When I once
> made one for that purpose, I didn't have a transmitter. And I did use
> a gamma match. I had no decent way to tune it up. So I just
> guesstimated, and tuned the match for max signal, noise, etc..I don't
> know how well it came out as far as the match, but the antenna worked
> great.
> A simple fast way to design an NBS yagi for any freq, is to use the
> eznec demo. It has a NBS yagi as a demo, and it can be easily scaled
> for any freq. MK

Okay, but aren't these models only sufficiently accurate if you use the
dimensions in the models to build an actual yagi, if the boom is non
conducting? Is it not true that if the boom is conducting you cannot rely on
the model dimensions?

3785. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 15:40:27 UTC
From: aunwin <aunwin@insightbb.com>
Message-ID: <Lh%xc.64912$3x.8645@attbi_s54>
Source record: 93640

Not so!
This method only applies to surface type corrosion materials that when
formed protects against ingrained corrosion.
Aluminum and copper are types where corrosion is halted after surface
corrosion. Anybody who has had an old car knows that rust can travel under
so called protective surfaces
This analysis was used with succes in court in the case of using aluminum
wiring in stead of copper wiring. The vital point was
that both of these materials formed a protective corrosion coating
that could not be undermined if the inter pressure point was not open to
corrosion penetration.
Art

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:NKLxc.5427$7C6.4347@newssvr22.news.prodigy.com...
> Just get a good clamp out of steel or copper and really torque it so you
get
> good contact. Good contact means there's metal-to-metal with no space for
> air or water. Not all strands will get this molecular contact but most
> touching will. Make sure the clamp is a cheap pot metal one as it'll
> corrode and fall off if it doesn't break while your torquing it. If you
hve
> any Thermit, it'll make a better joint.
>
> --
> 73
> Hank WD5JFR
>
> "Dave" <galt_57@hotmail.com> wrote in message
> news:5591d176.0406091057.b155e02@posting.google.com...
> > The answer must be here but after some searching I can't find it.
> > There is all sorts of conversation about ground rods and dissimilar
> > metals but I can't find the basic answer I need -- How do you make the
> > steel to copper connection? Do you simply clamp galvanized steel to
> > copper? Thanks.
>
>

3786. Re: inverted L or 1/2 size g5rv

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 16:13:34 UTC
From: jt1uk@aol.com
Message-ID: <20040610121334.09269.00000777@mb-m03.aol.com>
Source record: 93641

When I recently started out on HF these two antennas seemed to be obvious canditates given the dimensions of my rear garden. I started out with an L of similar dimensions to those quoted by the OP, and later tried a doublet (close to half G5RV) with an open wire feeder which ran rings around the L.
Not a fair comparison by any means outside the context of my garden and given that the radial system for the L was 4 wires on the ground no more than 25 feet in length.
My next step is to try a doublet of twice the length with the excess wire at each end being guyed in various directions as necessary .
Have any of you experience of this and particularly of optimising what will probably be an assymetric assymetric antenna?

John
M1JTA

3787. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 16:35:07 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <r83hc09otmbjrqo7i5rn07uc5ntcit0ail@4ax.com>
Source record: 93642
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

On 10 Jun 2004 15:04:57 GMT, "-=jd=-" <jd770YOUR@HATpostmark.net>
wrote:

>
>The difference being, Broadband and Broadbandd related "stuff" is selling
>quite well which correlates at some reasonable level into a demand for
>broadband. I'm not sure what the market figures are for shortwave, but I
>would guess it's much lower. Even if you were able to get *all* active
>SWL's in the U.S. to write (twice) to the FCC in opposition to BPL, how
>many protest letters do you think that would amount to in comparison to
>the broadband market's demand for broadband? Does anyone in here have any
>insight into marketing demographics for SWL's?

I'm sure some of our right-wing preachers that have taken to the
shortwaves could mount good letter-writing campaigns, should their
broadcasts be drowned out by BPL :-)

Bob
k5qwg

>
>Of course, the presumption I'm making is that there is a measurable demand
>for broadband in those remote locales where it is not already affordably
>available via other providers (cable, phone, etc.).
>
>-=jd=-

3788. Re: Simple practical designing with antenna modeling programs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 16:55:33 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2iri36Fpeo5gU1@uni-berlin.de>
Source record: 93643

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2ir30fFpnd30U1@uni-berlin.de...
> Are these points true?
>
> The following is the simplest way of obtaining a practical yagi design
using
> an antenna modeling program:
>
> 1 If you use a non conducting boom then you can build a practical model
> using the element lengths in the model.
>
> 2 For a VHF yagi in the clear you can assume freespace.
>
> 3 A simple straight wire in your model that is made source is DE and
> is treated as a simple hertz dipole by the program. So the values given
for
> R and J are the values you would measure having a hertz dipole as DE.
> This is true for the model and would be fairly accurate if the boom was
> non conducting and reasonably in the clear in the practical design.
>
> 4 It is easy to scale for frequency in antenna programs.
>
> 5 It is fairly easy to alter element diameters in antenna programs and
to
> obtain a redesign that maintains the original performance
characteristics.*
>
> It seems to me that if one is prepared to use a non conducting boom, a
> hertz dipole as DE, then the model is pretty much the practical design.
>
> Not sure about impact of a balun or the feedline.

http://www.cebik.com/scales.html

"Although I have omitted details--since they may vary widely--the general
principles separating the three mounting systems should be clear. The first
version uses a non-conductive plate or other means of insulating and
separating the element from the boom. If the separation is sufficient, the
boom has virtually no effect upon the element. In such cases, one may use
modeled dimensions directly, since the model (whether NEC or MININEC)
presumes that the elements are isolated from unmodeled conductors. An
alternative to the insulating plate is, of course, to use a non-conductive
boom. This technique permits through-boom mounting for the element, but with
no change of the effective length of the element."

(Scaling and Adjusting VHF/UHF Yagis L. B. Cebik, W4RNL)

So, I could use a metalic boom but make sure the elements are insulated, then the model is pretty much the practical design.

This means then that designing a practical antenna would be greatly simplified either by using a non conducting boom or insulating the elements.

I'm still unsure of point 3. But I assume that for a single wire that is made source in an antenna program, DE is a simple hertz dipole, the dimensions and the electrical parameters would be reproduced in a practical design cut to the dimensions as per the model - if the elements are insulated or the boom is non conducting.

3789. How do I feed a wideband VHF yagi with a balaced DE with unbalanced coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 17:24:47 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2irjq0FpsitoU1@uni-berlin.de>
Source record: 93644

The yagi is centered on 159 Mhz with a bandwidth of 6 Mhz.

The feed is 50ohm coax.

The DE is a simple hertz dipole. It's electrical parameters at the resonant frequency are R 50.9 J + 10.3.

What kind of balun would you use? TIA.

3790. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 17:26:36 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <nd5hc0dct050v3goj287p2p7uvv1682ruc@4ax.com>
Source record: 93645

snip
>>And that, in a nutshell, is the entire problem. You implied your definition
>>of re-reflection in _Reflections_. Steve implied his definition of re-reflection
>>in his QEX article. They are NOT the same definitions. Your definition of re-
>>reflected voltage involves a reflection coefficient of 1.0 at your virtual short.
>>Steve's reflection coefficient is the *physical reflection coefficient*, not the
>>virtual reflection coefficient and is NEVER equal to 1.0.

Cecil, I'll give you an example below, taken from your own 1/4 wl transformer
analysis, that proves a virtual reflection coefficient can equal 1.0.

>Now I see your problem, Cecil, and that is because you still don't understand
>why a reflect ion coefficient of 1.0 IS established when two waves equal in
>magnitude but of equal and opposite phase occur at the match point. If the two
>waves are of unequal magnitude the coefficient is simply less than 1.0. So I
>repeat for emphasis, it matters not whether the reflection is established by
>physical or virtual means. This is another error in Steve's article. He disputes
>this established fact, saying incorrectly that a physical short is required to
>establish reflections--totally wrong.

In your 1/4 wl transfomer analysis we have Pfwd total = 133.33 w. 33.333 w of
this incident power was reflected, even though in originally separate, but
eventually integrated waves to sum to 33.333 w. The originally separate, but
eventually integrated voltages were totally re-reflected at the match point. I
know that you agree that all reflected waves are totally re-reflected at the
match point. How do you suppose those waves became totally re-reflected? It can
be accomplished only if the aggregate reflection coefficient is 1.0.
Consequently, in the steady state the input of the 1/4 wl transformer presents a
reflection coefficient of 1.0 to the integrated sum of individual reflected
waves. The separate forward and reflected waves that appear in your analysis
occur separately only during the transition period from the initial state to the
steady state condition. Can't be any other way, Cecil. Believe it!

>

3791. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 17:28:16 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40C89A39.C30E2413@shaw.ca>
Source record: 93646

Richard wrote:

> Have I discarded the wood option prematurely. Maybe. :c)

Get a broken hockey stick -- lots around hockey rinks. They are hard
as nails and work great. I have also used them as yardarms on towers with
pulleys and they have lasted for many years in every kind of weather.

Irv - VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3792. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 17:49:55 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <caa748nua1@newshost.mot.com>
Source record: 93654

Uh.. I'm gonna do this anyway...

"Cecil Moore" <w5dxp@hotmail.com> wrote in message
news:40c7cab8_5@corp.newsgroups.com...
> Henry Kolesnik wrote:
> > ...shorted 1/4 wave stub...
> > for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
impedance
> > or a short. There are claims that this can be used to filter the even
> > harmonics. Shorts can't diisipate power and must reflect, so how does
a
> > stub work?
>
> Consider the following configuration:
>
> Source----ideal 1 WL feedline-----------+-----matched load
> |
> |Stub
> |
> |
> open

Oops! Time to wipe the CRT clean... Henry wants to discuss a SHORTED
stub...reset. end. stop.
My original comments hold. Harmonics are "reflected" or however you
want to look at the fact that they don't make it to the "matched load".
...... Unfortunately, I continue...

Assuming Cecil's comments will be valid if I swap the 1xF (1/4W) and the 2xF
(1/2W) comments, I proceed...

>
> If the stub is 1/4WL,
[... RESPONDIND as though this was the 1/2W remark...]

At the mouth of the stub, they
> are 180 degrees out of phase and superpose to zero volts which obeys
> Ohm's law and delivers zero power to the load.

Yea, ok, so a little sneaks by since it ain't lossless.

> Double the frequency. That makes the stub 1/2WL.
[...RESPONDING as though this was the 1/4W remark...]

The forward voltage and
> reflected voltage are essentially the same ...
> they are in phase and superpose to a maximum value which obeys Ohm's

> law and delivers maximum power to the load.

In my mental model, a hi Z across the line.

>
> Absolutely nothing except superposition and interference happens at the
> mouth of a stub. All the reflected action happens at the physical open
> circuit. Virtual impedances are only a V/I ratio and CANNOT cause
> reflections. Absolutely no reflections are happening at the mouth of
> the stub (unless a physical impedance discontinuity exists there).

\\ Nit alarm on\\ (Though I consider this a clarification in an attempt to simplify the explanation and remove the extra complexity added by the double terms) I consider superposition and interference to be the same thing. Superposition is the addition of two quantities (voltages ot currents). They can be of similar sign or different. If they are closer to 'in-phase', then they add to a greater value and if they are closer to 180 degree phase difference, then they add to a smaller value. You can call that "algebraiclly add" if it makes you feel better.
That is, a +1 and +1 _add_ to +2. A -1 and a +1 _add_ to 0.0
\\ end nit alarm \\

This IS a correct way to look at it. Think of the "main" line" (the one going to the "matched load" above) as being the thing which is "added to" the shorted system. Since it is added to a low Z point (on this high VSWR line), little goes down that path to the desired load. Any 50 ohm "thing" put in parallel at the point of the lowest voltage of the standing wave, sees a low/zero voltage, therefopre nothing goes there.

>
> Consider this. If a stub really presented an infinite impedance, you could
> simply remove it and nothing would change.

At the fundamental (_OPEN_ 1/4W stub, remember) this IS TRUE.
Are you saying that the 1/4W _shorted_ stub addition or removal makes a BIG difference at the fundamental -I think not, or you still talking about the 1/4W _open_ stub which kills the system at the fundamental when added.

3793. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 17:50:53 UTC
From: hello <hello@nospam.com>
Message-ID: <mb1yc.51167$zm5.26152@nntpserver.swip.net>
Source record: 93647

Many thanks for all the answers.
After all, I will try the horizontal Jpole.
It was my first idea but, I read lots of bad thinks about this antenna
(in particular in this newsgroup), but it's so easy to build that I
could try.

Thierry
F4DWV

3794. Re: Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 17:55:02 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <caa7drnvg1@newshost.mot.com>
Source record: 93653

An application just means that the _applicant_ believes it is patentable.
If the examiner finds sufficient prior art, out it goes. On the other hand,
there is something to be said for applying several older ideas to a new
problem and making the _combination_ patentable.

--
Steve N, K,9;d, c. i My email has no u's.

"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
news:85ed38d.0406091953.2aeb265d@posting.google.com...
> "Rick Karlquist N6RK" <richard@karlquist.removethis.com> wrote in message
news:<M5bxc.14440$HG.13166@attbi_s53>...
> snip
> >
> > IMHO, I don't see how they can patent the basic concept of
> > the SteppIR, but then I'm not a patent attorney. There
> > is the "Cliff Dweller" adjustable dipole as prior art, but will
> > the examiner ever find that. Maybe they are just patenting the idea of
> > the tape in the hollow tube.
> >
> > Rick N6RK
>
> Well I remember doing the same thing using a Mercedes car antenna
> which had a nice drive on it where the plastic cord was changed to
> wire. Worked O.K. when running the wire thru telescopic fishing poles.
> The first printing of this sort of design was one described in
> in many electrical journals in early 1970 . The antenna was sold by
> Racal
> (type AE3062) which was an all frequency monopole.
> They used a glass fibre column and at the base were two driven spools
> one of which had a flat silver coated copper tape and the other had a
> flat insulator tape. These tapes were both joined to form one complete
> tape which was driven up the mast (fibre glass tube column). In one
> version they had a frequency discriminating bridge sensor for an
> automatically tuned servo-system.They had two forms of antennas for
> commercial and military aplications, 2-30 Mhz and 4- 30 mHZ with poles
> 65 foot high and 125 foot high. Unfortunately it does require a ground
> plane to cover all frequencies a problem I over came with my
> particular antenna by using a full dipole structure.
> Like you I cannot see how a moveable conducting tape inside a fibre
> glass tube
> can be seen as a new invention or antenna device when the above
> description
> was so widely printed in the U.S. and sold commercially to boot!
> Regards

> Art
>
> >
> >
> >
> >
> > "Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
> > news:85ed38d.0406070836.6ed22d98@posting.google.com...
> > > I notice that the STEPPIR antenna patent is still "Pending"

3795. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 17:55:18 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <ag1yc.5391$u_5.1423@newssvr23.news.prodigy.com>
Source record: 93648

I forgot to mention putting an inverted tin can or bottle over the
connection, should be good for years. Better than tape or tar!
--
73
Hank WD5JFR

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:NKLxc.5427$7C6.4347@newssvr22.news.prodigy.com...
> Just get a good clamp out of steel or copper and really torque it so you
get
> good contact. Good contact means there's metal-to-metal with no space for
> air or water. Not all strands will get this molecular contact but most
> touching will. Make sure the clamp is a cheap pot metal one as it'll
> corrode and fall off if it doesn't break while your torquing it. If you
hve
> any Thermit, it'll make a better joint.
>
> --
> 73
> Hank WD5JFR
>
> "Dave" <galt_57@hotmail.com> wrote in message
> news:5591d176.0406091057.b155e02@posting.google.com...
> > The answer must be here but after some searching I can't find it.
> > There is all sorts of conversation about ground rods and dissimilar
> > metals but I can't find the basic answer I need -- How do you make the
> > steel to copper connection? Do you simply clamp galvanized steel to
> > copper? Thanks.
>
>

3796. Re: K1DFT New Antenna Technology

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 18:12:55 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <caa8fc$o5c$1@newshost.mot.com>
Source record: 93657

"Yuri Blanarovich" <k3bu@aol.comNoUsama> wrote in message
news:20040609210526.13391.00000688@mb-m04.aol.com...
> >Another press write-up:
> > http://www.planetanalog.com/news/showArticle.jhtml?articleID=21402311
> >Jim, K7JEB

> [snip] "A helix
> antenna is normally known to be a core radiator, because the current
profile
> drops off rapidly; they are just an inductor, and inductance does not like
to
> see changes in current, so it's going to buck that.

This sounds like false theory. He is implying that a distributed
inductor opposes a difference in current along its length, no?

The RF current in the distributed inductor can be different along its
length, modeling shows that, but this is AC and it is _always_ opposing the
changing AC (in this case RF) current at any point of the coil. That's what
inductors do. I can't get this to extend to opposing different AC currents
along the length of a long coil. If there is enough field from one end of
the coil coupling to the other end, then a falling field at the first end
tends to oppose a change in the current at that end as well as at the other,
but that's an opposition to a change in instantenous current, which will
increase inductance, not the AC current magnitude...

> "What I found was that for any smaller antenna, if you place a
> load coil in the middle you can normalize and make the current
> through the helix unity; that is, you can maximize it and
> linearize it," he added. <<

I can't get "Linearize" to work. Does he mean, "vary linearly along the
length"? "Normalize" and "unity" are pretty obsure as well.

Guess I'll wait for the movie to comeout.

--
Steve N, K,9;d, c. i My email has no u's.

3797. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 18:16:34 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c8a6a9_5@corp.newsgroups.com>
Source record: 93649

Walter Maxwell wrote:
> Cecil, the only difference that can obtain between reflection coefficents is in
> magnitude and phase. It matters not whether a reflection is established by a
> physical discontinuity or wave interference, the result is identical.

I agree the results are identical - It matters within the analysis but it
doesn't matter to the outcome. You and Steve get the same outcome. The
things you are arguing over is what happens inside the model each of you
is using.

> Now I see your problem, Cecil, and that is because you still don't understand
> why a reflection coefficient of 1.0 IS established when two waves equal in
> magnitude but of equal and opposite phase occur at the match point.

Walt, please listen to this again. I understand why a reflection coefficient
of 1.0 is established in your model. I understand why it is impossible for a
reflection coefficient of 1.0 to exist in Dr. Best's model. It is now up to you
to understand why it is impossible for a reflection coefficient of 1.0 to exist
in Dr. Best's model. A reflection coefficient of 1.0 also does not and cannot
exist in an S-parameter analysis of the following example.

> Cecil, we don't need to argue the conditions concerning S-parameter analysis,
> because I've put my finger on the problem you're having with this entire
> discussion, that is you're (and Steve's) unwillingness to understand that wave
> interference can establish a reflection coefficient of 1.0 without any physical
> means.

It is IMPOSSIBLE to establish a reflection coefficient of 1.0 in an S-parameter
analysis of the following:

100W XMTR---50 ohm line---x---1/2WL 150 ohm line---50 ohm load

The reflection coefficient at point 'x' in Dr. Best analysis is ABSOLUTELY
CONSTANT at 0.5. It NEVER changes from 0.5. It is always (150-50)/(150+50)
equals 0.5. It NEVER becomes 1.0 as it does in your analysis. A reflection
coefficient of 1.0 is ABSOLUTELY IMPOSSIBLE using an S-parameter analysis of
the above configuration.

Using an S-parameter analysis, a reflection coefficient of 1.0 DOES NOT exist
anywhere and CANNOT exist anywhere. Until you accept that fact, you will continue
to be confused.

Let me say it once again: THE "REFLECTION COEFFICIENT" THAT YOU ARE USING HAS
A DIFFERENT DEFINITION THAN THE "REFLECTION COEFFICIENT" THAT DR. BEST IS USING.
IT IS IMPOSSIBLE FOR DR. BEST'S REFLECTION EVER TO EQUAL 1.0. Dr. Best's rho is
NOT equal to and is NEVER equal to SQRT(Pr/Pf). Why is that so hard to understand?
--

73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3798. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 18:23:19 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40C8A717.39B1@wt.net>
Source record: 93650

Richard wrote:

> > A simple fast way to design an NBS yagi for any freq, is to use the
> > eznec demo. It has a NBS yagi as a demo, and it can be easily scaled
> > for any freq. MK
>
> Okay, but aren't these models only sufficiently accurate if you use the
> dimensions in the models to build an actual yagi, if the boom is non
> conducting?

I don't worry about the boom. It's effect on the antenna is small. All
my booms normally are metal.
Is it not true that if the boom is conducting you cannot rely on
> the model dimensions?

I don't think it is to any great degree worth losing sleep over. I built
the eznec NBS yagi for 6m, and used those dimensions, using my own
construction techniques, and it came out nearly perfect as per the
model, and modeled results. To me, you are taking a simple task, and
overly complicating things by insisting on utter perfection in element
diameters, boom, element mounting, etc. For a VHF receive 3-4 el yagi,
it's just not *that* critical. When I built a marine yagi, I paid little
attention to exact element dia, mounting , boom, etc. I used coathanger
wire welded directly to the copper tube boom. I didn't try to optimise
the lengths, etc. In fact, this was waaaay before I'd ever seen a
modeling program. It still worked just fine.
MK

--
http://web.wt.net/~nm5k

3799. NEW - Choke Balun Program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 18:24:43 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <caa91a$6pl$1@titan.btinternet.com>
Source record: 93651

New program CHOKEBAL.exe

Design and performance of a choke balun wound on a ferrite ring in
conjunction with a balanced transmission line and antenna.

The percent current unbalance on the line is estimated and how it varies
with frequency, line-length, etc.

Sorry, this program does NOT tell you how much power is radiated from the
feedline.

Program size 37 kilo-bytes. Download CHOKEBAL in a few seconds from website
below and run immediately. It's free issue.

....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
....

3800. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 18:27:51 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c8a94d_5@corp.newsgroups.com>
Source record: 93652

Walter Maxwell wrote:
> Cecil, I'll give you an example below, taken from your own 1/4 wl transformer
> analysis, that proves a virtual reflection coefficient can equal 1.0.

Save your energy, Walt. An S-parameter analysis does NOT allow for virtual
reflection coefficients. Virtual reflection coefficients DO NOT EXIST and
CANNOT EXIST in an S-parameter analysis. I don't know how to convey that
fact to you any stronger than I already have. Virtual reflection coefficients
are completely irrelevant to an S-parameter analysis. Virtual reflection
coefficients simply do NOT exist within the S-parameter math model.

> Consequently, in the steady state the input of the 1/4 wl transformer presents a
> reflection coefficient of 1.0 to the integrated sum of individual reflected
> waves.

Walt, virtual reflection coefficients simply don't exist in an S-parameter
analysis. Therefore, in all the examples discussed, reflection coefficients
of 1.0 are COMPLETELY IRRELEVANT to any discussion involving S-parameters.
Reflection coefficients of 1.0 DO NOT EXIST in an S-parameter analysis of a
matched system involving 50 ohms and 150 ohms. s11 is the reflection coefficient
looking into port 1. It is fixed constant at 0.5 and doesn't chance no matter
what the conditions. Your assertions are simply irrelevant to an S-parameter
analysis.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3801. Re: Simple practical designing with antenna modeling programs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 18:37:17 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40C8AA5D.76E9@wt.net>
Source record: 93655

Richard wrote:
>
> Are these points true?
>
> The following is the simplest way of obtaining a practical yagi design using
> an antenna modeling program:
>
> 1 If you use a non conducting boom then you can build a practical model
> using the element lengths in the model.

I don't think it matters much what boom you use. Being at right angles
to the elements, the boom should be nearly "invisible" to the antenna.
Even if it's metal, Even if the elements are directly connected to the
boom.
Sure, there will be minor differences, but for your task, I don't think
it's worth worrying about. I sure don't. I'm not *that* picky.
>
> 2 For a VHF yagi in the clear you can assume freespace.

Yes. For all practical purposes...
>
> 3 A simple straight wire in your model that is made source is DE and
> is treated as a simple hertz dipole by the program. So the values given for
> R and J are the values you would measure having a hertz dipole as DE.

Yes. Normally will end up a fairly low impedance, unless you space the
elements for a appx 50 ohm feed. NBS yagi's will have a fairly low
feedpoint impedance. Thats why I prefer just to use a boom grounded DE,
and use a matching device. I almost never use a split driven element
unless the yagi plans call for a 50 ohm feed due to the element spacing.
My cushcraft A4S is of this ilk...

> This is true for the model and would be fairly accurate if the boom was
> non conducting and reasonably in the clear in the practical design.

Again, even if the boom is conducting, I don't think it's worth worrying
about..It doesn't make that much difference. Or to me anyway...

>
> 4 It is easy to scale for frequency in antenna programs.

Yes.
>
> 5 It is fairly easy to alter element diameters in antenna programs and to
> obtain a redesign that maintains the original performance characteristics.*

If you simply rescale, the results should be the same. All dimensions
are rescaled. Of course, you can doodle with the program and redesign..
>
> It seems to me that if one is prepared to use a non conducting boom, a
> hertz dipole as DE, then the model is pretty much the practical design.

I think it is good enough, no matter what the boom is...
>
> Not sure about impact of a balun or the feedline.

If you use a split driven element with a 50 ohm feed, you need a 1:1
balun, or equal choke, or whatever...

--
http://web.wt.net/~nm5k

3802. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 18:44:39 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2irofsFpuv7kU1@uni-berlin.de>
Source record: 93656

"Mark Keith" <nm5k@wt.net> wrote in message news:40C8A717.39B1@wt.net...
> Richard wrote:
>
> > > A simple fast way to design an NBS yagi for any freq, is to use the
> > > eznec demo. It has a NBS yagi as a demo, and it can be easily scaled
> > > for any freq. MK
> >
> > Okay, but aren't these models only sufficiently accurate if you use the
> > dimensions in the models to build an actual yagi, if the boom is non
> > conducting?
>
> I don't worry about the boom. It's effect on the antenna is small. All
> my booms normally are metal.
> Is it not true that if the boom is conducting you cannot rely on
> > the model dimensions?
>
> I don't think it is to any great degree worth losing sleep over. I built
> the eznec NBS yagi for 6m, and used those dimensions, using my own
> construction techniques, and it came out nearly perfect as per the
> model, and modeled results. To me, you are taking a simple task, and
> overly complicating things by insisting on utter perfection in element
> diameters, boom, element mounting, etc. For a VHF receive 3-4 el yagi,
> it's just not *that* critical. When I built a marine yagi, I paid little
> attention to exact element dia, mounting , boom, etc. I used coathanger
> wire welded directly to the copper tube boom. I didn't try to optimise
> the lengths, etc. In fact, this was waaaay before I'd ever seen a
> modeling program. It still worked just fine.
> MK
>
> --
> http://web.wt.net/~nm5k

What has happenned is that I, who know little of the art, am relying on whoever condescends to make a comment. And comments so far have tended to highlight how unsatisfactory it is taking a model and bulding a yagi on the dimensions. There seems to have been a desire to point out to me how impossible a task it is to build a decent antenna unless one factors in alteration of boom size and element diameters. Technically these comments are correct, you cannot expect to get the same antenna performance if these things are ignored and I feel I've been concentrating on these details for fear of not doing enough. But on the other hand, will the difference on receive amount to much whether elements are insulted from a boom or not . Probably not eh.

3803. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 18:52:10 UTC
From: dplatt@radagast.org
Message-ID: <10chbeq7df0no60@corp.supernews.com>
Source record: 93658

In article <2ir7t9FprravU1@uni-berlin.de>,
Richard <nearlynews_email@ntlworld.com> wrote:

>Anyone have experience of making VHF antennas with non conducting booms?

The one I made for 200 MHz (TV channel 11) was made from a couple of
pieces of 3/4"-square clear fir, with copper-plated-steel welding rod
segments for elements. Worked fine.

>I think I ought to be able to employ a non conducting boom for a yagi design
>that is no more than about 50" (1.27 meters) in length. Must have sufficient
>rigidity.
>
>I was thinking about using a square boom made out of some synthetic material
>(NOT wood). Obviously tthe material must not degrade over time in an
>outdoor environment.

I've seen square, hollow rods made of fiberglass. Should work
reasonably well as long as you drill it carefully, cap the ends to
keep and wind out, and paint it afterwards to protect the resin from
solar UV.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3804. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 18:55:24 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c8afc2_8@corp.newsgroups.com>
Source record: 93659

Steve Nosko wrote:
> Oops! Time to wipe the CRT clean... Henry wants to discuss a SHORTED
> stub...reset. end. stop.

Sorry, a shorted 1/2WL stub exhibits a short at the fundamental frequency
and an open when it is 1/4WL at 1/2 the frequency of the first. Same
principles apply.

>>Absolutely nothing except superposition and interference happens at the
>>mouth of a stub. All the reflected action happens at the physical open
>>circuit. Virtual impedances are only a V/I ratio and CANNOT cause
>>reflections. Absolutely no reflections are happening at the mouth of
>>the stub (unless a physical impedance discontinuity exists there).
>
> \\ Nit alarm on\\ (Though I consider this a clarification in an attempt
> to simplify the explanation and remove the extra complexity added by the
> double terms) I consider superposition and interference to be the same
> thing.

So do I. I probably should have said superposition/interference, which logically
equals (superposition AND interference) since ONE AND ONE = ONE.

>>Consider this. If a stub really presented an infinite impedance, you could
>>simply remove it and nothing would change.
>
> At the fundamental (_OPEN_ 1/4W stub, remember) this IS TRUE.
> Are you saying that the 1/4W _shorted_ stub addition or removal makes a
> BIG difference at the fundamental -I think not, or you still talking about
> the 1/4W _open_ stub which kills the system at the fundamental when added.

Any stub that presents an infinite impedance should be able to be removed
and without anything changing. You have an infinite impedance before the removal
and you have an infinite impedance after the removal, so nothing changes when
you remove the stub. (Hint: Devil's advocate reasoning applied) Of course,
something changes when one removes the stub - that's the entire point. There
are forward components and reflected components flowing in and out of a stub.
That's why removing it changes things.
--
73, Cecil http://www.qsl.net/w5dxp

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3805. Re: K1DFT New Antenna Technology

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 20:00:02 UTC
From: fractenna@aol.com
Message-ID: <20040610160002.15234.00000816@mb-m16.aol.com>
Source record: 93660

> This sounds like false theory. He is implying that a distributed
>inductor opposes a difference in current along its length, no?
>
> The RF current in the distributed inductor can be different along its
>length, modeling shows that, but this is AC and it is _always_ opposing the
>changing AC (in this case RF) current at any point of the coil. That's what
>inductors do. I can't get this to extend to opposing different AC currents
>along the length of a long coil. If there is enough field from one end of
>the coil coupling to the other end, then a falling field at the first end
>tends to oppose a change in the current at that end as well as at the other,
>but that's an opposition to a change in instantenous current, which will
>increase inductance, not the AC current magnitude...
>
>
>> "What I found was that for any smaller antenna, if you place a
>> load coil in the middle you can normalize and make the current
>> through the helix unity; that is, you can maximize it and
>> linearize it," he added. <<
>
> I can't get "Linearize" to work. Does he mean, "vary linearly along the
>length"? "Normalize" and "unity" are pretty obsure as well.
>

He means that a very electrically small monopole can be designed so it has no current maximum: the current does not vary in magnitude with height. The current value is the same along it's length.This is common for top hat monopoles which are less than 1/30 wave in height.

The issue arises in the Vincent discussion because the electrical length of the antenna is far in excess of the height, so the current changes--unless you distribute additional inductance and capacitively truncate at the top.

Because the antenna is electrically long and physically short, it has a higher feedpoint resistance, although the tradeoff of higher ohmic losses to higher rad resistance gives, at best, a wash on gain.
It is, in effect, a short, slow wave antenna.

Monopole limits: At 1/30 wave height, the bandwidth can be on order of a few percent or less, with -2 dBd or so. I have worked with such antennas for some time. If you increase heights to 1/15 wave, the increase in bandwidth can be dramatic.

The problem is that broadcast antennae need reduced height--but don't need the many-percent bandwidth. They also have arcing issues from high voltage.

The problem is that commercial and military applications (such as cell phones) need multiband or wideband--and not the modest bandwidth.

The problem is that RFID doesn't have a size and gain problem, but an impedance problem.

Thus the 'revolution' is somewhat small in population....But hams need modest bandwidth and low height. Hence a potential niche.--if you have room for a ground plane.

Is there really a market for short , single band, ham monopoles? Understand that for a few more feet in height, you can get an MFJ multiband vertical--without a radial system.

73,
Chip N1IR

3806. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 20:01:50 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <qndhc0pgr345a2bv82r31tv5phfo7oqe99@4ax.com>
Source record: 93661

On Thu, 10 Jun 2004 13:16:34 -0500, Cecil Moore <w5dxp@hotmail.com> wrote:

>Walter Maxwell wrote:
>> Cecil, the only difference that can obtain between reflection coefficents is in
>> magnitude and phase. It matters not whether a reflection is established by a
>> physical discontinuity or wave interference, the result is identical.
>
>I agree the results are identical - It matters within the analysis but it
>doesn't matter to the outcome. You and Steve get the same outcome. The
>things you are arguing over is what happens inside the model each of you
>is using.

Cecil, you keep saying Steve and I get the same outcome. Where do you see that result ? The fact that Steve's outcome is incorrect in general, and nowhere agrees with mine, how can you say we get the same outcome?

>> Now I see your problem, Cecil, and that is because you still don't understand
>> why a reflection coefficient of 1.0 IS established when two waves equal in
>> magnitude but of equal and opposite phase occur at the match point.
>
>Walt, please listen to this again. I understand why a reflection coefficient
>of 1.0 is established in your model. I understand why it is impossible for a
>reflection coefficient of 1.0 to exist in Dr. Best's model. It is now up to you
>to understand why it is impossible for a reflection coefficient of 1.0 to exist
>in Dr. Best's model. A reflection coefficient of 1.0 also does not and cannot
>exist in an S-parameter analysis of the following example.

Why do you keep insisting on an S-parameter analysis? What good are you accomplishing with it ? And speaking of Steve's model--he shows it in his Fig 5 as a simple T-network as used in most antenna tuners. The effect at the input of the network is no different than in a stub model or a 1/4 wl transformer model. You can't rely on 'different models' to explain away the problem. When properly adjusted to match the output to the input in his T-network the reflected power reaching the input is totally re-reflected. This results only from a reflection coefficient of 1.0. Saying that it is impossible for a 1.0 to exist in Steve's model is simply not true. Steve simply doesn't understand the wave mechanics involved here.

>> Cecil, we don't need to argue the conditions concerning S-parameter analysis,
>> because I've put my finger on the problem you're having with this entire
>> discussion, that is you're (and Steve's) unwillingness to understand that wave
>> interference can establish a reflection coefficient of 1.0 without any physical
>> means.
>
>It is IMPOSSIBLE to establish a reflection coefficient of 1.0 in an S-parameter
>analysis of the following:

>
>100W XMTR---50 ohm line---x---1/2WL 150 ohm line---50 ohm load

It's true that the physical reflection coefficient is 0.5. How then do you account for ALL the reflected energy being re-reflected to the load? The fact is that a reflection coefficient of 1.0 is also established there by wave interference. You really must come to the grips with the fact that a reflection coefficient of 1.0 can be established by wave interference. You are now the one who won't budge.

>The reflection coefficient at point 'x' in Dr. Best analysis is ABSOLUTELY
>CONSTANT at 0.5. It NEVER changes from 0.5. It is always (150-50)/(150+50)
>equals 0.5. It NEVER becomes 1.0 as it does in your analysis. A reflection
>coefficient of 1.0 is ABSOLUTELY IMPOSSIBLE using an S-parameter analysis of
>the above configuration.
>
>Using an S-parameter analysis, a reflection coefficient of 1.0 DOES NOT exist
>anywhere and CANNOT exist anywhere. Until you accept that fact, you will continue
>to be confused.
>
>Let me say it once again: THE "REFLECTION COEFFICIENT" THAT YOU ARE USING HAS
>A DIFFERENT DEFINITION THAN THE "REFLECTION COEFFICIENT" THAT DR. BEST IS USING.
>IT IS IMPOSSIBLE FOR DR. BEST'S REFLECTION EVER TO EQUAL 1.0. Dr. Best's rho is
>NOT equal to and is NEVER equal to SQRT(Pr/Pf). Why is that so hard to understand?

I haven't seen anything in Steve's paper that shows he's using an S-Parameter, can you show me where? Not that it would make any difference in the outcome.

In addition, referring to your paragraph immediately above, where did you get the idea that I said Steve's rho = SQRT(Pr/Pf)? Cecil, that's simply SWR, not rho.

At this point, Cecil, if you are still unable to accept the concept of establishing a reflection coefficient of 1.0 through wave interference then there is no use of continuing this discussion. It will never go forward until you do. I know there are others on this rraa who agree with you, but there are many more who understand the concept and agree that it's true.

Walt

3807. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 20:12:14 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40C8C09E.1E01@wt.net>
Source record: 93662

Richard wrote:

>
> What has happenned is that I, who know little of the art, am relying on
> whoever condescends to make a comment. And comments so far have tended to
> highlight how unsatisfactory it is taking a model and bulding a yagi on the
> dimensions.

Mine came out nearly perfect. 6m version...

There seems to have been a desire to point out to me how
> impossible a task it is to build a decent antenna unless one factors in
> alteration of boom size and element diameters. Technically these comments
> are correct, you cannot expect to get the same antenna performance if these
> things are ignored and I feel I've been concentrating on these details for
> fear of not doing enough. But on the other hand, will the difference on
> receive amount to much whether elements are insulted from a boom or not .
> Probably not eh.

It does make a difference, but I don't think it's anything that would ruin an antenna. Lets say "perfect" design shows 9.4 dbi. Lets say "not quite perfect" design shows 8.4 dbi gain. Hardly noticable in the real world. Most consider 6 db to equal an S unit in theory as an example...When building my 6m yagi, "three element" I copied the eznec NBS specs exactly as far as element lengths and dia. The dia was 1/2 inch , which was easy to copy using 1/2 inch copper tubing. I gave no real thought about boom size or type, DE type, etc. I built the antenna per specs using welded to the boom elements, and welded to the boom one piece DE, matched using a simple gamma match. The antenna is all one piece including the boom. If I had used a split DE, I would have still used the same lengths...Anyway, I built it and tested it using local stations as signal sources. The gain and f/b "seemed" to be almost exactly as modeled, as well as I could measure. IE: the modeled f/b is appx 10 db. Thats about what I got. The forward gain seemed to be about right on also. "appx 9.4 dbi".
The easy way out for you, would be to get an existing 2m yagi, and simply trim the elements. You could rescale in the model program to tell you how much to take off. Sure, the spacings will change slightly, but again I bet it won't be noticable. If anything, being the spacing will actually slightly increase in wl, the gain "could" actually increase slightly. I bet it doesn't drop much... The modeling program would give you a good idea of what to expect from it. MK

--
http://web.wt.net/~nm5k

3808. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 20:25:09 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40C8C3A5.17BE@wt.net>
Source record: 93663

Mark Keith wrote:

> The easy way out for you, would be to get an existing 2m yagi, and
> simply trim the elements. You could rescale in the model program to tell
> you how much to take off.

BTW, if you rescale a 2m antenna, it will also rescale the spacing. So
in order to be accurate, you would need to respace the rescaled shorter
elements to match the old spacings. "After rescaling". Fairly
simple..That would give you a decent idea what to expect from the
modified antenna. MK

--
http://web.wt.net/~nm5k

3809. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 21:29:43 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40C8D2C7.7FB6@wt.net>
Source record: 93664

Mark Keith wrote:
>
> Mark Keith wrote:
>
> > The easy way out for you, would be to get an existing 2m yagi, and
> > simply trim the elements. You could rescale in the model program to tell
> > you how much to take off.
>
> BTW, if you rescale a 2m antenna, it will also rescale the spacing. So
> in order to be accurate, you would need to respace the rescaled shorter
> elements to match the old spacings. "After rescaling". Fairly
> simple..That would give you a decent idea what to expect from the
> modified antenna. MK
>
As a test I first rescaled the eznec 50 mhz NBS yagi to 146 mhz. I used
6-7-6 as the demo segment numbers. You are limited to 20 in the demo.
This kept the source in the middle of the DE..I ran it through the mill
and got 9.63 dbi gain, and 9.35 f/b. I then rescaled that antenna to 159
mhz. I then set the element spacings back to the 146mhz version specs.
Through the mill, and got 9.68 dbi gain, and 7.73 db f/b. About as I
expected...It would still be a good antenna. f/b is not much of an issue
for your needs in general...Thats more of an HF thing...You want gain
for local VHF. The chances of someone on your backside causing QRM are
fairly low... Find a 3-4-5 el 2m antenna, whack the elements down a tad,
and you'll be done with it. Well, unless you still wanna try building
one. It's easier to make a decent working yagi than you think, I
think...All that worrying about utter perfection will drive you to the
rubber room. :/ You would have to see about a 3 db difference in
performance to start really being noticable. Or my guess anyway on 159
mhz... MK
--
http://web.wt.net/~nm5k

3810. Re: Call for a *practical* design for a 5 or 6 element wideband yagi using a hertz dipole as DE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 21:33:38 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40C8D3B2.7DB2@wt.net>
Source record: 93665

```
Jack Painter wrote:
>
> "Richard" <nearlynews_email@ntlworld.com> wrote
>
> > I'm looking to make the center frequency 159 Mhz. So any practical design
> I
> > suppose is likely to be a VHF yagi not too far removed from 159 Mhz.
> > My antenna is to be a receiving antenna.
>
> Richard, I thought you wanted a marine-band antenna? The center should be at
> 156.300 to 156.800 mHz and will cover above that fine, but not well below
> it.
>
> Jack
Marine band goes up above 160 mhz a bit..If I remember right, the
boats/ patches, etc I used to hear were about 162 mhz. Been a while
though. They were above 160 mhz for sure. MK
--
http://web.wt.net/~nm5k
```

3811. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 21:37:36 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <caakf2$q9o$1@newshost.mot.com>
Source record: 93668

"Cecil Moore" <w5dxp@hotmail.com> wrote in message
news:40c8afc2_8@corp.newsgroups.com...
> Steve Nosko wrote:
> > Oops! Time to wipe the CRT clean... Henry wants to discuss a SHORTED
> > stub...reset. end. stop.
>
> Sorry, a shorted 1/2WL stub ... Same
> principles apply.
>
That's why I went ahead and continued on the "complementary situation"
[...]
>
> Any stub that presents an infinite impedance should be able to be removed
> and without anything changing. You have an infinite impedance before the
removal
> and you have an infinite impedance after the removal, so nothing changes
when
> you remove the stub. (Hint: Devil's advocate reasoning applied)

Your "Devil's advocate "meaning escapes me...

> Of course,
> something changes when one removes the stub - that's the entire point.
There
> are forward components and reflected components flowing in and out of a
stub.
> That's why removing it changes things.

Yea, but in the practical sense, it does not change anything at the
fundamental (desired) frequency [[high Z stub, power still to the load]].
It's only when you consider the harmonics, if they are there, that anything
important changes, right. So I'm puzzled why you included that part in your
comment.
--
Steve N, K,9;d, c. i My email has no u's.

3812. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 21:46:02 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <caakusqep1@newshost.mot.com>
Source record: 93521

"hello" <hello@nospam.com> wrote in message
news:mb1yc.51167$zm5.26152@nntpserver.swip.net...
>
> Many thanks for all the answers.
> After all, I will try the horizontal Jpole.
> It was my first idea but, I read lots of bad thinks about this antenna
> (in particular in this newsgroup), but it's so easy to build that I
> could try.
>
>
> Thierry
> F4DWV

//nit alarm on//
It's not a J-POLE. It's a J antenna. The J-POLE was a commercial antenna possibly by Cushcraft some time ago. It was a pole with several Js stacked vertically on it for gain. The J antenna goes back as far as my handbooks do at least the 40's.
I'd call this an end fed half wave. What's the matching device? A quarter wave shorted stub.
//nit podium off//

Registered member of NPA - Nit Pickers Anonomous

How come I don't see any of you guys at the meetings?
Also, how come the phrase "how come" means "why", sort of?

--
Steve N, K,9;d, c. i My email has no u's.

3813. Re: Call for a *practical* design for a 5 or 6 element wideband yagi using a hertz dipole as DE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 21:54:43 UTC
From: K7MEM <k7mem@myrealbox.com>
Message-ID: <40C8D8A3.30706@myrealbox.com>
Source record: 93666

Richard wrote:
> Hi. I'm wanting to "design" using a "simple design methodolgy". As far as I
> can tell that means avoiding using models and antenna programs because I
> think designing a practical yagi from a model is *not* a simple design
> methodology. That's my impression.
>
> So I think the best option I have is to take a practical design and use the
> principle of scaling, and using a program that will make adjustments to the
> element lengths for an alteration in element diameters and a program that
> will make adjustments in element lengths for alteration in boom size. I'm
> pretty sure element spacings will need not to be altered given some
> reasonable alteration in either element diamters or boom size.
>
> (Do these correction programs assume a particular element fixing method I
> wonder!!. Where are these programs. I only know of ELE.EXE)
>
> I'm looking for a practical design that uses a hertz dipole as DE, not a
> folded dipole. And it ought to be wideband well, a bandwidth of about 4% of
> the center frequency.
>
> Boom needs to be metal.
>
> I'm looking to make the center frequency 159 Mhz. So any practical design I
> suppose is likely to be a VHF yagi not too far removed from 159 Mhz.
>
> There can be a balun arrangement or not, but I don't want to feed a balanced
> DE with unbalanced coax.
>
> My antenna is to be a receiving antenna.
>
> My email is:
>
> hobby_electronics@REMOVEntlworld.com
>
> Please remove REMOVE.
>
> Thanks.
>

There use to be a program available written by Gunter Hock, DL6WU, that
was for designing VHF/UHF yagi antennas. It took into account boom type
and size, element size, bonding methods, etc.. The original program was
written in BASIC. For my own use, I converted it over to a JavaScript

driven web page. If you are interested I just posted it on the web at http://www.k7mem.150m.com/Electronic_Notebook/antennas/yagi_vhf.html. Maybe this is the kind of thing you are looking for. The original BASIC source code is available.

I only started this web site a week ago so don't expect everything to work completely. There are several known links that really don't go anywhere yet.

--
Martin E. Meserve
k7mem@myrealbox.com

3814. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 22:05:47 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <%W4yc.930$Wr.537@newsread1.news.pas.earthlink.net>
Source record: 93667

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2ir7t9FprravU1@uni-berlin.de...
> Anyone have experience of making VHF antennas with non conducting booms?
>
> I think I ought to be able to employ a non conducting boom for a yagi
design
> that is no more than about 50" (1.27 meters) in length. Must have
sufficient
> rigidity.

About 15 years ago I made a 220 mhz 8 element yagi out of a 10 foot piece of the gray electrical plastic type conduit. It is still at the top of my tower.. It is suspose to resist the UV from the sun beter than the normal PVC water pipe.

3815. Re: Antenna patent, (Fluid motions Steppir Antenna)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 22:12:21 UTC
From: kashe@sonic.net
Message-ID: <m2nhc0d35t04vu3vtqfndmsdtsj2lbilns@4ax.com>
Source record: 93669

On Tue, 8 Jun 2004 22:40:40 -0500, "*" <*@*.com> wrote:

>some take 4 years,
>
>"Art Unwin KB9MZ" <aunwin@insightbb.com> wrote in message
>news:85ed38d.0406070836.5defdbc6@posting.google.com...
>> I notice that the STEPPIR antenna patent is still "Pending"
>> I thought that "pending" meant that the patent has been awarded
>> and awaiting printing! Fluid motions have been stating Patent pending
>> for more than a few months (year)now and I have yet to see a release.
>> Anybody have any info on this ? I also noticed that another thread on
>> unconventional antenna design that the news release also stated
>> "patent pending"!
>> Has " patent pending "replaced the term "patent applied for" or has
>> the revised patent procedure and the USPTO fallen flat on its face ?
>> Art
>

If so, "patent applied for" must be _really_ old -- "patent
pending" showed up on all sorts of devices as far back as the '40s.

3816. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 22:20:57 UTC
From: dplatt@radagast.org
Message-ID: <10chnm9midc8v4a@corp.supernews.com>
Source record: 93670

>About 15 years ago I made a 220 mhz 8 element yagi out of a 10 foot piece of
>the gray electrical plastic type conduit. It is still at the top of my
>tower.. It is suspose to resist the UV from the sun beter than the normal
>PVC water pipe.

Did you have to support the ends of the conduit (e.g. a wire from the
tower top) at all? I've heard/read that the PVC conduits can tend to
droop progressively with time - any sign of that in your antenna?

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

3817. Re: How do I feed a wideband VHF yagi with a balaced DE with unbalanced coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 22:59:50 UTC
From: j999w@aol.com
Message-ID: <20040610185950.16660.00000898@mb-m15.aol.com>
Source record: 93522

You didn't mention if this would be used in some sort of transmitting application or not. Heck, for just listening across a 6mhz spread, I'd just connect the coax and not worry about it.

jw
K9RZZ

3818. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-10 23:05:26 UTC
From: jgboyles@aol.com
Message-ID: <20040610190526.06192.00000683@mb-m13.aol.com>
Source record: 93523

>Any stub that presents an infinite impedance should be able to be removed
>and without anything changing. You have an infinite impedance before the
>removal and you have an infinite impedance after the removal, so nothing
changes. There are forward components and reflected components flowing in and
out of a stub. That's why removing it changes things.

Is it because energy is stored in the stub? If the impedance is infinite then
no power dissipation is removed from the system. Something is dynamic in
nature in this example because if you remove an infinite impedance, nothing
will happen. Could the change be due to the fact that the stub is in the near
field of the antenna and subject to induced rf currents? If this were the
case, then removal of the stub would change things.
If the stub presents an infinite impedance, with no external influences,
removing it should have no effect. If the stub were replaced with a quality
parallel resonant LC circuit in a shielded box, would removing it make any
difference? I don't know, I am asking.

73 Gary N4AST

3819. Re: Ground Rod Removal

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 00:00:43 UTC
From: Topaz305RK <2smoore@nemontel.net>
Message-ID: <HMKdnZ77mKuZalXdRVn-uQ@vnet-inc.com>
Source record: 93524

If you have or know someone who has a "handy man" jack they work great for pulling ground rods, have done it many times.

K7SAM

3820. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 00:09:23 UTC
From: Topaz305RK <2smoore@nemontel.net>
Message-ID: <IsedndkFFuoaZFXd4p2dnA@vnet-inc.com>
Source record: 93525

If you are around any oil rigs you may be able to find some old pump rod. This rod is fiberglass, one inch in diameter with a large metal connector on each end. Just hack saw the ends off and you have about 20 feet of very rigid fiberglass rod. It is easy to make booms of 6 to 8 feet with no droop at all so a shorter boom would be even better. If you find some after you have cut it to length give it a good coat of paint just to keep the fiberglass slivers down.

K7SAM

3821. Re: K1DFT New Antenna Technology

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 00:34:01 UTC
From: fractenna@aol.com
Message-ID: <20040610203401.28253.00000586@mb-m22.aol.com>
Source record: 93526

> How do you put capacitors in? Is this a good slow wave solution?

CCD antenna use capacitors in a distributed way to cancel the inductance. They are commonly used in 1 wave dipole configurations. They have higher feedpoint impedances than 1/2 wave dipoles and they have 3 dB gain when fully stretched. Their pattern is figure 8, like a 1/2 wave dipole.

The Vincent antenna could use such an arrangement to emulate a 1/2 wave monopole CCD (that is, a 1 wave dipole) where the 1/2 wave electrical length is wound into a helix along the height.. In any case, there are a number of ways of doing this. In my opinion, this is not new, if that is the case.

I suspect that Vincent has a number of combinations of arrangements, depending on the desired height above 1/30 waves.

Remember: these are not efficient antennas; they are slow wave antennas. Put lots of power into them and they will heat up; arc; and melt. They trade gain against efficiency. They are not multi or wideband.

I would be very interested to know how hot a Vincent antennas when running 1500 watts continuous for an hour....If it's hot it's not efficient.

73,
Chip N1IR.

3822. Re: Jampro JMPC Theory of operation

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 00:35:40 UTC
From: K7JEB <k7jeb.remove.this@qsl.net>
Message-ID: <7hthc01mclarrkikn9cc3pgka1l9o1hdfp@4ax.com>
Source record: 93527

On Mon, 7 Jun 2004 08:02:18 -0500, "Richard Fry" <rfry@adams.net>
wrote:

>Here is a description of this antenna by Peter Onnigian, P.E.,
> who developed and patented the design...

> ...The slant angle is critical as it is the factor which
> determines the ratio of vertically and horizontally
> polarized radiated power....

> ... The two sets of dipoles are rotated at 22.5ï¿½ from the
>horizontal plane....

There you go - that's the secret sauce. It wasn't obvious
from the catalog photos that the dipoles were inclined at
an angle.

Good info, Richard.

Jim, K7JEB

3823. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:04:48 UTC
From: JJ <radiobuff77@mailcity.moc>
Message-ID: <KrKdna8FBYdyiVTdRVn-uA@gbronline.com>
Source record: 93537
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Clair J. Robinson wrote:

> Bob Miller wrote:
>
>>I'm sure some of our right-wing preachers that have taken to the
>>shortwaves could mount good letter-writing campaigns, should their
>>broadcasts be drowned out by BPL :-)
>>
>>Bob
>>k5qwg
>>
>
>
> Don't forget that those right-wing preachers and all other US short-wave
> broadcasters are licensed to broadcast to foreign locations only. I
> guess those 800 numbers are for use in the Caribbean and Canada. Sure,
> that has to be the case.
>
> 73, CJ K0CJ

You mean if I pick up their broadcast here in the US then that makes
them illegal?

3824. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:05:36 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <Az7yc.1093$Wr.843@newsread1.news.pas.earthlink.net>
Source record: 93528

"Dave Platt" <dplatt@radagast.org> wrote in message
news:10chnm9midc8v4a@corp.supernews.com...
> >About 15 years ago I made a 220 mhz 8 element yagi out of a 10 foot piece
of
> >the gray electrical plastic type conduit. It is still at the top of my
> >tower.. It is suspose to resist the UV from the sun beter than the normal
> >PVC water pipe.
>
> Did you have to support the ends of the conduit (e.g. a wire from the
> tower top) at all? I've heard/read that the PVC conduits can tend to
> droop progressively with time - any sign of that in your antenna?

The plastic conduit is about 10 feet long and the elements are for 220 mhz
made out of stainless steel 1/8 inch welding rod. The driven and reflectors
are the quagi design. Eight elements total as in one of the ARRL handbooks.
The diameter is about one inch conduit size . That makes it about 1.5
inches or more outside diameter. There is a slight droop but not very much.
There is no support other than the way I mounted it in the middle to the
mast.

3825. Re: Simple practical designing with antenna modeling programs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:16:16 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40c907ea$0$430$5cbedd26@news.real-time.com>
Source record: 93529

Richard wrote:

>
> So, I could use a metalic boom but make sure the elements are insulated,
> then the model is pretty much the practical design.
>
> This means then that designing a practical antenna would be greatly
> simplified either by using a non conducting boom or insulating the elements.

At 2m, yes, especially if it's a decent broadband design, at 432,
definately no, even if broadband. The shielding from the boom is
significant at 432.

tom
K0TAR

3826. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:17:17 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <6r1ic0p79mimd6t7sdhebi996u5dofn9m5@4ax.com>
Source record: 93530

On Thu, 10 Jun 2004 15:16:27 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:

>
>"J999w" <j999w@aol.com> wrote in message
>news:20040610100635.15979.00000844@mb-m16.aol.com...
>> Wood works fine ... just give 'er a good coat of latex paint. I've got
>some 432
>> Quagis that are about 6 years old ... still work great.
>>
>> jw
>> K9RZZ
>
>Have I discarded the wood option prematurely. Maybe. :c)
I think you should consider wood if you properly 'weatherize' it. Not
sure of which plastic is used, but there are plastic 2x2 posts used to
support newly planted trees that may fit the bill also, check your
local Lowe's/Home Depot/Nursery to see what they have.

Good luck,
Howard

3827. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:19:23 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <VJ7yc.477$X92.64@bignews6.bellsouth.net>
Source record: 93532

How about 'tinning' the copper first??

"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message
news:40c8706a.479885171@news.galilei.com...
> Hi Dave
>
> For searching the web, use Cathodic Protection as your search key.
>
> As far as steel to copper, nickel is a good go between between the two
> metals. You can weld to steel with nickel and put a nickel coating on
> the binding area of the steel rod.
>
> TTUL
> Gary
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 5/22/2004

3828. Re: Simple practical designing with antenna modeling programs

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:19:40 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40c908ac$0$430$5cbedd26@news.real-time.com>
Source record: 93531

And if you meant "above" the boom, rather than through the boom as
"insulated", then my comment about shielding is moot.

tom
K0TAR

3829. Re: If you value SW or HAM radio....

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:30:51 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <fX7yc.2122$zz.262@attbi_s04>
Source record: 93533

william ewald wrote:
> On Tue, 8 Jun 2004 23:00:02 -0500, "*" <*@*.com> wrote:
>
>
>>Glad you did something on this! I sent mine in (added to yours some);
>>
>>I recommend that the FCC ask for a technical showing that BPL will
>>not interfere with other existing communications in these bands
>>before establishing Rules and Regulations.
>
>
> Wasn't SW going to be made obsolete by satellite radio not too long
> ago? Maybe PopComm had an article on the subject.

Have you listened to the BPL trash??

It will make copying an S9 signal very difficult.
>
>

3830. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:35:40 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <M%7yc.6724$eu.1540@attbi_s02>
Source record: 93534

Henry Kolesnik wrote:

> I know that a shorted 1/4 wave stub exhibits a very high impedance. But
> for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low impedance
> or a short. There are claims that this can be used to filter the even
> harmonics. Shorts can't diisipate power and must reflect, so how does a
> stub work?
>

It works exactly as you stated: "It reflects the second and all even
harmonic energy back to the source."

3831. Re: How do I feed a wideband VHF yagi with a balaced DE with unbalanced coax?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:40:42 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <u48yc.6734$eu.6249@attbi_s02>
Source record: 93535

Just to be precise: it is NOT resonant!! Resonance requires that there
be a zero value for the j term. The +j10.3 indicates your antenna DE is
a little long for the measured frequency.

Richard wrote:

> The yagi is centered on 159 Mhz with a bandwidth of 6 Mhz.
>
> The feed is 50ohm coax.
>
> The DE is a simple hertz dipole. It's electrical parameters at the resonant
> frequency are R 50.9 J + 10.3.
>
> What kind of balun would you use? TIA.

3832. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 01:56:11 UTC
From: "Clair J. Robinson" <cjrNoSpam@visi.com>
Message-ID: <40C9113B.B0007320@visi.com>
Source record: 93536
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Bob Miller wrote:
>
> I'm sure some of our right-wing preachers that have taken to the
> shortwaves could mount good letter-writing campaigns, should their
> broadcasts be drowned out by BPL :-)
>
> Bob
> k5qwg
>

Don't forget that those right-wing preachers and all other US short-wave broadcasters are licensed to broadcast to foreign locations only. I guess those 800 numbers are for use in the Caribbean and Canada. Sure, that has to be the case.

73, CJ K0CJ

3833. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 02:17:58 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c91780_6@corp.newsgroups.com>
Source record: 93538

Walter Maxwell wrote:
> Cecil, you keep saying Steve and I get the same outcome. Where do you see that
> result ?

You both get the same measurable forward and reflected powers,
forward and reflected voltages, and forward and reflected currents.

> Why do you keep insisting on an S-parameter analysis?

Because that is essentially what Steve used and it works. It has
worked for decades. Please download the HP AN 95-1 and see for yourself.

> When
> properly adjusted to match the output to the input in his T-network the
> reflected power reaching the input is totally re-reflected. This results only
> from a reflection coefficient of 1.0.

Only in your model, Walt, not in Steve's. Reflection coefficients of 1.0
are INVALID in Steve's quasi-S-parameter model.

> Saying that it is impossible for a 1.0 to
> exist in Steve's model is simply not true.

Yes, it is true, for the configurations discussed so far. The ONLY time a
reflection coefficient of 1.0 exists in Steve's model is for a *physical*
short, a *physical* open, or a *physical* pure reactance. In Steve's model,
virtual stuff is invalid.

> It's true that the physical reflection coefficient is 0.5. How then do you
> account for ALL the reflected energy being re-reflected to the load? The fact
> is that a reflection coefficient of 1.0 is also established there by wave
> interference. You really must come to the grips with the fact that a reflection
> coefficient of 1.0 can be established by wave interference. You are now the one
> who won't budge.

You are asking me to budge away from the rules of an S-parameter analysis?

Sorry, Walt, virtual reflection coefficients are INVALID in an S-parameter
analysis like Steve is using. The s11 reflection coefficient that Steve uses
is defined as the "input reflection coefficient looking into port 1 with
the output port terminated by a matched load." Since there is no such thing
as a Z0 = 0 or a Z0 = infinity, there is no such thing as a reflection
coefficient equal to 1.0. The reflection coefficient, s11, that Steve is
using can *NEVER* be zero or one - *NOT EVER*.

> I haven't seen anything in Steve's paper that shows he's using an S-Parameter,
> can you show me where? Not that it would make any difference in the outcome.

His reflection coefficient is (Z2-Z1)/(Z2+Z1). That is identical to the S-parameter reflection coefficient, s11. It is a constant and never changes to 1.0, no matter what happens to the reflected power. Dr. Best simply doesn't use virtual reflection coefficients. Using virtual reflection coefficients in an S-parameter analysis is *INVALID*, i.e. they simply do not exist.

> In addition, referring to your paragraph immediately above, where did you get
> the idea that I said Steve's rho = SQRT(Pr/Pf)? Cecil, that's simply SWR, not
> rho.

Let's take the 133.33W forward and 33.33W reflected example. rho equals the square root of (33.33/133.33) = 0.5. That's not SWR, Walt. SWR cannot be less than unity. That is indeed the physical voltage reflection coefficient.

> At this point, Cecil, if you are still unable to accept the concept of
> establishing a reflection coefficient of 1.0 through wave interference then
> there is no use of continuing this discussion.

I accept the concept of a reflection coefficient of 1.0 for your model, Walt. But a reflection coefficient of 1.0 is simply NOT allowed in the quasi-S-parameter analysis that Steve uses. The S-parameter analysis works and has been used for decades but an s11 of 1.0 simply never happens (except at a short or an open). The reflection coefficients in an S-parameter analysis and in Steve's analysis are ***PHYSICAL***. They are ***NEVER*** virtual. I'm sorry if that upsets you. I don't know what else to say.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3834. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 02:22:56 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c918aa_6@corp.newsgroups.com>
Source record: 93539

Steve Nosko wrote:
> Yea, but in the practical sense, it does not change anything at the
> fundamental (desired) frequency [[high Z stub, power still to the load]].
> It's only when you consider the harmonics, if they are there, that anything
> important changes, right. So I'm puzzled why you included that part in your
> comment.

Some people believe that there is no current flowing into or out of a
1/4WL shorted stub. But all they have to do to change their minds is
measure the current through the short at the end of the stub. It is sky
high. The SWR inside a 1/4WL shorted stub is near infinite, i.e. the
square root of Pr/Pf inside a stub is near unity.
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3835. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 02:34:57 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c91b7b_6@corp.newsgroups.com>
Source record: 93540

JGBOYLES wrote:
> If the stub presents an infinite impedance, with no external influences,
> removing it should have no effect.

Exactly! Therefore, the infinite impedance at the mouth of a stub
is a virtual impedance, not a physical impedance. The physical
impedance exists at the end of the stub where all the reflections
are taking place. Reflections occur only at a physical impedance
discontinuity.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3836. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 02:42:23 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c91d39_6@corp.newsgroups.com>
Source record: 93541

Dave Shrader wrote:

> Henry Kolesnik wrote:
>> I know that a shorted 1/4 wave stub exhibits a very high impedance. But
>> for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
>> impedance
>> or a short. There are claims that this can be used to filter the even
>> harmonics. Shorts can't diisipate power and must reflect, so how does a
>> stub work?
>>
> It works exactly as you stated: "It reflects the second and all even
> harmonic energy back to the source."

Yes, but only after making a round trip to the short or open at
the bottom end of the stub. V/I ratios don't cause reflections.
Only physical impedance discontinuities cause reflections.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3837. Re: NEW - Choke Balun Program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 02:55:25 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <xa9yc.11106$H65.8613@nwrddc02.gnilink.net>
Source record: 93542

Reg

I've been trying to learn how to make baluns for the past few weeks. I
really appreciate your program. I downloaded it this morning and have been
thinking about it since then.

I had thought that I'd be restricted to using low loss insolution for the
wires on the baluns I've been building. I tried using 3 paralel wires from
a computer ribbon cable, but the losses have been way too high (at 137MHz)
Also, I would like to bild some 1:1 baluns with ferrite cores but cant
find a way to build them within my capability.

Thanks for the great program

Jerry

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:caa91a$6pl$1@titan.btinternet.com...
> New program CHOKEBAL.exe
>
> Design and performance of a choke balun wound on a ferrite ring in
> conjunction with a balanced transmission line and antenna.
>
> The percent current unbalance on the line is estimated and how it varies
> with frequency, line-length, etc.
>
> Sorry, this program does NOT tell you how much power is radiated from the
> feedline.
>
> Program size 37 kilo-bytes. Download CHOKEBAL in a few seconds from
website
> below and run immediately. It's free issue.
> ----
> ....
> Regards from Reg, G4FGQ
> For Free Radio Design Software go to
> http://www.btinternet.com/~g4fgq.regp
> ....
>
>

3838. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 03:15:04 UTC
From: Walter Maxwell <w2du@iag.net>
Message-ID: <mh8ic01h3cjm5rekdvr4v49pboqha1uuvd@4ax.com>
Source record: 93543

On Thu, 10 Jun 2004 21:17:58 -0500, Cecil Moore <w5dxp@hotmail.com> wrote:

>Walter Maxwell wrote:

>> In addition, referring to your paragraph immediately above, where did you get
>> the idea that I said Steve's rho = SQRT(Pr/Pf)? Cecil, that's simply SWR, not
>> rho.
>
>Let's take the 133.33W forward and 33.33W reflected example. rho equals the square
>root of (33.33/133.33) = 0.5. That's not SWR, Walt. SWR cannot be less than unity.
>That is indeed the physical voltage reflection coefficient.

You're right, Cecil, the print is so small on my screen I confused the r and f,
yes, it's rho.

>> At this point, Cecil, if you are still unable to accept the concept of
>> establishing a reflection coefficient of 1.0 through wave interference then
>> there is no use of continuing this discussion.
>
>I accept the concept of a reflection coefficient of 1.0 for your model, Walt.
>But a reflection coefficient of 1.0 is simply NOT allowed in the quasi-S-parameter
>analysis that Steve uses. The S-parameter analysis works and has been used for
>decades but an s11 of 1.0 simply never happens (except at a short or an open).
>The reflection coefficients in an S-parameter analysis and in Steve's analysis
>are ***PHYSICAL***. They are ***NEVER*** virtual. I'm sorry if that upsets you.
>I don't know what else to say.

I'm sorry, Cecil, but you are missing the entire point of the discussion. I'm
not upset, I'm just dismayed that you don't see the light. So as I said above
there is no point in continuing the discussion. Some day you'll come to
understand the basis for the problem, and then I'm sure we'll agree.

C ya, Cecil, and take care!

Walt

3839. Re: Designing with Technical Note 688

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 07:15:24 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <9Odj+CEMwVyAFAN3@ifwtech.co.uk>
Source record: 93544

Mark Keith wrote:
>It does make a difference, but I don't think it's anything that would
>ruin an antenna.

That's true, in the sense that yagis "want" to work. Even when elements drop off completely, they will continue to "beam up" in the forward direction.

However, this isn't an absolute guarantee that you can forget about correcting for element diameter and boom effects. If all the directors are too long, it can tip the first (longest) director into behaving as a reflector, and then the whole beam can reverse direction at the high end of its frequency range. Now that, you would notice.

>When building my 6m yagi, "three element" I copied the eznec NBS specs
>exactly as far as element lengths and dia.
...
> I gave no real thought about boom size or type, DE type, etc.

On 6m you probably don't have to, because boom corrections on that band are very small for most reasonable mounting methods. The reason why it worked is because you *did* scale the element diameter.

As so often, whether something "matters" depends on how much satisfaction you get from doing the best you can.

Regarding Richard's multiple musings, let's cut to the chase.

Richard, you've thought yourself a long way into this problem, and much of your thinking is good. But now you're spinning your wheels and getting no further. What you need now is to DO something!

1. Decide roughly how long you want your beam to be.

2. Go to a good timber merchant where they'll let you select a straight, knot-free length of square timber, about 35mm square. Pick up a packet of small staples and a pot of varnish.

3. Go to a farmer's merchant (lots of those in central London) and buy 10 metres of heavy galvanized fencing wire.

4. Varnish the boom. While the varnish is drying, go to www.cebik.com and pick an OWA (Optimized Wideband Antenna) design that will fit on the boom, and is designed for a direct 50-ohm feed.

5. Run Cebik's element dimensions through ELE.EXE to re-scale them to your frequency and your element diameter. If you won't be able to measure the SWR, make the driven element length half-way between the

lengths of the reflector and the first director.

6. Now switch off your computer, and don't come back until you've actually BUILT a yagi. You don't need advice for that - you NEED to work it out for yourself.

(Hints: Watch your thumbs when you staple those elements to the boom. You'll have to work out a different way of supporting the driven element, which has been cut in the middle... any Blue Peter [*] graduate would know how.)

[*] British children's TV show, notorious for its construction projects. "If your mother allows you to use sharp scissors, then cut a leg off the kitchen table and... "

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3840. Re: Call for a *practical* design for a 5 or 6 element wideband yagi using a hertz dipole as DE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 10:32:15 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <F2VtwASvoYyAFAZv@ifwtech.co.uk>
Source record: 93545

K7MEM wrote:
>
>There use to be a program available written by Gunter Hock, DL6WU, that
>was for designing VHF/UHF yagi antennas. It took into account boom type
>and size, element size, bonding methods, etc.. The original program was
>written in BASIC.

There are now many different programs called "dl6wu-something.bas" out
there on the web... but DL6WU didn't actually write any of them.

The master copy of the program that Martin is using is on my 'VHF/UHF
Long Yagi Workshop' page. It was originally written by KY4Z and W6NBI,
and AFAIK it is still the only one that DL6WU has personally checked
against his original tables and graphs. For that reason it is guaranteed
to be maintained for the indefinite future.

However, the DL6WU yagis are not suitable for the OP's original request
for 5/6 elements, because these are all "long" yagis with a minimum of
10 elements.

--
73 from Ian G3SEK
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3841. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 10:53:05 UTC
From: Dave <noone@nowhere.com>
Message-ID: <odadnXVfX-mPElTdRVn-hg@crocker.com>
Source record: 93546

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:x_Jxc.5407$kT5.594@newssvr22.news.prodigy.com...
> I know that a shorted 1/4 wave stub exhibits a very high impedance. But
> for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
impedance
> or a short. There are claims that this can be used to filter the even
> harmonics. Shorts can't diisipate power and must reflect, so how does a
> stub work?

stubs work very nicely. you can get practical stub information at my web
site, including how to build a 40m to 15m 3rd harmonic stub filter:
http://www.k1ttt.net/technote/techref.html#filters

as you may have noticed by now you have kicked the proverbial hornets nest.
reflections are a touchy word in this group, usually attracting the endless
argument that travels from thread to thread. in time this will deteriorate
into name calling and endless argument over reflections, interference,
virtual impedances, and a few other topics.

3842. Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 12:23:38 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2itmi8Fr4qtiU1@uni-berlin.de>
Source record: 93547

RE: Post below from May 20, 2004

Wouldn't a "non-radiating" feedline in the field of a radiator also distort the patterns of that radiator? Any conductor can do that, even if it is not a feedline. NEC-2 models of FM broadcast transmit elements (and test range patterns) show this clearly.

Paper 6 at http://rfry.org shows the free space patterns that the element arms of a rototiller FM broadcast transmit antenna develop if they could be driven from internal power sources -- and then the effects of adding the element stem, mounts, feedline, and some nearby tower structure. The patterns can get very skewed, even though the only radiators getting power via a metallic path from the tx are the element arms themselves.

RF

"Roy Lewallen" wrote
> With a typical ground plane antenna, the feedline can radiate
> significantly, distorting the pattern. This effect could easily be
> different for the different antennas. Modeling indicates that two baluns
> are often needed to suppress the current on the outside of the feedline.
> A model which includes the feedline might give some insights as to why
> the antennas behave so differently.

3843. DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 12:29:42 UTC
From: fractenna@aol.com
Message-ID: <20040611082942.13427.00000748@mb-m04.aol.com>
Source record: 93548

Hello--

I've received about 2 dozen e-mails on this subject. Prior to this, I communicated with Mr. Vincent early on 9 July and offered him the opportunity for scientific and objective independent testing. He declined due to a test already ongoing at a facility that I feel is also capable of such testing (you may ask Mr. Vincent if you wish).

My scientific interest in this topic is exhausted. I pose the following for those interested in what is possible, and what has been done, along the lines of distributed loading of helix monopoles. I invite you to investigate the prior art for yourself.

I have not seen Mr. Vincent's design, but based upon his PR statements, it appears to be a loaded helix monopole with a CCD-like arrangement for neutralization. The design, of course, may be different and novel, although I am not of that opinion, based upon the 3 reports published in the popular press. In the absence of knowledge, it is impossible to fully assess. Still, there is value in knowing what has been done and what is possible.

The prior art is rife with distributed loading of monopoles to extensively shorten them.

Here is a prior art method that will gives a few percent bandwidth and about -2 dBd for less than 1/15 wave height. I invite you to experiment for values and placements:

* Take a half wave of wire (approximately);
* Wind it into a helix of about 10^-3 waves diameter (or less);
* Place an inductive load half way up;
* Add at least 2 and up to 6 capacitors at distributed points along the helix length;
* If you wish to truncate the current at the top, then add a small end cap hat;

Essentially this is a shrunken 1 wave dipole manifest as a 1/2 wave monopole, using CCD (distributed capacitors) to neutralize the inductance. (remember: not all cacapcitors need be discrete components). Helical designs originated with Harold Wheeler more than 50 years ago. CCD articles have predominantly appeared in ham magazines in the 70's and 80's, although the original invention is (I believe) British and over 40 years old. There are many relevant patents, all expired to my knowledge.

This design approach will 'linearize' the current (slow he wave) and do a pretty good job. A shrunken 1/2 wave monopole does better than a shrunken 1/4 monopole. When you compare it to a full-sized 1/4 wave monopole it will do well

at a specific frequency.

It is an interesting question whether the relevant comparison should be to a 1/4 wave monopole or a 1/2 wave monopole. Such shrunken designs are 1/2 wave equivalents, not 1/4 wave equivalents. They will look much worse in performance compared to full sized counterparts. A 1/4 wave monopole is not a counterpart, although in a practical sense it is a much used antenna which one might seek to replace and thus compare to.

HOWEVER for such a shrunken design--

* It will be moderate to narrow band;
* It will trade gain for efficiency and is NOT efficient;
* It will run hot in continuous-on applications with moderate to high power.

Gain is not efficiency. Sometimes efficiency doesn't matter, but gain does. Other times the heating from inefficiency will kill an otherwise elegant design option.

Mr. Vincent's original PR claims, to my recollection: high efficiency; good (broad) bandwidth; very low height.

These are not mutually, physically, attainable. I, and many others, have spent enough time to know. There is no reason to believe that Mr. Vincent has attained these. What he has appeared to have attained, to my limited knowledge based on published PR, is: moderate to low efficiency; modest bandwidth, and very low height. To my knowledge, Mr. Vincent has neither done an efficiency test nor a heating test.

In terms of applications, there are very few, besides some 'ham' and CB needs, where a single band, somewhat inefficient whip is desired. Midland has a nice compromise stick for CB'ers that's using some of these ideas and is two feet high. I like their design.

--Using a heavily shortened CCD type helix monopole in a broadcast app will lead to a fire. It is not highly efficient and the wasted power will manifest as heat. As little as 30 watts of heat in a confined area will start a fire or melt components if not properly dissipated. About a 1 dB loss to heat for 1000 watts power will produce well over 100 watts dissipated heat. Ergo, even a reasonably efficient antenna is potentially dangerous if high power is used and the heat is not properly dissipated. Mr. Vincent's design PR describes melted components in some of his design efforts. This indicates inefficiency in the design tested.

--Much of the world wants 'ground independent' antennas--not monopoles

-- Microwave applications are not single frequency, with few exceptions. Even PIFA (inverted F) solutions--which are extremely low height, lower than Mr Vincen'ts-- are multibanded.

--Much of the world wants multiband antennas, or wideband antennas, not modest passbands.

73,
Chip N1IR

3844. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 13:03:34 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <G4iyc.4055$4j7.1298@newssvr24.news.prodigy.com>
Source record: 93549

Dave

Nice site, I like the "white paper" approach as I prefer the info without
the glitter. I've only read a few items and I
quote: "This is a plot of the attenuation provided by the stub. You can see
that it provides about 32db of attenuation at 28.25Mhz. " I've noticed that
the literature I've purused indicates that stubs either attenuate or reject.
None say reflect! I don't want to get into a discussion of word definitions
becasue reflect and feject are close but attenuate is not in the same class.
Comments...

--
73
Hank WD5JFR

"Dave" <noone@nowhere.com> wrote in message
news:odadnXVfX-mPElTdRVn-hg@crocker.com...
>
> "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> news:x_Jxc.5407$kT5.594@newssvr22.news.prodigy.com...
> > I know that a shorted 1/4 wave stub exhibits a very high impedance.
But
> > for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
> impedance
> > or a short. There are claims that this can be used to filter the even
> > harmonics. Shorts can't diisipate power and must reflect, so how does
a
> > stub work?
>
> stubs work very nicely. you can get practical stub information at my web
> site, including how to build a 40m to 15m 3rd harmonic stub filter:
> http://www.k1ttt.net/technote/techref.html#filters
>
> as you may have noticed by now you have kicked the proverbial hornets
nest.
> reflections are a touchy word in this group, usually attracting the
endless
> argument that travels from thread to thread. in time this will
deteriorate
> into name calling and endless argument over reflections, interference,
> virtual impedances, and a few other topics.
>
>
>

3845. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 13:11:34 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c9b0ad_3@corp.newsgroups.com>
Source record: 93550

Dave wrote:
> stubs work very nicely. you can get practical stub information at my web
> site, including how to build a 40m to 15m 3rd harmonic stub filter:
> http://www.k1ttt.net/technote/techref.html#filters

A fellow ham sent me an email suggesting a use for a shorted
1/4WL stub that had not occurred to me before. Many hams have
static electricity problems with dipoles since there is not
a DC path between the poles. For a single-frequency dipole,
a shorted 1/4WL stub could be installed at the feedpoint to
drain off the static electricity without affecting the
performance much on the fundamental frequency. It would also
aid in the suppression of even harmonics.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3846. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 13:23:57 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c9b394$1_3@corp.newsgroups.com>
Source record: 93551

Henry Kolesnik wrote:

> Dave
>
> Nice site, I like the "white paper" approach as I prefer the info without
> the glitter. I've only read a few items and I
> quote: "This is a plot of the attenuation provided by the stub. You can see
> that it provides about 32db of attenuation at 28.25Mhz. " I've noticed that
> the literature I've purused indicates that stubs either attenuate or reject.
> None say reflect! I don't want to get into a discussion of word definitions
> becasue reflect and feject are close but attenuate is not in the same class.
> Comments...

They indeed do attenuate or reject. Reflections is the method by which
stubs accomplish the attenuation or rejection. If one is only interested
in implementing stubs, and not interested in how they work, one need not
deal with reflections. What one must realize, however, that the SWR inside
a resonant stub is as high as it can be. All the reflections take place at
the shorted or open end of a stub, i.e. at the physical discontinuity point
where rho = |1.0|.

I don't have any argument with people who say, "I only want to use stubs.
I don't care how or why they work." My argument is with people who falsely
describe how they work, e.g. "Since the impedance looking into a shorted
1/4WL lossless stub is infinite, no current flows into or out of the stub."
If that were really true, one could remove the stub without changing
anything. The net superposed current may be zero but the forward and reflected
currents exist there and can be very high values. In fact, I have melted the
insulating material at the end of a shorted coaxial stub due to high I^2*R losses.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3847. Re: Call for a *practical* design for a 5 or 6 element wideband yagi using a hertz dipole as DE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 13:31:12 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <Buiyc.74$Jk5.37@lakeread02>
Source record: 93552

"Richard" <nearlynews_email@ntlworld.com> wrote
> > > I'm looking to make the center frequency 159 Mhz.
> >
> > Richard, I thought you wanted a marine-band antenna? The center should
be
> at
> > 156.300 to 156.800 mHz and will cover above that fine, but not well
below
> > it.
> >
> > Jack
>
> But to your point:
>
> Marine band is from 156-162 Mhz. Center 159 Mhz.

Richard, my point was, your antenna will funtion better centered on the lower part of the band, using any wideband features the antenna has to work upward in frequency, not downward.

Since DX'g was your goal, why not take advantage of this feature? During summer months troposheric ducting provides some pretty amazing DX features in this band. In the states, it is common to for stations to copy traffic hundreds of miles away when this happens.

Best regards,

Jack Painter
Virginia Beach, Va

3848. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 13:39:25 UTC
From: Dave <noone@nowhere.com>
Message-ID: <lOednXerWrSTK1Td4p2dnA@crocker.com>
Source record: 93553

yes, that works very nicely also. it does provide a dc ground for otherwise ungrounded antennas like verticals or dipoles providing a way for static build up to drain safely.

"Cecil Moore" <w5dxp@hotmail.com> wrote in message news:40c9b0ad_3@corp.newsgroups.com...
> Dave wrote:
> > stubs work very nicely. you can get practical stub information at my web
> > site, including how to build a 40m to 15m 3rd harmonic stub filter:
> > http://www.k1ttt.net/technote/techref.html#filters
>
> A fellow ham sent me an email suggesting a use for a shorted
> 1/4WL stub that had not occurred to me before. Many hams have
> static electricity problems with dipoles since there is not
> a DC path between the poles. For a single-frequency dipole,
> a shorted 1/4WL stub could be installed at the feedpoint to
> drain off the static electricity without affecting the
> performance much on the fundamental frequency. It would also
> aid in the suppression of even harmonics.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3849. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 13:42:01 UTC
From: Dave <noone@nowhere.com>
Message-ID: <NP2dnSzVO683K1TdRVn-hA@crocker.com>
Source record: 93554

the harmonic is 'attenuated' in that the magnitude of it is reduced when the stub is in line. i look at it like you could replace the stub with a lumped filter at the same point so the term attenuation makes more sense than reflections or rejections... i don't really care where the harmonic goes, i want to know how much it is attenuated by so i can compare with other types of filters.

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message news:G4iyc.4055$4j7.1298@newssvr24.news.prodigy.com...
> Dave
>
> Nice site, I like the "white paper" approach as I prefer the info without
> the glitter. I've only read a few items and I
> quote: "This is a plot of the attenuation provided by the stub. You can see
> that it provides about 32db of attenuation at 28.25Mhz. " I've noticed that
> the literature I've purused indicates that stubs either attenuate or reject.
> None say reflect! I don't want to get into a discussion of word definitions
> becasue reflect and feject are close but attenuate is not in the same class.
> Comments...
>
> --
> 73
> Hank WD5JFR
>
> "Dave" <noone@nowhere.com> wrote in message
> news:odadnXVfX-mPElTdRVn-hg@crocker.com...
> >
> > "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> > news:x_Jxc.5407$kT5.594@newssvr22.news.prodigy.com...
> > > I know that a shorted 1/4 wave stub exhibits a very high impedance.
> But
> > > for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
> > impedance
> > > or a short. There are claims that this can be used to filter the even
> > > harmonics. Shorts can't diisipate power and must reflect, so how does
> a
> > > stub work?
> >

> > stubs work very nicely. you can get practical stub information at my
web
> > site, including how to build a 40m to 15m 3rd harmonic stub filter:
> > http://www.k1ttt.net/technote/techref.html#filters
> >
> > as you may have noticed by now you have kicked the proverbial hornets
> nest.
> > reflections are a touchy word in this group, usually attracting the
> endless
> > argument that travels from thread to thread. in time this will
> deteriorate
> > into name calling and endless argument over reflections, interference,
> > virtual impedances, and a few other topics.
> >
> >
> >
>
>

3850. Re: Call for a *practical* design for a 5 or 6 element wideband yagi using a hertz dipole as DE

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 13:58:08 UTC
From: K7MEM <k7mem@myrealbox.com>
Message-ID: <40C9BA70.6090700@myrealbox.com>
Source record: 93555

Ian White, G3SEK wrote:
> K7MEM wrote:
>
>>
>> There use to be a program available written by Gunter Hock, DL6WU,
>> that was for designing VHF/UHF yagi antennas. It took into account
>> boom type and size, element size, bonding methods, etc.. The original
>> program was written in BASIC.
>
>
> There are now many different programs called "dl6wu-something.bas" out
> there on the web... but DL6WU didn't actually write any of them.
>
> The master copy of the program that Martin is using is on my 'VHF/UHF
> Long Yagi Workshop' page. It was originally written by KY4Z and W6NBI,
> and AFAIK it is still the only one that DL6WU has personally checked
> against his original tables and graphs. For that reason it is guaranteed
> to be maintained for the indefinite future.
>
>
> However, the DL6WU yagis are not suitable for the OP's original request
> for 5/6 elements, because these are all "long" yagis with a minimum of
> 10 elements.
>
>

Thank you for the corrections. I will make the necessary adjustments on
my web page to give proper credit.

I only suggested this program to show that there are programs out there
that take the factors he described into account. He could design for 10
elements and then trim back the number of directors. This will get him
in the ball park. He could then describe it to a modeling program to
see how it stacks up.

--
Martin E. Meserve
k7mem@myrealbox.com

3851. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 14:21:06 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040611102106.11868.00000680@mb-m27.aol.com>
Source record: 93556

>
>A fellow ham sent me an email suggesting a use for a shorted
>1/4WL stub that had not occurred to me before. Many hams have
>static electricity problems with dipoles since there is not
>a DC path between the poles. For a single-frequency dipole,
>a shorted 1/4WL stub could be installed at the feedpoint to
>drain off the static electricity without affecting the
>performance much on the fundamental frequency. It would also
>aid in the suppression of even harmonics.
>--
>73, Cecil http://www.qsl.net/w5dxp
>

Very effective way for monoband antennas. The improved version of this is the "Bazooka Balun" which besides above mentioned benefits acts as a balun. I used it on all my monoband antennas. Provides DC path to ground, harmonic supression, RF choke function and balanced to unbalanced feed point conversion.

Yuri, K3BU.us
www.computeradio.us home of Dream Radio One

3852. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 14:27:58 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40c9c027_3@127.0.0.1>
Source record: 93557

Dave wrote:
> the harmonic is 'attenuated' in that the magnitude of it is reduced when the
> stub is in line. i look at it like you could replace the stub with a lumped
> filter at the same point so the term attenuation makes more sense than
> reflections or rejections... i don't really care where the harmonic goes, i
> want to know how much it is attenuated by so i can compare with other types
> of filters.

Where is the bulk of the attenuation taking place, at/in the stub,
or as a V^2/R loss back upstream? (Not a trick question)
--
73, Cecil http://www.qsl.net/w5dxp

3853. Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 14:32:17 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406110632.5152736c@posting.google.com>
Source record: 93558

I'm working on a project that involves antennas that appear to be pressurized with nitrogren (approx 10psi). What purpose does this serve? Does it help with transmission properties, gain, etc? It is used on an aircraft, if that is a factor.

Thanks in advance!
Dave

3854. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 14:43:36 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <syjyc.46068$Gx4.5160@bgtnsc04-news.ops.worldnet.att.net>
Source record: 93559
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"-=jd=-" <jd770YOUR@HATpostmark.net> wrote in message
news:Xns9504813FD2FF8a216b130c132d203@63.218.45.22...
>
>
> Somehow, I don't see the protestations from SW preachers (in general) as
> being very effective towards stopping BPL... I almost think that may only
> serve to speed it's implementation! <g>
>
>
>
> -=jd=-

I do think the politicians would listen to the National Association of
Religious Broadcasters, or whatever they call themselves.

Frank Dresser

3855. Re: Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 14:54:35 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <qphjc0tpah6b033jdiv0g2sf3fgd34aoth@4ax.com>
Source record: 93560

It's probably "dry" N2. It is used to prevent water absorbtion and O2 absorbtion of the RF. It can also be used to detect leaks and to keep out atmospheric water.

Russ

On 11 Jun 2004 07:32:17 -0700, achilles03@hotmail.com (David Harper) wrote:

>I'm working on a project that involves antennas that appear to be
>pressurized with nitrogren (approx 10psi). What purpose does this
>serve? Does it help with transmission properties, gain, etc? It is
>used on an aircraft, if that is a factor.
>
>Thanks in advance!
>Dave

3856. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 14:55:21 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <tJjyc.46126$Gx4.1701@bgtnsc04-news.ops.worldnet.att.net>
Source record: 93561
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Dee D. Flint" <deeflint01@comcast.net> wrote in message
news:18udncF_f70CwlXd4p2dnA@comcast.com...
>
>
> Nor does he have a clue about how people choose to spend their money. For
> example he mentions that there is good market potential since 80% of the
> internet users are still on dial up. He seems to think that they will
> switch to BPL. But let's look at why they are on dial up. It is cost.
> Dial up is still the cheapest access and it will be cheaper than the
> projected cost for BPL. Unless they can get much closer to dial up in
> price, most will NOT switch. There's a dial up service around here that
is
> only about $10 per month. Even the most expensive dial up in this area
tops
> out at $20 per month. BPL won't be able to snag a major share of the dial
> users no matter what anyone would like to believe assuming their projected
> costs are accurate.
>
> Dee D. Flint, N8UZE
>

That's another good point. I think $30 bucks a month might attract alot of buyers to BPL, but it's still not low enough for cheapskates such as myself. I do think the likely number of buyers is researchable, but reporters don't always do research. Since the number is unspecified, I'll assume the BPL folk didn't bring up this fundamental issue in their press release.

The finanical press usually has a disclaimer at the end of their columns. Something like "Our columnist owns no stock or any other interest in the company". That's nice, but it would be more informative to the reader if the disclaimer said "Our columinist has done no research for this column beyond reading the press releases of the company".

Frank Dresser

3857. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 15:19:20 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <Y3kyc.65$mN4.59@newssvr23.news.prodigy.com>
Source record: 93562

I know they work! One of my reasons for asking the question is I've not found any mention in the literature of where the "attenuation/rejection/reflection/filter residue" goes.

--
73
Hank WD5JFR
"Dave" <noone@nowhere.com> wrote in message news:NP2dnSzVO683K1TdRVn-hA@crocker.com...
> the harmonic is 'attenuated' in that the magnitude of it is reduced when the
> stub is in line. i look at it like you could replace the stub with a lumped
> filter at the same point so the term attenuation makes more sense than
> reflections or rejections... i don't really care where the harmonic goes, i
> want to know how much it is attenuated by so i can compare with other types
> of filters.
>
> "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> news:G4iyc.4055$4j7.1298@newssvr24.news.prodigy.com...
> > Dave
> >
> > Nice site, I like the "white paper" approach as I prefer the info without
> > the glitter. I've only read a few items and I
> > quote: "This is a plot of the attenuation provided by the stub. You can
> see
> > that it provides about 32db of attenuation at 28.25Mhz. " I've noticed
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> > the literature I've purused indicates that stubs either attenuate or
> reject.
> > None say reflect! I don't want to get into a discussion of word
> definitions
> > becasue reflect and feject are close but attenuate is not in the same
> class.
> > Comments...
> >
> > --
> > 73
> > Hank WD5JFR
> >
> > "Dave" <noone@nowhere.com> wrote in message

> > news:odadnXVfX-mPElTdRVn-hg@crocker.com...
> > >
> > > "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> > > news:x_Jxc.5407$kT5.594@newssvr22.news.prodigy.com...
> > > > I know that a shorted 1/4 wave stub exhibits a very high impedance.
> > But
> > > > > for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
> > > > impedance
> > > > > or a short. There are claims that this can be used to filter the
even
> > > > > harmonics. Shorts can't diisipate power and must reflect, so how
> does
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> > > > > stub work?
> > > >
> > > > stubs work very nicely. you can get practical stub information at my
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> > > > site, including how to build a 40m to 15m 3rd harmonic stub filter:
> > > > http://www.k1ttt.net/technote/techref.html#filters
> > > >
> > > > as you may have noticed by now you have kicked the proverbial hornets
> > nest.
> > > > reflections are a touchy word in this group, usually attracting the
> > endless
> > > > argument that travels from thread to thread. in time this will
> > deteriorate
> > > > into name calling and endless argument over reflections, interference,
> > > > virtual impedances, and a few other topics.
> > > >
> > > >
> > > >
> > >
> > >
> >
> >

3858. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 15:32:22 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <agkyc.69$_O4.68@newssvr23.news.prodigy.com>
Source record: 93563

Something I found:on Cadweld notes which is Thermit:
Hi.

Despite several postings suggesting the words `exothermic' and `welding' be added to the TT word filter, I ordered some CadWeld ONESHOTS for use on ground rods. A few people have asked about how they work and I have some advice for anyone wanting to use one, so a brief posting is in order, IMHO.

Anyway, they work fine. They are more expensive than clamps, but provide a better connection and don't require the purchase of extra anti-oxidants, grease, etc. As an added bonus, there's a great fireworks show when they go off.

A few points to consider: First, BUY THE CADWELD-SUPPLIED IGNITION TOOL. A flame simply won't launch these and most consumer-oriented flint igniters don't project the spark far enough to enter the mold and ignite the material.

Second, if you get the kit for two wires to one rod, try and install it such that you have ONE wire passing through the mold to the next connection. I didn't and the process blew one of the wires out of the mold before it could weld. In any event, secure the wire from movement before lighting up.

Third, if you need to mail-order, I've had excellent results with The RF Connection (email: rfc@therfc.com). I ordered three kits, and because I didn't have the CadWeld lighter, I needed to add some material from the third kit to the second to achieve orbit. I mentioned this in an e-mail to rfc and they're having the warehouse ship another package of weld material. That's excellent customer service, as far as I'm concerned, especially since it would not have been unreasonable for them to say that I didn't follow the instruction, so tough noogies.

Hope that helps anyone interested in exothermic welding and didn't offend anybody who wanted the subject BANNED from the reflector.

73, kelly.
ve4xt@mts.net

"Dave" <galt_57@hotmail.com> wrote in message
news:5591d176.0406091057.b155e02@posting.google.com...
> The answer must be here but after some searching I can't find it.
> There is all sorts of conversation about ground rods and dissimilar
> metals but I can't find the basic answer I need -- How do you make the
> steel to copper connection? Do you simply clamp galvanized steel to
> copper? Thanks.

3859. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 15:36:54 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <qkkyc.70$LU4.1@newssvr23.news.prodigy.com>
Source record: 93565

I forgot to show the site with great grond info.
http://www.k1ttt.net/technote/techref.html#filters

--
73
Hank WD5JFR
"Dave" <galt_57@hotmail.com> wrote in message
news:5591d176.0406091057.b155e02@posting.google.com...
> The answer must be here but after some searching I can't find it.
> There is all sorts of conversation about ground rods and dissimilar
> metals but I can't find the basic answer I need -- How do you make the
> steel to copper connection? Do you simply clamp galvanized steel to
> copper? Thanks.

3860. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 15:41:37 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40c9d162$1_3@127.0.0.1>
Source record: 93564

Yuri Blanarovich wrote:
> Very effective way for monoband antennas. The improved version of this is the
> "Bazooka Balun" which besides above mentioned benefits acts as a balun. I used
> it on all my monoband antennas. Provides DC path to ground, harmonic
> supression, RF choke function and balanced to unbalanced feed point conversion.

A 4:1 toroidal balun will also do the same thing -
provide a DC path between conductors.
--
73, Cecil http://www.qsl.net/w5dxp

3861. Re: Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 15:47:05 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40C9D403.93889D08@shaw.ca>
Source record: 93566

Russ wrote:
>
> It's probably "dry" N2. It is used to prevent water absorbtion and O2
> absorbtion of the RF. It can also be used to detect leaks and to keep
> out atmospheric water.
>
> Russ
>
Exactly! Very common in some of our shipboard antenna tuning units as
well -- at least back in the 70's.
Irv VE6BP

--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

3862. Re: Steel to Copper

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 15:48:26 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40c9d2a9.570572031@news.galilei.com>
Source record: 93567

"Hal Rosser" <hmrosser@bellsouth.net> verbositized:

>How about 'tinning' the copper first??

Hmmmmm, I wouldn't do it!

Solder is a lead tin alloy and breaks down to easily.

But it wouldn't hurt to use an electrically conductive grease!

TTUL
Gary

3863. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 15:57:59 UTC
From: Dave <noone@nowhere.com>
Message-ID: <5sCdnaZuTvUVS1TdRVn-vw@crocker.com>
Source record: 93568

you can look at it various ways.
1. the wave traveling wave analysis... the harmonic goes down the stub, reflects back, and when it gets back to the transmission line it is 180 degress out of phase with the next cycle so it cancels it at the junction... therefore there is no harmonic to propagate down the line past the junction. this of course will raise the hackles of the anti-reflectionists who will then say there is also no harmonic left to propagate down the stub which means there is a virtual short at the junction, but no way to generate it since nothing can be there to go down the stub.

2. the power analysis. power goes in, power comes out, it all reflects back and forth until the energy becomes infinite and the amp blows up... but of course energy is conserved and momentum must go somewhere so the stub probably walks across the table with each wave reflection.

3. the sinusoidal steady state analysis. this takes the stub and transforms the shorted impedance at the far end back to the junction and then does all calculations as if the real short existed at the junction.... this will of course annoy the reflectionists who will point out in never ending detail how you can't explain tv ghosts, radar, or other transient phenomena this way... of course by assuming the sinusoidal steady state at the start you exclude those systems from this type of analysis, but that won't stop the protests.

4. the s analysis... who know what this will say except cecil who will find some way to steer the discussion over to it.

5. the optical layer analysis... see above.

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:Y3kyc.65$mN4.59@newssvr23.news.prodigy.com...
> I know they work! One of my reasons for asking the question is I've not
> found any mention in the literature of where the
> "attenuation/rejection/reflection/filter residue" goes.
>
> --
> 73
> Hank WD5JFR
> "Dave" <noone@nowhere.com> wrote in message
> news:NP2dnSzVO683K1TdRVn-hA@crocker.com...
> > the harmonic is 'attenuated' in that the magnitude of it is reduced when
> the
> > stub is in line. i look at it like you could replace the stub with a
> lumped
> > filter at the same point so the term attenuation makes more sense than
> > reflections or rejections... i don't really care where the harmonic

goes,
> i
> > want to know how much it is attenuated by so i can compare with other
> types
> > of filters.
> >
> > "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> > news:G4iyc.4055$4j7.1298@newssvr24.news.prodigy.com...
> > > Dave
> > >
> > > Nice site, I like the "white paper" approach as I prefer the info
> without
> > > the glitter. I've only read a few items and I
> > > quote: "This is a plot of the attenuation provided by the stub. You
can
> > see
> > > that it provides about 32db of attenuation at 28.25Mhz. " I've
noticed
> > that
> > > the literature I've purused indicates that stubs either attenuate or
> > reject.
> > > None say reflect! I don't want to get into a discussion of word
> > definitions
> > > becasue reflect and feject are close but attenuate is not in the same
> > class.
> > > Comments...
> > >
> > > --
> > > 73
> > > Hank WD5JFR
> > >
> > > "Dave" <noone@nowhere.com> wrote in message
> > > news:odadnXVfX-mPElTdRVn-hg@crocker.com...
> > > >
> > > > "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> > > > news:x_Jxc.5407$kT5.594@newssvr22.news.prodigy.com...
> > > > > I know that a shorted 1/4 wave stub exhibits a very high
impedance.
> > > But
> > > > > for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
> > > > impedance
> > > > > or a short. There are claims that this can be used to filter the
> even
> > > > > harmonics. Shorts can't diisipate power and must reflect, so how
> > does
> > > a
> > > > > stub work?
> > > >
> > > > stubs work very nicely. you can get practical stub information at
my

> > web
> > > > site, including how to build a 40m to 15m 3rd harmonic stub filter:
> > > > http://www.k1ttt.net/technote/techref.html#filters
> > > >
> > > > as you may have noticed by now you have kicked the proverbial
hornets
> > > nest.
> > > > reflections are a touchy word in this group, usually attracting the
> > > endless
> > > > argument that travels from thread to thread. in time this will
> > > deteriorate
> > > > into name calling and endless argument over reflections,
interference,
> > > > virtual impedances, and a few other topics.
> > > >
> > > >
> > > >
> > >
> > >
> >
> >
>
>

3864. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 16:05:00 UTC
From: Cecil Moore <Cecil.A.Moore@ieee.ONEDOT.org>
Message-ID: <40c9d6dd$1_3@127.0.0.1>
Source record: 93569

Henry Kolesnik wrote:
> I know they work! One of my reasons for asking the question is I've not
> found any mention in the literature of where the
> "attenuation/rejection/reflection/filter residue" goes.

An open 1/4WL stub detours all the associated frequency
energy into the stub and then reflects it back to the source.
Consider the following:

```
XMTR---------feedline-------+----load
|
| 1/4WL
| open
| stub
```

The stub causes complete destructive interference between the
forward voltage and reflected voltage at the mouth of the stub.
Since the net voltage at the mouth of the stub is zero, no
current flows into the load. All the current in the feedline
is flowing in the stub and is reflected at the open end. The
reflected waves head back to the source. Therefore, for lossless
feedlines, all the attenuation/interference occurs in the source.
Of course, for real-world feedlines, I^2*R losses will occur
because of the high SWR at the associated frequency.

The effect of the above stub is much like shorting out the load.
Shorting out the load increases the dissipation in the source.
--
73, Cecil http://www.qsl.net/w5dxp

3865. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 16:49:01 UTC
From: Dave <noone@nowhere.com>
Message-ID: <t6mdnexEmrXif1TdRVn-ug@crocker.com>
Source record: 93570

"Cecil Moore" <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
news:40c9d6dd$1_3@127.0.0.1...
> Henry Kolesnik wrote:
> > I know they work! One of my reasons for asking the question is I've
not
> > found any mention in the literature of where the
> > "attenuation/rejection/reflection/filter residue" goes.
>
> An open 1/4WL stub detours all the associated frequency
> energy into the stub and then reflects it back to the source.

a new theory! now i'll have to add the traffic theory of waves to the list. just who posts this detour sign? so does all the energy go down to the end of the stub and have to make a u-turn to get back? are you sure they aren't issued a ticket for doing that?? and then again at the junction they have to be directed back to the source, sounds like a job for robo-cop! got to be fast to direct all those waves back and forth!

>The stub causes complete destructive interference between the
>forward voltage and reflected voltage at the mouth of the stub.
>Since the net voltage at the mouth of the stub is zero, no
>current flows into the load

oh, oh! i know this one!! but if the voltage at the mouth of the stub is zero, how does any wave flow down into the stub? there is no voltage there to drive it?? how does the incoming wave know to not flow past the stub connection and get reflected instead?? doesn't that make it a virtual short and just reflect back to the source from there?? but wait, how does the stub get hot then?? where does the current at the end of the stub come from?

3866. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 17:19:15 UTC
From: "Dee D. Flint" <deeflint01@comcast.net>
Message-ID: <5bCdnRIiLaG6d1TdRVn-gw@comcast.com>
Source record: 93571
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Frank Dresser" <analogdial@worldnet.att.net> wrote in message
news:tJjyc.46126$Gx4.1701@bgtnsc04-news.ops.worldnet.att.net...
>
> "Dee D. Flint" <deeflint01@comcast.net> wrote in message
> news:18udncF_f70CwlXd4p2dnA@comcast.com...
> >
> >
> > Nor does he have a clue about how people choose to spend their money.
For
> > example he mentions that there is good market potential since 80% of the
> > internet users are still on dial up. He seems to think that they will
> > switch to BPL. But let's look at why they are on dial up. It is cost.
> > Dial up is still the cheapest access and it will be cheaper than the
> > projected cost for BPL. Unless they can get much closer to dial up in
> > price, most will NOT switch. There's a dial up service around here that
> is
> > only about $10 per month. Even the most expensive dial up in this area
> tops
> > out at $20 per month. BPL won't be able to snag a major share of the
dial
> > users no matter what anyone would like to believe assuming their
projected
> > costs are accurate.
> >
> > Dee D. Flint, N8UZE
> >
>
> That's another good point. I think $30 bucks a month might attract alot
of
> buyers to BPL, but it's still not low enough for cheapskates such as
myself.
> I do think the likely number of buyers is researchable, but reporters
don't
> always do research. Since the number is unspecified, I'll assume the BPL
> folk didn't bring up this fundamental issue in their press release.
>
> The finanical press usually has a disclaimer at the end of their columns.
> Something like "Our columnist owns no stock or any other interest in the
> company". That's nice, but it would be more informative to the reader if
> the disclaimer said "Our columinist has done no research for this column
> beyond reading the press releases of the company".
>
> Frank Dresser

Plus if BPL does "threaten" to enter a market, the DSL and cable guys will drop their prices to keep from losing market share. So I bet they are monitoring this situation closely. The latter already know it is price that keeps some people from switching from dial-up. Just look at some of the recent ads on TV for their promotions. Cable had been advertising a $29.99 introductory offer and now they are offering a $19.99 introductory offer. DSL and cable know that they have to get close to dial up prices to get the customers.

Dee D. Flint, N8UZE

3867. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 17:49:11 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40c9ef52$1_3@127.0.0.1>
Source record: 93572

Dave wrote:
> "Cecil Moore" <Cecil.A.Moore@ieee.ONEDOT.org> wrote:
>>An open 1/4WL stub detours all the associated frequency
>>energy into the stub and then reflects it back to the source.
>
> a new theory!

Not a new theory. I learned that at Texas A&M back in the 50's.
I had a pretty smart RF prof. It's the same thing that happens
without a load.

XMTR---------feedline---------------open

> so does all the energy go down to the end
> of the stub and have to make a u-turn to get back?
Energy is normally completely reflected at a physical open
circuit in a piece of transmission line. Stubs are no exception
to transmission line theory.

> oh, oh! i know this one!! but if the voltage at the mouth of the stub is
> zero, how does any wave flow down into the stub?

If the standing-wave minimum voltage is zero, why is the current
at that exact point at its maximum value. Maybe you should review
"Plumber's Delight" beam construction rules and standing-waves.

> there is no voltage there
> to drive it?? how does the incoming wave know to not flow past the stub
> connection and get reflected instead??

Because reflections only occur at a physical impedance discontinuity.
There is no physical impedance discontinuity until the open is reached.

XMTR---one wavelength feedline---+---1/4WL---open
|
load

Note the load is connected at a "Plumber's Delight" V=0 point.

The voltage 1/4WL from the open end is zero. What do you think the
current is 1/4WL from the open end? What do you think the voltage
is at the open. Sounds like you believe that there is no current
or voltage on the entire length of the above since it is an odd
number of 1/4WL's long.

> doesn't that make it a virtual short
> and just reflect back to the source from there??

Nope, in the above example, there is a virtual short at the XMTR output.
Does that mean to you that there's no voltage or current on the entire
feedline? Virtual impedances don't cause reflections.

On a 50 ohm feedline with an SWR of 2:1, an impedance of 100 ohms
repeats every 1/2WL but it doesn't cause any reflections at the
100 ohm points because there is not a physical impedance discontinuity
there.
--
73, Cecil http://www.qsl.net/w5dxp

3868. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 18:31:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10cjujjqt2qsve8@corp.supernews.com>
Source record: 93573

No.

A "non-radiating" feedline is one on which there is no net current (i.e., no common mode current). In the case of coax, this translates to zero current on the outside of the shield; for twinlead feedlines, it means that the currents in the two conductors are exactly equal in magnitude and opposite in direction.

Pattern distortion is caused by current being induced in a conductor by an impinging field. That current, in turn, creates a field which adds to the impinging field, resulting in pattern distortion. (This is, in fact, the way a Yagi functions.) If there is current induced in a feedline by the field, it's a radiating conductor (because the current causes radiation which interferes with the impinging field). If there is no current induced in the feedline by the impinging field, it creates no field of its own (i.e., it's non-radiating) and therefore causes no interference.

A transmission line placed symmetrically with respect to a dipole won't have any current induced in it, although current can be conducted via a direct connection. A transmission line asymmetrically placed will have current induced in it and will distort the pattern. The feedline of a ground plane or J-Pole likewise has induced current which distorts the pattern. The amount of common mode current flowing in a transmission line can be reduced by introducing an impedance to the common mode current. It's desirable to do this without disturbing the differential mode transmission line operation. That's the function of a balun. The amount of induced current depends strongly on the orientation and length of the parasitic conductor, and might be large or small in a particular case.

Roy Lewallen, W7EL

Richard Fry wrote:
> RE: Post below from May 20, 2004
>
> Wouldn't a "non-radiating" feedline in the field of a radiator also distort
> the patterns of that radiator? Any conductor can do that, even if it is not
> a feedline. NEC-2 models of FM broadcast transmit elements (and test range
> patterns) show this clearly.
>
> Paper 6 at http://rfry.org shows the free space patterns that the element
> arms of a rototiller FM broadcast transmit antenna develop if they could be
> driven from internal power sources -- and then the effects of adding the
> element stem, mounts, feedline, and some nearby tower structure. The
> patterns can get very skewed, even though the only radiators getting power

> via a metallic path from the tx are the element arms themselves.
>
> RF
> ___________
>
> "Roy Lewallen" wrote
>
>>With a typical ground plane antenna, the feedline can radiate
>>significantly, distorting the pattern. This effect could easily be
>>different for the different antennas. Modeling indicates that two baluns
>>are often needed to suppress the current on the outside of the feedline.
>>A model which includes the feedline might give some insights as to why
>>the antennas behave so differently.
>
>
>

3869. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 18:32:14 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <OUmyc.4149$KO.1564@newssvr24.news.prodigy.com>
Source record: 93574

What if the source doesn't or can't dissipate?

--
73
Hank WD5JFR
"Cecil Moore" <Cecil.A.Moore@ieee.ONEDOT.org> wrote in message
news:40c9d6dd$1_3@127.0.0.1...
> Henry Kolesnik wrote:
> > I know they work! One of my reasons for asking the question is I've
not
> > found any mention in the literature of where the
> > "attenuation/rejection/reflection/filter residue" goes.
>
> An open 1/4WL stub detours all the associated frequency
> energy into the stub and then reflects it back to the source.
> Consider the following:
>
> XMTR---------feedline-------+----load
> |
> | 1/4WL
> | open
> | stub
>
> The stub causes complete destructive interference between the
> forward voltage and reflected voltage at the mouth of the stub.
> Since the net voltage at the mouth of the stub is zero, no
> current flows into the load. All the current in the feedline
> is flowing in the stub and is reflected at the open end. The
> reflected waves head back to the source. Therefore, for lossless
> feedlines, all the attenuation/interference occurs in the source.
> Of course, for real-world feedlines, I^2*R losses will occur
> because of the high SWR at the associated frequency.
>
> The effect of the above stub is much like shorting out the load.
> Shorting out the load increases the dissipation in the source.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>

3870. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 18:34:38 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cactvu$af9$1@hercules.btinternet.com>
Source record: 93575

By how much does the length of the short-circuiting bar at the end of the
1/4-wave stub affect its resonant length?

What open-circuit resonant frequency does the stub change to when the short
circuiting bar is removed?

Reg, G4FGQ

3871. Re: Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 18:40:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10cjv55bnpu3pf6@corp.supernews.com>
Source record: 93576

In the '60s I worked on heavy ground radar, which produced peak powers of several megawatts. The waveguides for those antennas were routinely kept slightly pressurized with dry air. In the set I worked on the most, the air was pumped through one of two canisters of silica gel dessicant, while the other was being heated and purged of accumulated moisture. The roles of the two canisters was automatically and periodically reversed to assure a continuing supply of dry air. A small hole at the antenna end of the feedline allowed a little air flow to occur. In some climates at least, the waveguides would internally arc if the dry air supply failed.

Roy Lewallen, W7EL

Irv Finkleman wrote:

> Russ wrote:
>
>>It's probably "dry" N2. It is used to prevent water absorbtion and O2
>>absorbtion of the RF. It can also be used to detect leaks and to keep
>>out atmospheric water.
>>
>>Russ
>>
>
> Exactly! Very common in some of our shipboard antenna tuning units as
> well -- at least back in the 70's.
> Irv VE6BP
>

3872. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 18:47:25 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040611144725.07840.00000908@mb-m06.aol.com>
Source record: 93577

>Yuri Blanarovich wrote:
>> Very effective way for monoband antennas. The improved version of this is
>the
>> "Bazooka Balun" which besides above mentioned benefits acts as a balun. I
>used
>> it on all my monoband antennas. Provides DC path to ground, harmonic
>> supression, RF choke function and balanced to unbalanced feed point
>conversion.
>
>A 4:1 toroidal balun will also do the same thing -
>provide a DC path between conductors.
>--
>73, Cecil http://www.qsl.net/w5dxp

Not the SAME (thing), but SOME. That is, minus harmonic suppresion.
Jus' to be preeeesize :-)

Yuri, K3BU.us

God Bless President Reagan! RIP
Thanks for freeing me and millions of others from behind the Iron Curtain!!!

3873. Re: Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 19:24:08 UTC
From: "H. Adam Stevens" <hstevens@totalaccessNOSPAM.net>
Message-ID: <10ck1t89se0rm3d@corp.supernews.com>
Source record: 93578

1 keeps water out
2 makes leaks appaent

"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406110632.5152736c@posting.google.com...
> I'm working on a project that involves antennas that appear to be
> pressurized with nitrogren (approx 10psi). What purpose does this
> serve? Does it help with transmission properties, gain, etc? It is
> used on an aircraft, if that is a factor.
>
> Thanks in advance!
> Dave

3874. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 20:04:08 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2iuhhlFrfaptU1@uni-berlin.de>
Source record: 93579

A balun can reduce common mode feedline currents due to the power supplied to the line by the transmitter, but if the feedline is immersed in an asymmetric radiated field, how does the balun reduce/remove the resulting, unpredictable differential current on the feedline, and its contribution toward producing the net radiated pattern?

RF

"Roy Lewallen" wrote:
>
> A "non-radiating" feedline is one on which there is no net current
> (i.e., no common mode current). In the case of coax, this translates to
> zero current on the outside of the shield; for twinlead feedlines, it
> means that the currents in the two conductors are exactly equal in
> magnitude and opposite in direction.

>A transmission line placed symmetrically with respect to a dipole
>won't have any current induced in it, although current can be conducted
>via a direct connection.

>The amount of common mode current flowing in a transmission
>line can be reduced by introducing an impedance to the common
>mode current. It's desirable to do this without disturbing the differential
>mode transmission line operation. That's the function of a balun.

3875. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 20:39:40 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ca19b7_1@corp.newsgroups.com>
Source record: 93580

Henry Kolesnik wrote:
> What if the source doesn't or can't dissipate?

Heh, heh, you're on your own for that discussion. I personally
believe it is possible for reflected energy to wind up decreasing
the power consumption from the DC source that is supplying the finals,
which winds up decreasing the load on the 60 Hz power grid, which
decreases the oil required from the Middle East, which tends to
decrease the possibility of world war, which bodes well for the human
race, but that is another thread for another time.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3876. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 20:42:19 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ca1a55_1@corp.newsgroups.com>
Source record: 93581

Reg Edwards wrote:

> By how much does the length of the short-circuiting bar at the end of the
> 1/4-wave stub affect its resonant length?

I just twist the ends together. I don't use a bar.

> What open-circuit resonant frequency does the stub change to when the short
> circuiting bar is removed?

Same resonant frequency - virtual impedance at the input is reversed.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3877. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 20:45:27 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ca1b11$1_1@corp.newsgroups.com>
Source record: 93584

Yuri Blanarovich wrote:
> Thanks for freeing me and millions of others from behind the Iron Curtain!!!

... and from the IRS by lowering the maximum tax rate by 300%? :-)

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
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3878. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 20:46:24 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <ASoyc.5063$Di3.4893@bgtnsc05-news.ops.worldnet.att.net>
Source record: 93582
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"-=jd=-" <jd770YOUR@HATpostmark.net> wrote in message
news:Xns9505A66D0D175a216b130c132d203@63.218.45.20...
>
> Oh - I thought the poster intimated the "less than mainstream" SW
> preachers, ala "Profit Stair", etc.
>
>
>
> -=jd=-

I suppose he was, but I'm thinking of the all the religious broadcasters who've set up shop on the SW bands in the last 20 years or so. They have demonstrated a measure of political clout in that the old rules against domestic SW broadcasting are now freely ignored. These guys have a significant investment to protect, particularly those guys who buy another 100 kW transmitter every 18 months or so.

Frank Dresser

3879. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 20:46:49 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <AMnyc.32973$Sw.4753@attbi_s51>
Source record: 93583

Dave wrote:

> "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> news:x_Jxc.5407$kT5.594@newssvr22.news.prodigy.com...
>
>>I know that a shorted 1/4 wave stub exhibits a very high impedance. But
>>for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
>
> impedance
>
>>or a short. There are claims that this can be used to filter the even
>>harmonics. Shorts can't diisipate power and must reflect, so how does a
>>stub work?
>
>
> stubs work very nicely. you can get practical stub information at my web
> site, including how to build a 40m to 15m 3rd harmonic stub filter:
> http://www.k1ttt.net/technote/techref.html#filters
>
> as you may have noticed by now you have kicked the proverbial hornets nest.
> reflections are a touchy word in this group, usually attracting the endless
> argument that travels from thread to thread. in time this will deteriorate
> into name calling and endless argument over reflections, interference,
> virtual impedances, and a few other topics.
>
>
>

We bounce between the Physics of Operation and the Practicalities of Engineering. We have experts on all sides of the issue <grin>. And, typically, engineers and physicists both use English but can't communicate well <grin, again grin>

But your basic question is how does one answer your question: "Shorts can't dissipate power and must reflect, so how does a stub work?"

In practical terms, you have answered your own question! Reflections.

In Physics terms, you have to deal with the wave inside the stub and the [V^2(theta) + I^2(theta)] energy storage as a function of position within the stub and the corresponding sources of loss also a function of V^2 and I^2 inside the stub and finally the reflections that exist within the stub caused by the intentional physical short circuit [or open circuit].

So, are you pursuing Physics or Applications type knowledge?

3880. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 20:48:54 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ca1be0$1_1@corp.newsgroups.com>
Source record: 93585

Richard Fry wrote:
> A balun can reduce common mode feedline currents due to the power supplied
> to the line by the transmitter, but if the feedline is immersed in an
> asymmetric radiated field, how does the balun reduce/remove the resulting,
> unpredictable differential current on the feedline, and its contribution
> toward producing the net radiated pattern?

It simply provides an impedance to the common-mode currents. Whether
that impedance is high enough to be effective depends upon the system
parameters and configuration.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3881. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 20:52:18 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ca1cab$1_1@corp.newsgroups.com>
Source record: 93586

Dave Shrader wrote:
> So, are you pursuing Physics or Applications type knowledge?

And apparently, never the twain shall meet. :-)

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3882. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 21:04:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10ck7jrrp49kv96@corp.supernews.com>
Source record: 93587

The radiated field in which a feedline is immersed produces a common mode, not differential, current on the feedline(*). The balun creates a high impedance to the flow of common mode current. The result is that much less common mode current is induced than would be the case if the balun were absent. AM broadcasters put insulators periodically in tower guy wires. Baluns have the same effect, although they're of course not as perfect as the fully open circuit created by the insulator.

I'd also like to add that the induced current isn't unpredictable, as you stated. It has to follow rules like all other physical phenomena, so it's entirely predictable. I have to qualify this, though, by noting that in many or most amateur installations, the path from the antenna along the outside of the feedline to the rig and from there to the Earth is often not well known. And precise predictions of feedline current can't be made without knowing this path.

This effect is easily observed in models, as well as being experimentally verifiable with a small amount of effort. For example, make a simple wire Yagi with wire elements. Slip a few ferrite cores over one of the elements and see what happens to the pattern. What you've done is to reduce the current in the parasitic element, which is immersed in the field from the driven and other elements, thereby reducing its contribution to the total field. Cutting the element (analogous to the broadcasters' insertion of an insulator) has the same effect, although it'll be even more profound than the high but finite impedance of the cores. Quanitative measurements aren't hard to make, either. You can find details of current measurement devices in Chapter 8 of the ARRL Antenna book and other references. When placed over a coax feedline, or over both conductors of a twinlead feedline, they'll measure the common mode current.

(*) I'm assuming here that we're dealing either with coax, or with twinlead whose wire spacing is small in terms of wavelength and whose spacing from the antenna is large compared to the wire spacing. If you put twinlead in a field such that the field seen by one conductor is significantly different than the field seen by the other, you will get an induced differential, as well as common mode current. This won't happen with coax. Unlike common mode current, an induced differential current will affect the properties of the line as a transmission line (that is, change its apparent Z0 and velocity factor). But this would be an unusual condition in an amateur installation, and I'm not considering it here.

Roy Lewallen, W7EL

Richard Fry wrote:
> A balun can reduce common mode feedline currents due to the power supplied
> to the line by the transmitter, but if the feedline is immersed in an
> asymmetric radiated field, how does the balun reduce/remove the resulting,
> unpredictable differential current on the feedline, and its contribution
> toward producing the net radiated pattern?
>
> RF
> ----------
>
> "Roy Lewallen" wrote:
>
>>A "non-radiating" feedline is one on which there is no net current
>>(i.e., no common mode current). In the case of coax, this translates to
>>zero current on the outside of the shield; for twinlead feedlines, it
>>means that the currents in the two conductors are exactly equal in
>>magnitude and opposite in direction.
>
>
>>A transmission line placed symmetrically with respect to a dipole
>>won't have any current induced in it, although current can be conducted
>>via a direct connection.
>
>
>>The amount of common mode current flowing in a transmission
>>line can be reduced by introducing an impedance to the common
>>mode current. It's desirable to do this without disturbing the differential
>>mode transmission line operation. That's the function of a balun.
>
>
>

3883. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 21:14:25 UTC
From: kashe@sonic.net
Message-ID: <b58kc0luiio9i2t6avpolotfk7n12g7r14@4ax.com>
Source record: 93588
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

On Wed, 09 Jun 2004 16:32:31 -0000, dplatt@radagast.org (Dave Platt)
wrote:
>
>I agree that if BPL is rolled out en mass, it _is_ likely to cause
>serious interference with HF operations (amateur and otherwise), and
>that the momentum of "Hey, we've invested billions to field BPL, you
>can't just shut us down" is likely to override the original "No, there
>won't be interference" promised.
>
You've hit on a key issue here -- interests will cry out
against "premature regulation" or promise to mitigate if regulation is
already in place. Then, when damage to others has been shown to exist,
they claim they've been led down the garden path by being allowed to
proceed in the first place. Next they complain about the "crushing
burden" it would impose on them and their investors to mitigate
damages as per the original contract. Standard tactis for running
roughshod ofer the rights of others.

3884. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 21:20:12 UTC
From: kashe@sonic.net
Message-ID: <bb8kc0l3gt4ttjp4gvtso0vtnpdluo6esq@4ax.com>
Source record: 93590
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

On 09 Jun 2004 20:05:36 GMT, "-=jd=-" <jd770YOUR@HATpostmark.net>
wrote:

>
>Now, I do not expect the FCC to investigate every CB'er messing up TV
>reception, but I would expect them to eagerly investigate complaints from
>any public safety related organization. If they don't, shame on them.
>

In the current political climate that public safety
organizations should be able to invoke homeland security concerns to
bolster their side of the debate -- inability to coordinate
evacuations, etc.

3885. Re: Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 21:20:55 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <Xmpyc.4177$iz1.468@newssvr24.news.prodigy.com>
Source record: 93589

If waveguide isn't pressurized with a dry gas and it has any pinholes it will breath outside ambient as temperature cycles. Later the water vapor will condense on the walls of the WG and as it collects it will flow to low spots of the WG. You know the rest of the story. In non-operating systems in freezing climates you'll see expanded (somtimes split) WG from water that froze in the low spots.

--
73
Hank WD5JFR

"David Harper" <achilles03@hotmail.com> wrote in message news:fef44ceb.0406110632.5152736c@posting.google.com...
> I'm working on a project that involves antennas that appear to be
> pressurized with nitrogren (approx 10psi). What purpose does this
> serve? Does it help with transmission properties, gain, etc? It is
> used on an aircraft, if that is a factor.
>
> Thanks in advance!
> Dave

3886. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 21:25:36 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <krpyc.4179$BO1.3285@newssvr24.news.prodigy.com>
Source record: 93591

What happens if the twisted short is grounded as in lightning protection?
Is there any succinct difference?

--
73
Hank WD5JFR

"Cecil Moore" <w5dxp@hotmail.com> wrote in message
news:40ca1a55_1@corp.newsgroups.com...
> Reg Edwards wrote:
>
> > By how much does the length of the short-circuiting bar at the end of
the
> > 1/4-wave stub affect its resonant length?
>
> I just twist the ends together. I don't use a bar.
>
> > What open-circuit resonant frequency does the stub change to when the
short
> > circuiting bar is removed?
>
> Same resonant frequency - virtual impedance at the input is reversed.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> ------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3887. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 21:38:41 UTC
From: * <*@*.com>
Message-ID: <2iunkbFqicb4U1@uni-berlin.de>
Source record: 93592

Yes, it distorts the pattern, radiating or not.
How much depends upon the situation,
frequencies, spacing, size of feedline.
It is a conductive surface so it will distort pattern.
Side mounted on a tower changes pattern quite a lot
depending upon spacing from the tower, you can tune
the pattern that way. dB Products used to have a good
Catalogue that showed this.
I would not expect much pattern distortion from a feedline
very small, but would from a tower.

"Richard Fry" <rfry@adams.net> wrote in message
news:2itmi8Fr4qtiU1@uni-berlin.de...
> RE: Post below from May 20, 2004
>
> Wouldn't a "non-radiating" feedline in the field of a radiator also
distort
> the patterns of that radiator? Any conductor can do that, even if it is
not
> a feedline. NEC-2 models of FM broadcast transmit elements (and test
range
> patterns) show this clearly.
>
> Paper 6 at http://rfry.org shows the free space patterns that the element
> arms of a rototiller FM broadcast transmit antenna develop if they could
be
> driven from internal power sources -- and then the effects of adding the
> element stem, mounts, feedline, and some nearby tower structure. The
> patterns can get very skewed, even though the only radiators getting power
> via a metallic path from the tx are the element arms themselves.
>
> RF
> ----------
>
> "Roy Lewallen" wrote
> > With a typical ground plane antenna, the feedline can radiate
> > significantly, distorting the pattern. This effect could easily be
> > different for the different antennas. Modeling indicates that two baluns
> > are often needed to suppress the current on the outside of the feedline.
> > A model which includes the feedline might give some insights as to why
> > the antennas behave so differently.
>
>

3888. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 21:48:44 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <0Npyc.5247$Di3.628@bgtnsc05-news.ops.worldnet.att.net>
Source record: 93593
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"-=jd=-" <jd770YOUR@HATpostmark.net> wrote in message
news:Xns9505ACAF94A4Da216b130c132d203@63.218.45.20...
>
> Wholly-Cow! They must be realizing a fair bit of success when they "pass
> the plate".
>
>
> -=jd=-

Some of the broadcasters are pretty ambitious. WYFR bought several about 20 years ago. Then it was WWCR. WWRB already has five transmitters.

I haven't heard as much of WWRB since Alex Jones moved to WWCR, but I imagine Dave Frantz might have had something to say about BPL. This time last year, he was talking about HAARP causing all those tornadoes and the evils of Satan's World Wide Web.

Frank Dresser

3889. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 22:01:23 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2iuodfFrt537U1@uni-berlin.de>
Source record: 93594

As a discussion point, consider 1/2-wave parasitic radiators sometimes positioned within a foot or two of FM broadcast transmit elements, to "shape" their patterns. This is the common technique used in "sidemount" antennas that must meet FCC requirements for directional FM broadcast assignments.

A parasitic itself is suspended mechanically in space by a non-metallic support. It has no direct connection to the transmitter, and no conductive physical path to any part of the antenna, its feedline, mounts, or supporting structure.

Such parasitics >do< affect the net radiation pattern(s) of the array.

Isn't a "non-radiating" feedline with a balun just an arbitrary length of conductor, but now with a metallically conductive path to the driven element(s), as well?

The feedline (and other metallic structures) adjacent to an FM broadcast transmit antenna will affect the radiation patterns of the antenna even though the measured match between the feedline and antenna input is extremely good (even 1:1 SWR) -- in which case the line should have no differential current to produce such an effect. What is the explanation for that, please?

RF

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:10ck7jrrp49kv96@corp.supernews.com...
> The radiated field in which a feedline is immersed produces a common
> mode, not differential, current on the feedline(*). <ETC>

3890. HP 5061-1136 Return Loss Bridge ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 22:34:41 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <5sqyc.4189$V62.725@newssvr24.news.prodigy.com>
Source record: 93595
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.antenna,rec.radio.amateur.equipment

There's an HP 5061-1136 Return Loss Bridge 124? 10KHz-10MHz on ebay at
:http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3820418812&sspagename=ST
RK%3AMEWA%3AIT&rd=1
I can't find anything on it, anyone out there know about it? Strange
impedanace and not much range, possibly Telco spec?
tnx
--
73
Hank WD5JFR

3891. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 22:39:59 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10ckd626a30fef3@corp.supernews.com>
Source record: 93596

Richard Fry wrote:
> As a discussion point, consider 1/2-wave parasitic radiators sometimes
> positioned within a foot or two of FM broadcast transmit elements, to
> "shape" their patterns. This is the common technique used in "sidemount"
> antennas that must meet FCC requirements for directional FM broadcast
> assignments.
>
> A parasitic itself is suspended mechanically in space by a non-metallic
> support. It has no direct connection to the transmitter, and no conductive
> physical path to any part of the antenna, its feedline, mounts, or
> supporting structure.
>
> Such parasitics >do< affect the net radiation pattern(s) of the array.
>
> Isn't a "non-radiating" feedline with a balun just an arbitrary length of
> conductor, but now with a metallically conductive path to the driven
> element(s), as well?

No. A "non-radiating" feedline is one which has no significant amount of common mode current. This can be accomplished by making the feedline a length such that the induced current is minimal; by inserting a balun or baluns; and/or by placing the feedline symmetrically with respect to the antenna. I thought I had explained this -- I don't seem to be communicating well.

> The feedline (and other metallic structures) adjacent to an FM broadcast
> transmit antenna will affect the radiation patterns of the antenna even
> though the measured match between the feedline and antenna input is
> extremely good (even 1:1 SWR) -- in which case the line should have no
> differential current to produce such an effect. What is the explanation for
> that, please?

We've been down this path before, and you've shown that you won't accept the fact that SWR has nothing to do with whether or not common mode current exists on a feedline, and there's nothing I've been able to do to convince you otherwise. You also either haven't read or won't believe that it's common mode, not differential, current that causes a line to radiate and thereby contribute to the overall pattern. But hopefully other readers have learned from this exchange. Once the basic principles are grasped, these phenomena lose their mystery, and they're no longer "unpredictable", but readily measured, modeled, and understood.

Based on past experience, nothing I say will sway you from the way you've chosen to interpret observed phenomena. And I believe I've done enough explaining so that any other readers, who are open to learning

some fundamentals, can come away with a better understanding. So that's enough for now.

Roy Lewallen, W7EL

>
> RF
> _____
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
> news:10ck7jrrp49kv96@corp.supernews.com...
>
>>The radiated field in which a feedline is immersed produces a common
>>mode, not differential, current on the feedline(*). <ETC>
>
>
>

3892. Re: HP 5061-1136 Return Loss Bridge ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 23:16:47 UTC
From: Bill Janssen <billjNOTTHIS@ieee.org>
Message-ID: <z3ryc.2191$Z45.400@news01.roc.ny>
Source record: 93597
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.antenna,rec.radio.amateur.equipment

Henry Kolesnik wrote:

>There's an HP 5061-1136 Return Loss Bridge 124? 10KHz-10MHz on ebay at
>:http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3820418812&sspagename=ST
>RK%3AMEWA%3AIT&rd=1
> I can't find anything on it, anyone out there know about it? Strange
>impedanace and not much range, possibly Telco spec?
>tnx
>
>
The dual plug on the side and the empedance looks like typical telco
equipment

Bill K7NOM

3893. Re: Non conducting booms

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 23:23:04 UTC
From: j999w@aol.com
Message-ID: <20040611192304.16314.00000842@mb-m29.aol.com>
Source record: 93598

>>> Wood works fine ... just give 'er a good coat of latex paint. I've got
>>some 432
>>> Quagis that are about 6 years old ... still work great.
>>>
>>> jw
>>> K9RZZ
>>

I should have mentioned ... I painted them blue!

:^]

jw
K9RZZ

3894. Re: Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 23:35:58 UTC
From: SBC YAHOO NEWS <nn7kexk7zfg@sbcglobal.net>
Message-ID: <ylryc.69973$VX1.44749@newssvr29.news.prodigy.com>
Source record: 93599

+, when waveguide, and/or coax leaks, even a SMALL amount of water has a profound effect on it's ability to move rf! Remember several instances of water inside waveguide, only say, 1/16 th of inch deep, on top of window (a dam of either mica, or teflon, to act as a vapor barrier), completely absorbeing all signals, both ways at 6 GHz! Modern systems tend to use dry air pumps (andrew, Prodelien), but even telephone cables (copper, with plastic, and paper insulation) are often pressurized. And, as an aside, when moisture has penetrated these, oftentimes, the pitcock on one end (lower, or level) is opened, while nitrogen, or dry air is applied to the other end, and allowed to continusly flow thru it, to dry it out, or at least to keep it going until favorable weather appears, to timely replace it! and, IF you look at waveguide fittings (both rectangular, and round, the first gap (if you will is a 1/4 wave choke, , and there is usually a SECOND ring (both recessed) , that an rubber gasket fits in for an air block. the wave guide that it mates to on the other end has only an opening for the waveguide, itself, forming (when both these ends are properly mated , an airtight, and rf tight connection . and to insure correct fitting of them, the screw holes of one (forget which) are threaded, and the other is NOT (only one way to apply them!) --Jim NN7K

--
No trees were killed in the sending of this message. However, a large number of electrons were terribly inconvenienced !

" People who never get carried away, should be! " --- Malcom Forbes

"Roy Lewallen" <w7el@eznec.com> wrote in message news:10cjv55bnpu3pf6@corp.supernews.com...
> In the '60s I worked on heavy ground radar, which produced peak powers
> of several megawatts. The waveguides for those antennas were routinely
> kept slightly pressurized with dry air. In the set I worked on the most,
> the air was pumped through one of two canisters of silica gel dessicant,
> while the other was being heated and purged of accumulated moisture. The
> roles of the two canisters was automatically and periodically reversed
> to assure a continuing supply of dry air. A small hole at the antenna
> end of the feedline allowed a little air flow to occur. In some climates
> at least, the waveguides would internally arc if the dry air supply
failed.
>
> Roy Lewallen, W7EL
>
> Irv Finkleman wrote:
>
> > Russ wrote:
> >

> >>It's probably "dry" N2. It is used to prevent water absorbtion and O2
> >>absorbtion of the RF. It can also be used to detect leaks and to keep
> >>out atmospheric water.
> >>
> >>Russ
> >>
> >
> > Exactly! Very common in some of our shipboard antenna tuning units as
> > well -- at least back in the 70's.
> > Irv VE6BP
> >

3895. Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-11 23:40:33 UTC
From: Zecharia Sitchin <ZSitchin@about.com>
Message-ID: <u7gkc0tseflctleqiprpiehki5do09pjqd@4ax.com>
Source record: 93600
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

What would be the optimum type of antenna, power level, and frequency to communicate from CONUS to Nibiru?

3896. How good is Antenna Specialists?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 00:03:23 UTC
From: Chris <spadfly@earthlink.net>
Message-ID: <fLryc.2112$Wr.1611@newsread1.news.pas.earthlink.net>
Source record: 93601

I have a question about a CB antenna but I'd like an opinion from someone who knows more about antenna theory than the average CB'er. I have an old Antenna Specialists M-902 Black Stallion antenna that I am thinking about using. It looks like the one here http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3093592178 but I don't know how well you can see it. It's a shunt-fed, base loaded antenna that is about 3 ft. long and mounts on the trunk lip. My question is how does it compare to some of the new antennas like Wilson or K40? Wilson claims to be the best http://www.wilsonantenna.com/w1000.htm but are they really that much better? Thanks for the help.

Chris

3897. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 00:49:20 UTC
From: John Barnard <jfjb@shaw.ca>
Message-ID: <40CA531E.DD36CE61@shaw.ca>
Source record: 93602
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

```
Pass the plate to modulate the plate?

Regards

John Barnard

-=jd=- wrote:

> On Fri 11 Jun 2004 04:46:24p, "Frank Dresser"
> <analogdial@worldnet.att.net> wrote in message
> news:ASoyc.5063$Di3.4893@bgtnsc05-news.ops.worldnet.att.net:
>
> >
> > "-=jd=-" <jd770YOUR@HATpostmark.net> wrote in message
> > news:Xns9505A66D0D175a216b130c132d203@63.218.45.20...
> >>
> >> Oh - I thought the poster intimated the "less than mainstream" SW
> >> preachers, ala "Profit Stair", etc.
> >>
> >>
> >>
> >> -=jd=-
> >
> > I suppose he was, but I'm thinking of the all the religious broadcasters
> > who've set up shop on the SW bands in the last 20 years or so. They
> > have demonstrated a measure of political clout in that the old rules
> > against domestic SW broadcasting are now freely ignored. These guys
> > have a significant investment to protect, particularly those guys who
> > buy another 100 kW transmitter every 18 months or so.
> >
> > Frank Dresser
> >
> >
>
> Wholly-Cow! They must be realizing a fair bit of success when they "pass
> the plate".
>
> -=jd=-
> --
> My Current Disposable Email:
> jd770YOUR@HATpostmark.net
> (Remove YOUR HAT to reply directly)
```

3898. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 01:08:33 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2iv3ceFrrcvqU1@uni-berlin.de>
Source record: 93603

Just curious, Roy. Have you used EZNEC to model an FM broadcast transmit array, feedlines and adjacent tower -- as in the models in Paper 6 at http://rfry.org ? If so, and your pattern results are appreciably different than those, for those same scenarios -- I'd truly appreciate learning from you the reason(s) you might pose for that. Maybe I'm doing it wrong.

I'll be glad to send you the intermediate results: radiators alone, complete elements with feedlines, complete elements with feedlines and tower.

RF

3899. Free stainless steel 1/4 inch diameter tubes

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 02:25:16 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <gQtyc.25350$TR1.2505@nwrddc01.gnilink.net>
Source record: 93604

I picked up about 40 stainless steel tubes, 40 inches long and 0.250
diameter. If there is anyone near Los Angeles who would like some (free)
they are available. I'd even deliver to a user near LA. iif there is any
problem with transportation.
I thought of directors for beams above ~135MHz. I dont recommend
stainless steel due to the I^R loss, but, what do I know!!

Jerry

3900. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 06:50:47 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <ps8lc0dq7igaej1fjgqsqpuvh3cnn3grqd@4ax.com>
Source record: 93605

On 07 Jun 2004 14:02:20 GMT, tdonaly@aol.com (Tdonaly) wrote:

>Richard Clark wrote,
>>
>>Let's see, you two have passed this SAME thing back and forth 39
>>times, cannot agree about what each thinks about ONE particular, and
>>each of you insist you know what a third party meant.
>>
>>Well, I'm off to Foggy Bottom (D.C.) again to where they do this kind
>>of thing for a living and call it law. ;-)
>>
>>Let's see if a week improves this chowder.
>>
>>73's
>>Richard Clark, KB7QHC
>>
>
>The triumph of hope over experience.
>73,
>Tom Donaly, KA6RUH
>

Hi Tom,

Well, up to 78 (double my last count) and no further along in this chowder to confirm your observation (makes me glad I abandoned that metaphor for excellent Chesapeake Crab Cakes).

The twists and turns in this conversation matched all the roads closed and diverted around the cathedral during the funeral. -whew-

73's
Richard Clark, KB7QHC

3901. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 07:35:42 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <0RNR5CDOJryAFANw@ifwtech.co.uk>
Source record: 93606

Roy Lewallen wrote:
>I'd also like to add that the induced current isn't unpredictable, as
>you stated. It has to follow rules like all other physical phenomena,
>so it's entirely predictable.

The key to reducing the unwanted feedline current is that knowledge that "it has to follow rules". We can't change the rules, but we *can* change the antenna/feedline configuration so that the rules will work in our favor.

These are the well-known physical rules about the way that voltages and currents distribute themselves on wires, for example:

* Antenna wires carry standing waves of voltage and current, and also so do feedlines if they carry net (common-mode or surface) RF currents.

* A voltage maximum is located at a current minimum, and vice versa.

* Maxima and minima are a quarter-wavelength apart.

* Current goes to zero at the physical end of a wire; voltage goes to maximum.

Whenever you change the antenna/feedline configuration, the rules will then force the voltage and current to rearrange themselves into a new configuration also. So how can we "play the rules" to reduce unwanted feedline currents?

For the moment, let's talk about coax feedline and unwanted surface currents, because it's easier to insert chokes and also easier to understand the results.

The unwanted surface current on the feedline has two components:
* Conducted current, launched onto the feedline from the hard-wired connection at the feedpoint
* Induced current, caused by the feedline being placed in an EM field.

Wherever you insert a feedline choke along the feedline (by winding the coax into a coil, or using ferrite loading) then you are creating a high impedance which *forces* a current minimum at that point. The rules will then force the current distribution along the feedline to change, so that it meet this new additional requirement.

A choke balun at the feedpoint is the single most effective change you can make, because it almost completely prevents conducted currents from being launched onto the feedline.

That leaves the induced currents to be dealt with. These are typically less of a problem than the conducted current, but are very hard to kill. It's rather like trying to squeeze the air out of a long inflated tube. Squeeze in one place by forcing a current minimum, and a new current maximum will pop up a quarter-wavelength away.

Your feedpoint choke has defined a current minimum at the top of the feedline, but by squeezing there you have created an induced current maximum a quarter-wavelength down the feedline. So place another choke there too, and the rules will make it impossible for ay significant currents to build up between those two chokes. By making the rules work in your favor, you have effectively killed the feedline current between the two chokes.

The current won't quite go to zero, and a current maximum will certainly try to pop up somewhere else, if the rules allow... but it probably won't be as large as before, and you can chase that one down too.

There are many other ways to look at the problem, but I've found this viewpoint of "playing the rules" to be quite a helpful one. I hope it chimes with some other people too.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3902. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 07:49:25 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <egvLVWEFWryAFAqq@ifwtech.co.uk>
Source record: 93607

Roy Lewallen wrote:
>> The feedline (and other metallic structures) adjacent to an FM broadcast
>> transmit antenna will affect the radiation patterns of the antenna even
>> though the measured match between the feedline and antenna input is
>> extremely good (even 1:1 SWR) -- in which case the line should have no
>> differential current to produce such an effect. What is the explanation for
>> that, please?
>
>We've been down this path before, and you've shown that you won't
>accept the fact that SWR has nothing to do with whether or not common
>mode current exists on a feedline, and there's nothing I've been able
>to do to convince you otherwise. You also either haven't read or won't
>believe that it's common mode, not differential, current that causes a
>line to radiate and thereby contribute to the overall pattern.

I agree with Roy that SWR itself is not the *cause* of radiating
feedlines.

However, if the feedline is allowed to carry currents and radiate, it
effectively becomes part of a new and different antenna configuration.
That new configuration will have a different feedpoint impedance, so the
SWR will change.

But the SWR didn't cause the feedline current and radiation; in fact it
was exactly the opposite.

Also, Richard is assuming that unwanted feedline currents will always
change the SWR for the worse. That's often true, but it doesn't have to
be - sometimes the SWR gets worse when the feedline current is choked
off.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

3903. Murch UT2000B

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 10:28:02 UTC
From: bum@att.net
Message-ID: <5imlc0pnc3khgmhnu541qvev7mgerads88@4ax.com>
Source record: 93608

Does anyone know if Murch sold the UT2000B as a kit?

A friend of mine has a UT2000B and found it was wired incorrectly and
he is wondering if the factory did this or if it was kit that someone
wired incorrectly.

73..de John/K4WJ
73..de John/K4WJ
K8PXG from 18 Jun 59 to 11 Feb 97
K8WJ from 12 Feb 97 to 07 Apr 97

3904. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 10:49:05 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0406120249.774d99ec@posting.google.com>
Source record: 93609

Roy Lewallen <w7el@eznec.com> wrote in message
news:<10ckd626a30fef3@corp.supernews.com>...
>
> No. A "non-radiating" feedline is one which has no significant amount of
> common mode current. This can be accomplished by making the feedline a
> length such that the induced current is minimal; by inserting a balun or
> baluns; and/or by placing the feedline symmetrically with respect to the
> antenna. I thought I had explained this -- I don't seem to be
> communicating well.
>

What's up Roy? Long time no see!

Ok, well, I'd like to discuss this a bit.

So for most of the dipole based antennas (including Yagis), you
can use 6 turns of 4" diameter coils in the coax, to make an inductive
loop that is supposed to prevent current from moving down the outer
braid (non-radiating).

>
> We've been down this path before, and you've shown that you won't accept
> the fact that SWR has nothing to do with whether or not common mode
> current exists on a feedline, and there's nothing I've been able to do
> to convince you otherwise. You also either haven't read or won't believe
> that it's common mode, not differential, current that causes a line to
> radiate and thereby contribute to the overall pattern. But hopefully
> other readers have learned from this exchange. Once the basic principles
> are grasped, these phenomena lose their mystery, and they're no longer
> "unpredictable", but readily measured, modeled, and understood.
>

Ok, so I understand how the common-mode-rejection-ratio works with
an audio amplifier that has an XLR cable input: signals in phase
(common
mode) will cancel each other out when they reach the input transformer
(balun). And although the XLR cable is shielded, the two signal wires
are more like a twin-lead transmission line instead of like coaxial
cable.

So i'm not sure how to ask this, but coxial cable is obviously a
much different beast than twin lead, so the concept of common-mode
currents
radiating from the line is a bit strange because the outer braid
completely
encloses the inner radial. But this is weird because coaxial cable is

unbalanced already, while twin-lead (or in the case of the audio XLR, shielded twin lead) is balanced.

This is a discussion here:

http://lists.contesting.com/archives/html/Towertalk/2003-06/msg00484.html

Slick

3905. Re: Making 2.4GHz antenna more directional

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 11:33:06 UTC
From: jason <jas@kto.net>
Message-ID: <hKCyc.49$wT2.16@newsfe3-gui>
Source record: 93610

Making it more directional would require something to become like a beam.
The only other thing you could do is similar to the effect of a corner
reflector. A big piece of foil curved around, but god knows what the SWR or
radiation pattern would be.
Do you just need to block the signal from going in one direction, like
through a wall/window and into the house etc?
It wouldn't really stop people sniffing or watchign what you're up to as
that particular system is very insecure, even with WEP. Stick to good old
wires!

"Nige" <uYYYY@ntlworld.com> wrote in message
news:a4nlc05qmlgul41j5n4949t2u0r23b67e0@4ax.com...
> I'm sure this has been asked before on this group, but I can't find it
> on my news server. I've got a Wi-Fi 802.11g wireless access point that
> I'd like to alter the coverage of.
>
> Has anyone any experience of making 2.4GHz antenna more directional? I
> need about 90 degrees, rather than 360. I've seen the "Pringles" DIY
> projects, but they are all to produce a beam.
>
> I was thinking of a tin cut in half lengthways, any thoughts?
>
> 73 G1NDM (no longer active)
>
>
> --
> Nige
>
> Please replace YYYY with the current year

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.703 / Virus Database: 459 - Release Date: 10/06/2004

3906. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 11:51:10 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <O6Cyc.51297$Gx4.49695@bgtnsc04-news.ops.worldnet.att.net>
Source record: 93611
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"Dee D. Flint" <deeflint01@comcast.net> wrote in message
news:5bCdnRIiLaG6d1TdRVn-gw@comcast.com...
>
>
>
> Plus if BPL does "threaten" to enter a market, the DSL and cable guys will
> drop their prices to keep from losing market share. So I bet they are
> monitoring this situation closely. The latter already know it is price
that
> keeps some people from switching from dial-up. Just look at some of the
> recent ads on TV for their promotions. Cable had been advertising a
$29.99
> introductory offer and now they are offering a $19.99 introductory offer.
> DSL and cable know that they have to get close to dial up prices to get
the
> customers.
>
> Dee D. Flint, N8UZE
>

I was wondering how many people have broadband access, so I googled this up:

"A new, national report by comScore Networks indicates broadband Internet access is ready to overtake dial-up access as the top online subscription service in major metro markets in the United States. "

""In the past several months, we've seen the U.S. online population reach 150 million people, and household broadband penetration cross the 33 percent threshold," said Russ Fradin, executive vice president of comScore Networks. "Now we've recorded another milestone, with broadband accounting for more than half of U.S. major market Internet connections.""

If the story is correct, half of the internet users have broadband access where it's widely available, and a third of the country has it. Roughly 50 million people in the US have broadband access.

http://www.ectnews.com/story/33108.html

The story doesn't mention dropping price as much of a driving force in the expansion of broadband, but I don't see how it can't be considered as the main reason. SBC here runs promotional offers with the first few months of DSL broadband for little more than the cost of dial up. Of course, the price goes up after the promotional period ends.

Anyway, there seems to be a wide interest in broadband, as long as it's offered at an attractive price.

Frank Dresser

3907. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 12:52:50 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40cafdcd$1_5@corp.newsgroups.com>
Source record: 93612

Dr. Slick wrote:
> So for most of the dipole based antennas (including Yagis), you
> can use 6 turns of 4" diameter coils in the coax, to make an inductive
> loop that is supposed to prevent current from moving down the outer
> braid (non-radiating).

6 turns is probably not enough inductance to do much choking on 160m
or 80m.

If the dipole is non-resonant, 6 turns of coax may have very little
effect on any HF frequency.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3908. Re: Making 2.4GHz antenna more directional

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 13:08:11 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <%eDyc.13749$tA6.2018@nwrddc03.gnilink.net>
Source record: 93613

Nige

If you dont get th info you yant , you are invited to E-mail me to get
alot of referances to sites where decent efforts to build sirectional
'wireless' antennas can be made.

Jerry

"Nige" <uYYYY@ntlworld.com> wrote in message
news:a4nlc05qmlgul41j5n4949t2u0r23b67e0@4ax.com...
> I'm sure this has been asked before on this group, but I can't find it
> on my news server. I've got a Wi-Fi 802.11g wireless access point that
> I'd like to alter the coverage of.
>
> Has anyone any experience of making 2.4GHz antenna more directional? I
> need about 90 degrees, rather than 360. I've seen the "Pringles" DIY
> projects, but they are all to produce a beam.
>
> I was thinking of a tin cut in half lengthways, any thoughts?
>
> 73 G1NDM (no longer active)
>
>
> --
> Nige
>
> Please replace YYYY with the current year

3909. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 14:45:32 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <fb5mc09sdovus389b593f5tsjv3do1egur@4ax.com>
Source record: 93614

On Fri, 11 Jun 2004 15:39:59 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

> This can be accomplished by making the feedline a
>length such that the induced current is minimal; by inserting a balun or
>baluns; and/or by placing the feedline symmetrically with respect to the
>antenna. I thought I had explained this -- I don't seem to be
>communicating well.

Hi Roy, Richard,

Perhaps it is because of the naming convention vs. application.

The term more appropriate to the Topic is RF Choke rather than BalUn
(which performs the choking action by implication, and could easily
fail that implication if the incorrect BalUn design is chosen).
Further, as you have noted in past correspondence Roy, a second Choke
(not BalUn) is often required for these VHF/UHF applications to
completely isolate the line.

73's
Richard Clark, KB7QHC

3910. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 15:45:23 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <nyFyc.14485$2i5.925@attbi_s52>
Source record: 93615
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Excuse me for butting into an interesting discussion. As the originator of this string heading, I just wanted to say that I hope no one loses sight of the original message that prompted my post.

That was the one from "yea right" who wrote in his message news:pan.2004.06.05.07.04.03.720063@spam.spam...

"If you value radio, this may be the last and only chance to have your voice heard to stop BPL from destroying your hobby. The FCC has extended the comment period for BPL.

It is VERY simple to file a FCC comment. Click the link below and enter

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in box #1 (proceeding number) and fill in the blanks. The simplest way to comment is to type your comment into the box on the bottom of the form.
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi "

Anyone who has not given the FCC their input, should (you too, Frank).

AK

<kashe@sonic.net> wrote in message news:bb8kc0l3gt4ttjp4gvtso0vtnpdluo6esq@4ax.com...
> On 09 Jun 2004 20:05:36 GMT, "-=jd=-" <jd770YOUR@HATpostmark.net>
> wrote:
>
> >
> >Now, I do not expect the FCC to investigate every CB'er messing up TV
> >reception, but I would expect them to eagerly investigate complaints from
> >any public safety related organization. If they don't, shame on them.
> >
>
> In the current political climate that public safety
> organizations should be able to invoke homeland security concerns to
> bolster their side of the debate -- inability to coordinate
> evacuations, etc.
>

3911. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 15:50:37 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <vq5mc0ln7jl7flbklnrkjsbn6c6h2tp2mv@4ax.com>
Source record: 93616

On 12 Jun 2004 03:49:05 -0700, radio913@aol.com (Dr. Slick) wrote:

> So for most of the dipole based antennas (including Yagis), you
>can use 6 turns of 4" diameter coils in the coax, to make an inductive
>loop that is supposed to prevent current from moving down the outer
>braid (non-radiating).

Hi OM,

Loop has a loaded meaning here in this group, the appropriate term would be R.F. Choke. What you describe is adequate for many applications but needs to be confirmed in practice.

There are three (3) conductors implicit in any discussion of Transverse vs. Common Mode. They are the two wires and ground (ground being the conductor in the either the sense of a body of available charge, or a literal wire). If you have absolutely no reference to a third source of charge, then there is no issue of Common Mode.

The twin lead model in any real application (be it window line, twin lead, or your AF cables) has some interaction with ubiquitous ground and this gives rise to Common Modality issues. These models are fairly obvious, what follows reveals how you have missed the translation to coax:

> So i'm not sure how to ask this, but coxial cable is obviously a
>much different beast than twin lead, so the concept of common-mode
>currents radiating from the line is a bit strange because the outer braid
>completely encloses the inner radial. But this is weird because coaxial cable is
>unbalanced already, while twin-lead (or in the case of the audio XLR,
>shielded twin lead) is balanced.

The discussions in this group are often on shaky ground (pun intended) by lacking discussion of ground. The discussions in this group are often on that same tremulous substrate when the arguments run to Kirchhoff, and tectonic when Superposition is given its fanfare.

The Kirchhoff/Superposition failures of discussion revolve around the normal observation in the reciprocity of load as source. For the coax model, the two conductors are bound just as tightly as any twin lead or conductor pair. If we were to terminate the coax at a shielded load, then the self shielding property of the coax would obviate any discussion of Common Mode. Aside from leakage (if you choose to use braided shield), it is totally absent. If you replaced the coax with twin lead, Common Mode WOULD become an issue (an inverse of expectations), but I will suspend that to return to the coax issue you ask to resolve.

The coax terminates in real world loads that are not shielded and THIS imbalances the system. A current is imparted to the load, and a voltage is developed across it (Kirchhoff/Ohm). To any other system component, this voltage is a source (Superposition) potential (irrespective of where the "energy" comes from). This source, now translated and extended to the feedpoint, sees the antenna, and it sees the coax shield which has some linkage to ground. That is, the exterior of the coax is NOT the same conductor as the interior of the coax. The interior path is self shielded, the exterior is definitely not. Superposition allows us to discard the interior wire of the coax, and to simply view this coax as a third wire whose path is described by the exterior of the shield.

This load-as-source (Superposition), then sees more than one path to ground: one, through the load as we know it (typically the antenna); and two, the coax shield's exterior path. Both offer paths for current and this current is the Common Mode current - by definition, as they are referenced to the Common (ground).

Where the load is balanced like a dipole (a seriously flawed presumption, but usefully accepted for the purpose of argument); then those current paths are equal, out of phase, cancel, and conform to the Transverse Mode. However, this balanced load has a reference to ground (this is where the flawed presumption arises and reveals how the Common Mode originates). So does the exterior of the coax shield. Some part of the balanced load is out of phase with the coax shield, and with ground completing the circuit (as both elements share this Common) then current flows - Common Mode current.

If you snub the coaxial exterior path (or Choke it); then you will successfully reduce that Common Mode current. Examples of snubbing mechanisms are bountifully described in this group.

Twin lead applications suffer from Common Mode for the same reasons when the "balanced" load is in fact unbalanced (quite simple when the literal, physical load, the antenna, fails to present equal relations to ground). This is seen when you observe a dipole with one leg drawn down at an angle (or up away from ground for that matter). The visual imbalance is as telling as any method to confirm. If one end of a dipole is supported in the clear, and the other end runs flat into a wooded area, there is the obvious visual imbalance that will in some way force Common Mode currents into the pristine twin lead configuration. The failure mechanisms are manifold, so further elaboration is unnecessary.

To stir the controversy, the standard FCC model for an AM service antenna (ground mounted monopole) is possibly the single best, real example of a balanced system. ;-)

73's
Richard Clark, KB7QHC

3912. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 15:50:37 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <hDFyc.24731$0y.15762@attbi_s03>
Source record: 93617
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Excuse me for butting into an interesting discussion. As the originator of this string heading, I just wanted to say that I hope no one loses sight of the original message that prompted my post. That was the one from "yea right" who wrote in his message news:pan.2004.06.05.07.04.03.720063@spam.spam...

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Anyone who has not given the FCC their input, should (you too, Frank).

AK

"John Barnard" <jfjb@shaw.ca> wrote in message news:40CA531E.DD36CE61@shaw.ca...
> Pass the plate to modulate the plate?
>
> Regards
>
> John Barnard
>
> -=jd=- wrote:
>
> > On Fri 11 Jun 2004 04:46:24p, "Frank Dresser"
> > <analogdial@worldnet.att.net> wrote in message
> > news:ASoyc.5063$Di3.4893@bgtnsc05-news.ops.worldnet.att.net:
> >
> > >
> > > "-=jd=-" <jd770YOUR@HATpostmark.net> wrote in message
> > > news:Xns9505A66D0D175a216b130c132d203@63.218.45.20...
> > >>
> > >> Oh - I thought the poster intimated the "less than mainstream" SW
> > >> preachers, ala "Profit Stair", etc.
> > >>
> > >>

> > >>
> > >> -=jd=-
> > >
> > > I suppose he was, but I'm thinking of the all the religious
broadcasters
> > > who've set up shop on the SW bands in the last 20 years or so. They
> > > have demonstrated a measure of political clout in that the old rules
> > > against domestic SW broadcasting are now freely ignored. These guys
> > > have a significant investment to protect, particularly those guys who
> > > buy another 100 kW transmitter every 18 months or so.
> > >
> > > Frank Dresser
> > >
> > >
> >
> > Wholly-Cow! They must be realizing a fair bit of success when they "pass
> > the plate".
> >
> > -=jd=-
> > --
> > My Current Disposable Email:
> > jd770YOUR@HATpostmark.net
> > (Remove YOUR HAT to reply directly)
>

3913. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 15:50:38 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <iDFyc.88778$Ly.40165@attbi_s01>
Source record: 93618
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Excuse me for butting into an interesting discussion. As the originator of this string heading, I just wanted to say that I hope no one loses sight of the original message that prompted my post. That was the one from "yea right" who wrote in his message news:pan.2004.06.05.07.04.03.720063@spam.spam...

"If you value radio, this may be the last and only chance to have your voice heard to stop BPL from destroying your hobby. The FCC has extended the comment period for BPL.

It is VERY simple to file a FCC comment. Click the link below and enter

03-104

in box #1 (proceeding number) and fill in the blanks. The simplest way to comment is to type your comment into the box on the bottom of the form.
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi "

Anyone who has not given the FCC their input, should (you too, Frank).

AK

"JJ" <radiobuff77@mailcity.moc> wrote in message news:KrKdna8FBYdyiVTdRVn-uA@gbronline.com...
> Clair J. Robinson wrote:
>
> > Bob Miller wrote:
> >
> >>I'm sure some of our right-wing preachers that have taken to the
> >>shortwaves could mount good letter-writing campaigns, should their
> >>broadcasts be drowned out by BPL :-)
> >>
> >>Bob
> >>k5qwg
> >>
> >
> >
> > Don't forget that those right-wing preachers and all other US short-wave
> > broadcasters are licensed to broadcast to foreign locations only. I
> > guess those 800 numbers are for use in the Caribbean and Canada. Sure,
> > that has to be the case.
> >
> > 73, CJ K0CJ
>

> You mean if I pick up their broadcast here in the US then that makes
> them illegal?
>

3914. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 15:50:38 UTC
From: AK <ak-in-nc@mchsi.com>
Message-ID: <iDFyc.24732$0y.9613@attbi_s03>
Source record: 93619
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

Excuse me for butting into an interesting discussion. As the originator of this string heading, I just wanted to say that I hope no one loses sight of the original message that prompted my post. That was the one from "yea right" who wrote in his message news:pan.2004.06.05.07.04.03.720063@spam.spam...

"If you value radio, this may be the last and only chance to have your voice heard to stop BPL from destroying your hobby. The FCC has extended the comment period for BPL.

It is VERY simple to file a FCC comment. Click the link below and enter

03-104

in box #1 (proceeding number) and fill in the blanks. The simplest way to comment is to type your comment into the box on the bottom of the form.
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi "

Anyone who has not given the FCC their input, should (you too, Frank).

AK

"Frank Dresser" <analogdial@worldnet.att.net> wrote in message news:O6Cyc.51297$Gx4.49695@bgtnsc04-news.ops.worldnet.att.net...
>
> "Dee D. Flint" <deeflint01@comcast.net> wrote in message
> news:5bCdnRIiLaG6d1TdRVn-gw@comcast.com...
> >
> >
> >
> > Plus if BPL does "threaten" to enter a market, the DSL and cable guys will
> > drop their prices to keep from losing market share. So I bet they are
> > monitoring this situation closely. The latter already know it is price
> that
> > keeps some people from switching from dial-up. Just look at some of the
> > recent ads on TV for their promotions. Cable had been advertising a
> $29.99
> > introductory offer and now they are offering a $19.99 introductory offer.
> > DSL and cable know that they have to get close to dial up prices to get
> the
> > customers.
> >

> > Dee D. Flint, N8UZE
> >
>
> I was wondering how many people have broadband access, so I googled this
up:
>
> "A new, national report by comScore Networks indicates broadband Internet
> access is ready to overtake dial-up access as the top online subscription
> service in major metro markets in the United States. "
>
> ""In the past several months, we've seen the U.S. online population reach
> 150 million people, and household broadband penetration cross the 33
percent
> threshold," said Russ Fradin, executive vice president of comScore
Networks.
> "Now we've recorded another milestone, with broadband accounting for more
> than half of U.S. major market Internet connections.""
>
> If the story is correct, half of the internet users have broadband access
> where it's widely available, and a third of the country has it. Roughly
50
> million people in the US have broadband access.
>
> http://www.ectnews.com/story/33108.html
>
> The story doesn't mention dropping price as much of a driving force in the
> expansion of broadband, but I don't see how it can't be considered as the
> main reason. SBC here runs promotional offers with the first few months
of
> DSL broadband for little more than the cost of dial up. Of course, the
> price goes up after the promotional period ends.
>
> Anyway, there seems to be a wide interest in broadband, as long as it's
> offered at an attractive price.
>
> Frank Dresser
>
>

3915. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 16:01:39 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <DNFyc.52272$Gx4.49317@bgtnsc04-news.ops.worldnet.att.net>
Source record: 93620
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

"AK" <ak-in-nc@mchsi.com> wrote in message
news:iDFyc.24732$0y.9613@attbi_s03...
> Excuse me for butting into an interesting discussion. As the originator of
> this string heading, I just wanted to say that I hope no one loses sight
of
> the original message that prompted my post. That was the one from "yea
> right" who wrote in his message
> news:pan.2004.06.05.07.04.03.720063@spam.spam...
>
[snip]

Yep, they got it, and I got the confirmation.

Frank Dresser

3916. Re: My ten cents worth to the FCC

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 16:15:22 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-6A956A.09151912062004@news.sf.sbcglobal.net>
Source record: 93471
Cross-posted to: rec.radio.shortwave,rec.radio.amateur,rec.radio.amateur.antenna

In article <KLXxc.38815$Gx4.714@bgtnsc04-news.ops.worldnet.att.net>,
"Frank Dresser" <analogdial@worldnet.att.net> wrote:

> "AK" <ak-in-nc@mchsi.com> wrote in message
> news:QdQxc.26209$Sw.14324@attbi_s51...
> >
> [snip]
>
> >
> > I doubt the "benefits millions" bit, but will the FCC restrict amateur
> radio
> > if it interferes with big-business political contributors' operations ? Of
> > course it will.
> >
> > ak
> >
> >
>
> OK -- I'll go through it.
>
> If BPL works as promised, it will benefit millions. The BPL folk promise
> high speed internet access at under $30.00 a month.

< Snip >

Most of the country has a $26.95 promotion for DSL from SBC and Extreme
DSL et cetera.

--
Telamon
Ventura, California

3917. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 16:39:11 UTC
From: k7itm@aol.com
Message-ID: <3200347.0406120839.3bfc7185@posting.google.com>
Source record: 93472
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

What do you mean by optimum?? Do you have an infinite supply of money, or is that one of the constraints? Do you have a license to transmit on some frequencies? How much land area on each end do you have to work with? Do you care how much power you need to use, or do you want to keep it below some level? What other constraints are you operating under that will help you evaluate just what "optimum" means? And what are you trying to communicate? That is, can you work with very low data rates, say one word per hour, or do you want to send television signals or high speed data? (What do you need to communicate, and how long can you afford to wait to do it?)

If you want to be able to reliably communicate at any time and you have enough funds, a satellite based system is likely your best bet. Cell phones, with their built-in antennas and self-adjusting power, should be fine if you are close enough on each end to the required infrastructure. (i.e., let someone else do all the RF work for you if you can.)

If you want a direct earth-based RF link, with no relay stations between, you can do it on either high frequencies or VLF. With VLF, it will take very large antenna structures and high power (many kilowatts), but once you have a working system, it will work pretty much any time. On HF, there will be times when it is impossible to establish a link at any power, and other times when one watt is sufficient. Generally expect to use frequencies between 10MHz and 30MHz, and expect to need a license. (You can be sure that other people will hear your communications.) Because the frequency you'll want to use will change with the condition of the ionosphere (which depends in turn on things such as solar activity and time of day and season), you'll want an antenna system that can accomodate a range of frequencies. It probably would be helpful to have some directionality in the antenna, as you'd get with a Yagi or log-periodic array, but a simple dipole antenna will work under the right ionospheric conditions.

You can learn a lot about this sort of thing if you read some amateur radio publications. I suppose current editions of "The Radio Amateur's Handbook" from ARRL would be a good place to start.

Cheers,
Tom

Zecharia Sitchin <ZSitchin@about.com> wrote in message news:<u7gkc0tseflctleqiprpiehki5do09pjqd@4ax.com>...
> What would be the optimum type of antenna, power level, and frequency to

> communicate from CONUS to Nibiru?

3918. Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 16:40:23 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2j0pukFs1u5aU1@uni-berlin.de>
Source record: 93473

You can purchase or get for free antenna model files.

Should whoever creates these files be making them write protected? I've got ones that I purchased and ones that I got for frree and non are write protected, I would have thought that would be the thing to do. I am presuming that write protection is a parameter than is part of the file, or maybe not, perhaps it's a setting of your PC system. Anyone know? TIA.

3919. Re: HP 5061-1136 Return Loss Bridge ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 16:46:14 UTC
From: k7itm@aol.com
Message-ID: <3200347.0406120846.2836cfc9@posting.google.com>
Source record: 93474
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.antenna,rec.radio.amateur.equipment

"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:<5sqyc.4189$V62.725@newssvr24.news.prodigy.com>...
> There's an HP 5061-1136 Return Loss Bridge 124? 10KHz-10MHz on ebay at
> :http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3820418812&sspagename=ST
> RK%3AMEWA%3AIT&rd=1
> I can't find anything on it, anyone out there know about it? Strange
> impedanace and not much range, possibly Telco spec?
> tnx

As Bill noted, it's telco. Looks like something we used to make, or
at least supported at the end of its life. I suppose a 3-decade
frequency range isn't extreme, but I'll bet it's more (for the
achieved performance level) than most hams get in homebrew directional
couplers. ;-) It's possible I could find more info on it if you're
seriously interested.

Cheers,
Tom

3920. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 17:45:49 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <10cmg8tt8c45sed@corp.supernews.com>
Source record: 93475
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

Dear Mr. Bruhns:
Yours was a well presented description of the issues attendant to
terrestrial radio communication.
However, Nibiru is a mythological planet that no radio signal can
reach because it is hidden from view.
73 Mac N8TT

--
J. Mc Laughlin - Michigan USA

Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0406120839.3bfc7185@posting.google.com...
> What do you mean by optimum?? Do you have an infinite supply of
> money, or is that one of the constraints? Do you have a license to
> transmit on some frequencies? How much land area on each end do you
> have to work with? Do you care how much power you need to use, or do
> you want to keep it below some level? What other constraints are you
> operating under that will help you evaluate just what "optimum" means?
> And what are you trying to communicate? That is, can you work with
> very low data rates, say one word per hour, or do you want to send
> television signals or high speed data? (What do you need to
> communicate, and how long can you afford to wait to do it?)
>
> If you want to be able to reliably communicate at any time and you
> have enough funds, a satellite based system is likely your best bet.
> Cell phones, with their built-in antennas and self-adjusting power,
> should be fine if you are close enough on each end to the required
> infrastructure. (i.e., let someone else do all the RF work for you if
> you can.)
>
> If you want a direct earth-based RF link, with no relay stations
> between, you can do it on either high frequencies or VLF. With VLF,
> it will take very large antenna structures and high power (many
> kilowatts), but once you have a working system, it will work pretty
> much any time. On HF, there will be times when it is impossible to
> establish a link at any power, and other times when one watt is
> sufficient. Generally expect to use frequencies between 10MHz and
> 30MHz, and expect to need a license. (You can be sure that other
> people will hear your communications.) Because the frequency you'll
> want to use will change with the condition of the ionosphere (which
> depends in turn on things such as solar activity and time of day and
> season), you'll want an antenna system that can accomodate a range of
> frequencies. It probably would be helpful to have some directionality
> in the antenna, as you'd get with a Yagi or log-periodic array, but a

> simple dipole antenna will work under the right ionospheric
> conditions.
>
> You can learn a lot about this sort of thing if you read some amateur
> radio publications. I suppose current editions of "The Radio
> Amateur's Handbook" from ARRL would be a good place to start.
>
> Cheers,
> Tom
>

3921. noise bridge readings??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 18:26:08 UTC
From: denton <denton@oregontrail.net>
Message-ID: <cafha5pdb1@news.oregontrail.net>
Source record: 93476

I am working on a project to build a switchable impendence balun network to go between my 450 ohm twin lead and auto antenna tuner, using a Palomar rx noise bridge.
I am somewhat confused interpretating the noise bridge readings, and the Palomars book is a bit vague on interpretating the resistance vs the xl and xc readings.
I guess I should take the readings and plug them into a smith chart..but I know even less how to interpolate that little beastie.
any help?

3922. Re: Making 2.4GHz antenna more directional

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 18:39:06 UTC
From: KL=?ISO-8859-1?B?2A==?=S <kl0s@cox.net>
Message-ID: <BCF0C60A.4C0FE%kl0s@cox.net>
Source record: 93477

Try:

http://www.freeantennas.com/

3923. Re: HP 5061-1136 Return Loss Bridge ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 18:50:47 UTC
From: Bill Janssen <billjNOTTHIS@ieee.org>
Message-ID: <bglyc.5776$Hd3.1317@news02.roc.ny>
Source record: 93478
Cross-posted to: sci.electronics.equipment,rec.radio.amateur.antenna,rec.radio.amateur.equipment

Tom Bruhns wrote:

>"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
news:<5sqyc.4189$V62.725@newssvr24.news.prodigy.com>...
>
>
>>There's an HP 5061-1136 Return Loss Bridge 124? 10KHz-10MHz on ebay at
>>:http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3820418812&sspagename=ST
>>RK%3AMEWA%3AIT&rd=1
>> I can't find anything on it, anyone out there know about it? Strange
>>impedanace and not much range, possibly Telco spec?
>>tnx
>>
>>
>
>As Bill noted, it's telco. Looks like something we used to make, or
>at least supported at the end of its life. I suppose a 3-decade
>frequency range isn't extreme, but I'll bet it's more (for the
>achieved performance level) than most hams get in homebrew directional
>couplers. ;-) It's possible I could find more info on it if you're
>seriously interested.
>
>Cheers,
>Tom
>
>
The frequency range, the empedance and the plug, all point to use with
"L" carrier
analog multiplex. The 124 Ohm would be a balanced line and consist of a
shielded pair.
I don't know if 124 Ohm single conductor shielded cable was used

Bill K7NOM

3924. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 19:21:29 UTC
From: Barkley <barkley@starfleet.net>
Message-ID: <40CB57B7.A09A0011@starfleet.net>
Source record: 93479
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

My research and field trials demonstrated that
using a space orbiting array powered by fusion generators
can produce a temporal distortial.

Once the distortion has opened up, use of a tunneling neutrino
partial beam would be sufficient to transmit the information.

Now to receive it on the other end is another story.

barkley

k4wge wrote:

> Zecharia Sitchin <ZSitchin@about.com> wrote
>
> > What would be the optimum type of antenna, power level, and frequency to
> > communicate from CONUS to Nibiru?
>
> Have you considered using a heliograph?

3925. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 20:03:53 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0406121203.475b0f03@posting.google.com>
Source record: 93480

Cecil Moore <w5dxp@hotmail.com> wrote in message
news:<40cafdcd$1_5@corp.newsgroups.com>...
> Dr. Slick wrote:
> > So for most of the dipole based antennas (including Yagis), you
> > can use 6 turns of 4" diameter coils in the coax, to make an inductive
> > loop that is supposed to prevent current from moving down the outer
> > braid (non-radiating).
>
> 6 turns is probably not enough inductance to do much choking on 160m
> or 80m.
>
> If the dipole is non-resonant, 6 turns of coax may have very little
> effect on any HF frequency.

What's up Cecil?

ok, you may be right about HF, but for VHF (30-300 MHz), 6 turns
in the coax is enough.

So have you made an inductive coil in coax for HF? If so, how
many turns did you need, and what was the diameter of the turns?

I may need to do this for an AM station one day, but maybe not
because most AM antennas are some sort of end-fed random length
wire with a tuner, where the wire length is greater than 1/4 wavelength.
In other words, i haven't seen any dipole antennas for broadcast band
AM....it would be too long!

Slick

3926. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 20:10:19 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40cb6459_3@corp.newsgroups.com>
Source record: 93481
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

J. McLaughlin wrote:
> However, Nibiru is a mythological planet that no radio signal can
> reach because it is hidden from view.

Is that the same as Sitchin's 12th planet? If so, it is
presently supposed to be far, far outside the orbit of
Pluto about halfway through a 3600 year orbit.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3927. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 20:14:59 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40cb6570$1_3@corp.newsgroups.com>
Source record: 93482
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

Barkley wrote:
> Now to receive it on the other end is another story.

Shoulda latched onto a piece of THEIR transceiving
equipment the last time they were close (a couple
of thousand years ago).
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

3928. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 20:19:37 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40cb6687_3@corp.newsgroups.com>
Source record: 93483

Dr. Slick wrote:
> So have you made an inductive coil in coax for HF? If so, how
> many turns did you need, and what was the diameter of the turns?

I once made one out of a 2-liter pop bottle about 1/3 full
of turns of RG-8X. It worked pretty well on 40m, my favorite
band, but a thunderstorm destroyed it. I have no idea what
the choking impedance was.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3929. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 20:33:14 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <eMJyc.2810$Wr.244@newsread1.news.pas.earthlink.net>
Source record: 93484

>
> Should whoever creates these files be making them write protected? I've got
> ones that I purchased and ones that I got for frree and non are write
> protected, I would have thought that would be the thing to do. I am
> presuming that write protection is a parameter than is part of the file, or
> maybe not, perhaps it's a setting of your PC system. Anyone know? TIA.

If you got them off a cd then it is probably just a setting of the computer. Find the file on the hard drive or move it to the hard drive. using something like Windows Explorer. Then see if it is set as read only. If so uncheck that block.

3930. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 21:19:28 UTC
From: KC1DI <kc1di@arrl.net>
Message-ID: <jnsmc0t7agqr0fo1001ptnahm4sdj6sf13@4ax.com>
Source record: 93485

On Sat, 12 Jun 2004 07:52:50 -0500, Cecil Moore <w5dxp@hotmail.com>
wrote:

>Dr. Slick wrote:
>> So for most of the dipole based antennas (including Yagis), you
>> can use 6 turns of 4" diameter coils in the coax, to make an inductive
>> loop that is supposed to prevent current from moving down the outer
>> braid (non-radiating).
>
>6 turns is probably not enough inductance to do much choking on 160m
>or 80m.
>
>If the dipole is non-resonant, 6 turns of coax may have very little
>effect on any HF frequency.

It took 27 turn here to get decent choking on 80m. But it finally
worked 6" diamater selenoid wound.
73 Dave KC1DI

P.S. feeding a OFCD cut for 3.6 MHZ. Thru a 4 to 1 Balun.

3931. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 21:29:50 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <iBKyc.18258$eu.4875@attbi_s02>
Source record: 93486

Dave wrote:
> you can look at it various ways.

As I mentioned above; engineers, technicians, wave mechanics,
physicists, experimenters, etc., ALL live on this list <grin>. Mea
Culpa, I'm a retired engineer.

Just remember, stubs WORK very well. Thank the owner of your local
repeater for tuning the stubs [AKA CAVITIES] to reduce the desense below
receiver response levels, typically -120 dB or more attenuation.

> 1. the wave traveling wave analysis... the harmonic goes down the stub,
> reflects back, and when it gets back to the transmission line it is 180
> degress out of phase with the next cycle so it cancels it at the junction...
> therefore there is no harmonic to propagate down the line past the junction.
> this of course will raise the hackles of the anti-reflectionists who will
> then say there is also no harmonic left to propagate down the stub which
> means there is a virtual short at the junction, but no way to generate it
> since nothing can be there to go down the stub.
>
> 2. the power analysis. power goes in, power comes out, it all reflects back
> and forth until the energy becomes infinite and the amp blows up... but of
> course energy is conserved and momentum must go somewhere so the stub
> probably walks across the table with each wave reflection.
>
> 3. the sinusoidal steady state analysis. this takes the stub and transforms
> the shorted impedance at the far end back to the junction and then does all
> calculations as if the real short existed at the junction.... this will of
> course annoy the reflectionists who will point out in never ending detail
> how you can't explain tv ghosts, radar, or other transient phenomena this
> way... of course by assuming the sinusoidal steady state at the start you
> exclude those systems from this type of analysis, but that won't stop the
> protests.
>
> 4. the s analysis... who know what this will say except cecil who will find
> some way to steer the discussion over to it.
>
> 5. the optical layer analysis... see above.
>
> "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
> news:Y3kyc.65$mN4.59@newssvr23.news.prodigy.com...
>
>>I know they work! One of my reasons for asking the question is I've not
>>found any mention in the literature of where the
>>"attenuation/rejection/reflection/filter residue" goes.

>>
>>--
>>73
>>Hank WD5JFR
>>"Dave" <noone@nowhere.com> wrote in message
>>news:NP2dnSzVO683K1TdRVn-hA@crocker.com...
>>
>>>the harmonic is 'attenuated' in that the magnitude of it is reduced when
>>
>>the
>>
>>>stub is in line. i look at it like you could replace the stub with a
>>
>>lumped
>>
>>>filter at the same point so the term attenuation makes more sense than
>>>reflections or rejections... i don't really care where the harmonic
>
> goes,
>
>>i
>>
>>>want to know how much it is attenuated by so i can compare with other
>>
>>types
>>
>>>of filters.
>>>
>>>"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
>>>news:G4iyc.4055$4j7.1298@newssvr24.news.prodigy.com...
>>>
>>>>Dave
>>>>
>>>>Nice site, I like the "white paper" approach as I prefer the info
>>
>>without
>>
>>>>the glitter. I've only read a few items and I
>>>>quote: "This is a plot of the attenuation provided by the stub. You
>
> can
>
>>>see
>>>
>>>>that it provides about 32db of attenuation at 28.25Mhz. " I've
>
> noticed
>
>>>that
>>>

>>>>the literature I've purused indicates that stubs either attenuate or
>>>
>>>reject.
>>>
>>>>None say reflect! I don't want to get into a discussion of word
>>>
>>>definitions
>>>
>>>>becasue reflect and feject are close but attenuate is not in the same
>>>
>>>class.
>>>
>>>>Comments...
>>>>
>>>>--
>>>>73
>>>>Hank WD5JFR
>>>>
>>>>"Dave" <noone@nowhere.com> wrote in message
>>>>news:odadnXVfX-mPElTdRVn-hg@crocker.com...
>>>>
>>>>>"Henry Kolesnik" <kolesnik@sbcglobal.net> wrote in message
>>>>>news:x_Jxc.5407$kT5.594@newssvr22.news.prodigy.com...
>>>>>
>>>>>>I know that a shorted 1/4 wave stub exhibits a very high
>
> impedance.
>
>>>>But
>>>>
>>>>>for the 2nd harmonic it's a 1/2 wave stub and exhibits a very low
>>>>>
>>>>>impedance
>>>>>
>>>>>or a short. There are claims that this can be used to filter the
>>
>>even
>>
>>>harmonics. Shorts can't diisipate power and must reflect, so how
>>>
>>>does
>>>
>>>>a
>>>>
>>>>stub work?
>>>>>
>>>>>stubs work very nicely. you can get practical stub information at
>
> my
>

>>>web
>>>
>>>>>site, including how to build a 40m to 15m 3rd harmonic stub filter:
>>>>>http://www.k1ttt.net/technote/techref.html#filters
>>>>>
>>>>>as you may have noticed by now you have kicked the proverbial
>
> hornets
>
>>>>nest.
>>>>
>>>>>reflections are a touchy word in this group, usually attracting the
>>>>
>>>>endless
>>>>
>>>>>argument that travels from thread to thread. in time this will
>>>>
>>>>deteriorate
>>>>
>>>>>into name calling and endless argument over reflections,
>
> interference,
>
>>>>>virtual impedances, and a few other topics.
>>>>>
>>>>>
>>>>>
>>>>
>>>>
>>>
>>
>
>

3932. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 22:05:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <0iumc0tm3vmgohtu6m5nuvhso8taajj1aq@4ax.com>
Source record: 93487

On Fri, 11 Jun 2004 18:32:14 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:
>What if the source doesn't or can't dissipate?

Hi Hank,

Simple enough to find out. Disconnect the output of your transmitter.
Set the drive level of your transmitter for full power. Defeat the
ALC. Key down. By the clock or watch, take notes at 1 minute
intervals for, say, 10 minutes. Prepare notes into report. Submit
report here. Total time to perform: 30 seconds - 30 minutes depending
mostly on access to the ALC defeat.

This answers all equivocations about does/doesn't; will/won't;
might/mightn't; could/couldn't; or can/can't. Think about it, you
have probably spent more time than that writing to and reading from
this thread to no certain conclusion.

73's
Richard Clark, KB7QHC

3933. RE: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 22:22:52 UTC
From: fractenna@aol.com
Message-ID: <20040612182252.13352.00000747@mb-m26.aol.com>
Source record: 93488

The following is from the ARRL (main page www.arrl.org to get link) Web site. It would appear that the ARRL is promulgating the view that "History is being made". ARRL stands for: American Radio Relay League.' Relay' is an archaic term kept from the organization's founding days; this is not a wireless mesh network organization, for example.

Mr. Robert Vincent is a Technical Coordinator for the ARRL.

To any non-hams, I would like to point out that the ARRL is an organization comprising a minority of licensed radio amateurs in the US, and that many other highly technical radio amateurs, professional in their respective communities, do not necessarily agree with recent views so posed by that organization regarding UWB (ultrawideband); BPL (broadband over power lines) ; and the press-promulgated claims of the DLM antenna.

Many antenna professional are members of the ARRL, while many are not.

In my opinion, it is fitting and proper to give a voice and forum to this research effort, but ill-advised to posit it as "revolutionary" (URI press release) and "history being made"(ARRL web site) until after the findings have been presented and assessed. It is, in my opinion, more prudent for such an organization to present a neutral face in the absence of publicly available information.

73,
Chip N1IR

"In April, I reported that our Technical Coordinator, K1DFT had been recognized by the University of RI for having invented the most outstanding intellectual property of 2003. Recently, news articles in the New York Times, EE Times and Providence Journal have recognized Rob personally and his invention in very positive reports. His invention is called a Distributed Loaded Monopole and is in process of being patented. Independent validation of Rob's hard work is being performed and he will present a mini-seminar of the exciting new antenna concept at the NE Division Convention in Boxboro, August 14-15. It will certainly be a standing room only crowd in the Cotillion Room. Don't miss it. You'll be witnessing history being made. "

3934. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 22:43:29 UTC
From: Roger Gt <not@here.net>
Message-ID: <kGLyc.70281$R93.58354@newssvr29.news.prodigy.com>
Source record: 93489
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

"Zecharia Sitchin" <ZSitchin@about.com> wrote in message
news:u7gkc0tseflctleqiprpiehki5do09pjqd@4ax.com...
: What would be the optimum type of antenna, power level, and
frequency to
: communicate from CONUS to Nibiru?
:

More about the Planet AT:

http://www.2012.com.au/Nibiru.html

3935. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 22:58:11 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <7ULyc.35308$HG.31316@attbi_s53>
Source record: 93490

Cecil Moore wrote:

SNIP
>
> Heh, heh, you're on your own for that discussion. I personally
> believe it is possible for reflected energy to wind up decreasing
> the power consumption from the DC source that is supplying the finals,
> which winds up decreasing the load on the 60 Hz power grid, which
> decreases the oil required from the Middle East, which tends to
> decrease the possibility of world war, which bodes well for the human
> race, but that is another thread for another time.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>

Good engineering CAN solve the world's problems!!!

Just use enough 1/4 wavelength stubs and we can totally eliminate the #1 or #2 cause of international tension!!

Now, the Oil exporting states will face economic ruin! We will have to give them foreign aid!! Damn ... taxes will have to go up!! That means we have to elect a Demo Krapp as president.

Cecil, I didn't know you were campaigning for what's his name!!

I better be careful or my tongue may slip out of my cheek.

3936. Re: Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 23:06:28 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <U%Lyc.35367$HG.5456@attbi_s53>
Source record: 93491

David Harper wrote:

> I'm working on a project that involves antennas that appear to be
> pressurized with nitrogren (approx 10psi). What purpose does this
> serve? Does it help with transmission properties, gain, etc? It is
> used on an aircraft, if that is a factor.
>
> Thanks in advance!
> Dave

In addition to the responses already posted, there is at least one other possible, I repeat possible, requirement for pressurized waveguides, antenna feedpoints, etc. It is to increase the breakdown voltage of the local 'atmosphere' at very high power [e.g. megawatts at microwave frequencies.]

3937. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 23:13:28 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2j1gvuFspj2tU1@uni-berlin.de>
Source record: 93492

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:eMJyc.2810$Wr.244@newsread1.news.pas.earthlink.net...
> >
> > Should whoever creates these files be making them write protected? I've
> got
> > ones that I purchased and ones that I got for frree and non are write
> > protected, I would have thought that would be the thing to do. I am
> > presuming that write protection is a parameter than is part of the file,
> or
> > maybe not, perhaps it's a setting of your PC system. Anyone know? TIA.
>
> If you got them off a cd then it is probably just a setting of the
computer.
> Find the file on the hard drive or move it to the hard drive. using
> something like Windows Explorer. Then see if it is set as read only. If
so
> uncheck that block.

Thing is, I cannot understand why these files are not read only. Whether
copied from CD or downloaded.

3938. Re: How good is Antenna Specialists?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 23:17:49 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <xaMyc.35433$HG.26665@attbi_s53>
Source record: 93493

Bigger is better! [up to a limit of 102 inches for CB [27 MHz] use.]

A 62 inch antenna is about 54 degrees long. 90 degrees long is a full
size 102 inch whip. A 40 inch antenna is 35 degrees long.

Conclusion: a 90 inch whip is typically 'the best' for mobile, a 54 inch
antenna would be not as good as the 102 but better than the 40 inch
antenna. The 'short' antennas use a small coil to work properly. The
location of the coil contributes to how well the antenna works. But the
102 inch is still better than any shortened antenna.

Chris wrote:

> I have a question about a CB antenna but I'd like an opinion from someone
> who knows more about antenna theory than the average CB'er. I have an old
> Antenna Specialists M-902 Black Stallion antenna that I am thinking about
> using. It looks like the one here
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3093592178 but I don't
> know how well you can see it. It's a shunt-fed, base loaded antenna that is
> about 3 ft. long and mounts on the trunk lip. My question is how does it
> compare to some of the new antennas like Wilson or K40? Wilson claims to be
> the best http://www.wilsonantenna.com/w1000.htm but are they really that
> much better? Thanks for the help.
>
> Chris
>
>

3939. Re: Murch UT2000B

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 23:20:51 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <mdMyc.39683$Sw.35776@attbi_s51>
Source record: 93494

Was NOT sold as a kit!! I use the Murch UT2000A. I've owned the 2000A
for 30+ years. All came factory wired.

The 2000A is 80 - 10 meters. The 2000B is 160 - 10 meters with SWR built in.

Sounds like someone 'fiddled' with it!!

Deacon Dave, W1MCE

bum@att.net wrote:

> Does anyone know if Murch sold the UT2000B as a kit?
>
> A friend of mine has a UT2000B and found it was wired incorrectly and
> he is wondering if the factory did this or if it was kit that someone
> wired incorrectly.
>
> 73..de John/K4WJ
> 73..de John/K4WJ
> K8PXG from 18 Jun 59 to 11 Feb 97
> K8WJ from 12 Feb 97 to 07 Apr 97

3940. Re: noise bridge readings??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 23:42:52 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <0yMyc.297$0v7.155@newssvr23.news.prodigy.com>
Source record: 93495

From memory one control tells you R and the other is Xc or Xl depending which way from zero. So set it for R then X and keep on till you get no improvement.

--
73
Hank WD5JFR
"denton" <denton@oregontrail.net> wrote in message news:cafha5pdb1@news.oregontrail.net...
> I am working on a project to build a switchable impendence balun network to
> go between my 450 ohm twin lead and auto antenna tuner, using a Palomar rx
> noise bridge.
> I am somewhat confused interpretating the noise bridge readings, and the
> Palomars book is a bit vague on interpretating the resistance vs the xl and
> xc readings.
> I guess I should take the readings and plug them into a smith chart..but I
> know even less how to interpolate that little beastie.
> any help?
>
>

3941. Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-12 23:43:35 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406121543.2cb48211@posting.google.com>
Source record: 93496

I had a simple question in regards to phased array antenna patterns.
If a phased array is trying to send a narrow beam in a specific
direction, how do the other side lobes get reduced and/or eliminated?
Are the individual antenna transmitters/elements not omnidirectional
themselves? If not, what are the characteristics of their patterns?

I ask this because I'm trying to understand how tracking radars can
send narrow beams in the desired direction without significant
secondary lobes to interfere with returns from the desired lobe.

Thanks in advance for any insight!
Dave

3942. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 00:13:14 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <u_Myc.18550$eu.3901@attbi_s02>
Source record: 93497

"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406121543.2cb48211@posting.google.com...
>I had a simple question in regards to phased array antenna patterns.
> If a phased array is trying to send a narrow beam in a specific
> direction, how do the other side lobes get reduced and/or eliminated?
> Are the individual antenna transmitters/elements not omnidirectional
> themselves? If not, what are the characteristics of their patterns?
>
> I ask this because I'm trying to understand how tracking radars can
> send narrow beams in the desired direction without significant
> secondary lobes to interfere with returns from the desired lobe.
>
> Thanks in advance for any insight!
> Dave

Dave,

Actually phased arrays have existed in commercial broadcasting AM (day/night
patterns) as well as some FM.

The best way for you to visualize a phased array is to have 2, 3 or 4 stones
hit the water at the same time ....
you will see patterns emerge as cancellations happen.

http://home.earthlink.net/~jimlux/radio/antenna/phased/

http://mitglied.lycos.de/radargrundlagen/antennen/at18-en.html

Recent IEEE seminar
http://www.ieee-boston.org/edu/course_phased-array.htm

Hundreds of references available with a simple google search.

w9gb

3943. Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 01:12:11 UTC
From: yea right <spam@spam.spam>
Message-ID: <pan.2004.06.13.01.12.11.784504@spam.spam>
Source record: 93498
Cross-posted to: rec.radio.amateur.swap,alt.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

The information about filing a FCC BPL comment on the ARRL web page was outdated. There is a new case number that should be used. 04-37 is the correct case number.

It only takes 5 minutes to file a comment with the FCC against BPL.

http://vambo.org/a/

3944. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 01:26:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <km7nc0t1a7rbv9hc8f70j0mkthkq0i5f5q@4ax.com>
Source record: 93499

On 12 Jun 2004 16:43:35 -0700, achilles03@hotmail.com (David Harper)
wrote:

Hi Dave,

By the points asked:
>how do the other side lobes get reduced and/or eliminated?
Through the addition or subtraction of phase;
>Are the individual antenna transmitters/elements not omnidirectional
>themselves?
This is not an imperative of design;
>If not, what are the characteristics of their patterns?
They add or subtract according to phase offered;
>how tracking radars can
>send narrow beams in the desired direction without significant
>secondary lobes to interfere with returns from the desired lobe.
How indeed, they are not immune from these issues.

Phase and distance are co-equivalent when you speak of multiple
sources. When one source excites resonant elements, those element's
create a phase lag/lead and combine with the original signal with a
phase lag/lead that is correlatable to physical separation from the
exciting source. The designer conspires to arrange all such
times/distances/lags/leads/phases to combine additively/subtractively
to create the desired pattern. Simple patterns like the figure 8 of
the dipole involve few components, but also reveal broad
characteristics for the same reason.

If you want a sharp beam with small fringing lobes, you have to invest
in quite a few times/distances/lags/leads/phases elements. Complexity
does not bring order easily. However money might. Those who build
radars are used to just such a lubricant. The dishes you see offer a
continuum of times/distances/lags/leads/phases with the added benefit
of fairly good shielding from a lot of their sources of grief.
However, they are constrained by physical necessity of being pointed
towards the area of interest.

Other radar designers using phased array sources, use massive
parallelism. Look at a picture of the USS Enterprise. Nearly the
entire surface area of the Island is radiating elements on all four
sides. Each and every source offers a very simple characteristic with
a variable delay line between it an free space - and of course, there
is some distance involved between each element and the next. Given
that those delay lines are addressable and individually setable, beam
steering is obtained through a rather simple concept.

If I recall my former trade correctly, some of the sources in the array can be employed separate to the main combination - sort of like picture-in-picture technology. :-)

73's
Richard Clark, KB7QHC

3945. Re: Making 2.4GHz antenna more directional

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 01:40:41 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <tgOyc.30725$TR1.13674@nwrddc01.gnilink.net>
Source record: 93500

"Nige" <uYYYY@ntlworld.com> wrote in message
news:u20mc0pipjrbp9psmpuuo28kaj74qdscpa@4ax.com...
> In rec.radio.amateur.antenna, Jerry Martes wrote:
>
> >you are invited to E-mail me to get
> >alot of referances to sites where decent efforts to build sirectional
> >'wireless' antennas can be made.
>
> Thank you. I'd be happy if you could post these here, I think that is
> the normal Usenet protocol.
>
>
> --
> Nige
>
> Please replace YYYY with the current year

Nige

Have you already looked at sites like this??

http://www.techtastic.ca/articles/homemade-antenna.html

There are so many ways to get directivity at 2.4 GHz that I wouldnt know
where to start, unless I knew more about your constraints. I might be able
to be of some help with this project since I am currently involved with
providing a friend with Broadband coverage on his boat via WiFi.. But, I
am no expert. I havent designed antennas since 1970 and have almost never
thought about antennas since them.
And, there are some really knowledgable antenna designers here on this
news group.

Jerry

3946. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 01:41:44 UTC
From: k7itm@aol.com
Message-ID: <3200347.0406121741.7891289f@posting.google.com>
Source record: 93501
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:<10cmg8tt8c45sed@corp.supernews.com>...
> Dear Mr. Bruhns:
> Yours was a well presented description of the issues attendant to
> terrestrial radio communication.
> However, Nibiru is a mythological planet that no radio signal can
> reach because it is hidden from view.
> 73 Mac N8TT
>
...

Hook, line and sinker, eh? Ah, well, the postings really are more
often for the lurkers than the OPs.

Now if only that had been the worst thing that happened to me today.
:-(

Cheers,
Tom

3947. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 01:45:30 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <rsqdnRdCl4smLFbdRVn-gg@comcast.com>
Source record: 93502

Translation: fractured antennas are horseshit.

"Fractenna" <fractenna@aol.com> wrote in message
news:20040609122135.15248.00000404@mb->
> True frequency and waveform agility is the goal in SDR . Wideband, or
> controlled multiband, is needed. Ham requirements are well met at present
with
> a variety of antenna designs that are nearly periodic in a fairly narrow
> frequency coverage, a fairly easy problem to solve.
> 73,
> Chip N1iR

3948. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 01:50:39 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hjcnc09o929jf9dvs48qslbmun4jgfui3l@4ax.com>
Source record: 93503

On Sat, 12 Jun 2004 18:45:30 -0700, "CW" <clinton.magers@comcast.net>
wrote:
>Translation: fractured antennas are horseshit.
Unfortunately, that association is an aspersion upon horseshit. ;-)

3949. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 01:57:13 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <qJKdnSXb44jlKVbdRVn-hA@adelphia.com>
Source record: 93504

Richard wrote:
> "Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
> news:eMJyc.2810$Wr.244@newsread1.news.pas.earthlink.net...
>
>>>Should whoever creates these files be making them write protected? I've
>>
>>got
>>
>>>ones that I purchased and ones that I got for frree and non are write
>>>protected, I would have thought that would be the thing to do. I am
>>>presuming that write protection is a parameter than is part of the file,
>>
>>or
>>
>>>maybe not, perhaps it's a setting of your PC system. Anyone know? TIA.
>>
>>If you got them off a cd then it is probably just a setting of the
>
> computer.
>
>>Find the file on the hard drive or move it to the hard drive. using
>>something like Windows Explorer. Then see if it is set as read only. If
>
> so
>
>>uncheck that block.
>
>
> Thing is, I cannot understand why these files are not read only. Whether
> copied from CD or downloaded.

What difference does it make, Richard? You can just go back to the
original file if needs be.

- Minke KB3EIA -

3950. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 02:01:21 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <QsydnaF9_YbsKFbdRVn-jw@adelphia.com>
Source record: 93505
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

Barkley wrote:

> My research and field trials demonstrated that
> using a space orbiting array powered by fusion generators
> can produce a temporal distortial.
>
> Once the distortion has opened up, use of a tunneling neutrino
> partial beam would be sufficient to transmit the information.
>
> Now to receive it on the other end is another story.

Wrong! Geordi used that same method once on STTNG to try to make ice cream once. Didn't work then and never would.

- Mike -

3951. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 02:51:24 UTC
From: Rosco <rvaagen@hotmail.com>
Message-ID: <40cbc6e4$1@news.702com.net>
Source record: 93506
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

If a hen and a half laid an egg and a half in a day and a half, how long
would it take for a peg legged monkey to kick the seeds out of a gourd?

LOL

Zecharia Sitchin <ZSitchin@about.com> wrote in message
news:u7gkc0tseflctleqiprpiehki5do09pjqd@4ax.com...
> What would be the optimum type of antenna, power level, and frequency to
> communicate from CONUS to Nibiru?
>
>

3952. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 03:22:19 UTC
From: Al <aldhearn@bellsouth.net>
Message-ID: <6BPyc.150$lr2.64@bignews2.bellsouth.net>
Source record: 93507

Sometimes, it's useful to think about problems such as this in terms of analogous systems that behave in similar ways.

For example, imagine a gasoline-powered engine driving a water pump though a friction belt and pulley. The pump is attempting to pump water into a short plugged pipe (shorted transmission line). After the first couple of seconds the reflected water from the plugged end creates a back pressure on the pump, a situation in which the pump is then not capable of delivering additional water to that which is stored in the pipe. Now, a number of things can occur, short of mechanical failure of some part of the system:

1) the belt between the motor and pump can start to slip, dissipating the energy generated by the motor as heat lost to friction in the belt and pulley

2) the motor can slow or cease to function, incapable of working against the increased torque (impedance) created by the belt that has been constrained by the pump that can't pump water into the plugged pipe.

In case 1), the power is being generated by the motor, but it is not being delivered to the load. It is being dissipated (converted to heat) `in between.
In case 2), the power simply cannot be created. The motor can't work against such a load. The power is not being dissipated anywhere -- it's simply not being generated. As Cecil has suggested, in this case, the engine stops, which stops using gasoline, which reduces the demand on the Middle East oil supply, which lowers prices, which .....

Case 2) is not one in which reflections "cancel" the energy being generated, although it can be thought of that way. Energy can't be "canceled" (a fundamental law). If a generator isn't delivering energy to a load, it's because the energy either doesn't exist (isn't being generated), or it's being rerouted, stored, or being converted to another form.

Although this analogy could be complicated by making it a pumping system that generates sinusoidal water pressure waves with wavelength-related pipe lengths, it doesn't need to be for it to work.

Al WA4GKQ

"Cecil Moore" <w5dxp@hotmail.com> wrote in message
news:40ca19b7_1@corp.newsgroups.com...
> Henry Kolesnik wrote:
> > What if the source doesn't or can't dissipate?
>
> Heh, heh, you're on your own for that discussion. I personally
> believe it is possible for reflected energy to wind up decreasing

> the power consumption from the DC source that is supplying the finals,
> which winds up decreasing the load on the 60 Hz power grid, which
> decreases the oil required from the Middle East, which tends to
> decrease the possibility of world war, which bodes well for the human
> race, but that is another thread for another time.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3953. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 04:50:54 UTC
From: CW <clinton.magers@comcast.net>
Message-ID: <pqednRV0IpiyQFbd4p2dnA@comcast.com>
Source record: 93509

LOL!

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:hjcnc09o929jf9dvs48qslbmun4jgfui3l@4ax.com...
> On Sat, 12 Jun 2004 18:45:30 -0700, "CW" <clinton.magers@comcast.net>
> wrote:
> >Translation: fractured antennas are horseshit.
> Unfortunately, that association is an aspersion upon horseshit. ;-)

3954. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 04:59:52 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cagn08$245$1@sparta.btinternet.com>
Source record: 93510

"David Harper" wrote
> I had a simple question in regards to phased array antenna patterns.
> If a phased array is trying to send a narrow beam in a specific
> direction, how do the other side lobes get reduced and/or eliminated?
> Are the individual antenna transmitters/elements not omnidirectional
> themselves? If not, what are the characteristics of their patterns?
>
> I ask this because I'm trying to understand how tracking radars can
> send narrow beams in the desired direction without significant
> secondary lobes to interfere with returns from the desired lobe.
>
> Thanks in advance for any insight!

==========

To understand how things work it is necessary to be familiar with elementary trigonometry. Its quite simple really.

Without trigonometry you just have to accept that's the way things are.

3955. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 05:27:29 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cagok1$c4u$1@hercules.btinternet.com>
Source record: 93511

"Richard" wrote
> Thing is, I cannot understand why these files are not read only. Whether
> copied from CD or downloaded.

==========

Richard, if you can't trust yourself NOT to mess about with modifyable
programs then you shouldn't be trying to use them.

If you are unable to resurect mutilated software, an impossible task,
vanished reliability, don't blame the author.

3956. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 06:39:19 UTC
From: K Williams <krw@adelphia.net>
Message-ID: <1OKdnTgoKfurUFbdRVn-hQ@adelphia.com>
Source record: 93508
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,alt.gods,sci.electronics.design,sci.engr.radar+sonar

Mike Coslo wrote:

> Barkley wrote:
>
>> My research and field trials demonstrated that
>> using a space orbiting array powered by fusion generators
>> can produce a temporal distortial.
>>
>> Once the distortion has opened up, use of a tunneling neutrino
>> partial beam would be sufficient to transmit the information.
>>
>> Now to receive it on the other end is another story.
>
>
> Wrong! Geordi used that same method once on STTNG to try to make
> ice cream once. Didn't work then and never would.

Geordi didn't have the right script writers. Any decent writer
would have had him take a hair-pin and modify the food replicator
to create the necessary neutrino beam. Of course, the replicator
would have had to be set to "ice_cream.ben_and_jerrys" to get it
all together.

--
Keith

3957. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 06:43:48 UTC
From: K7JEB <k7jeb.remove.this@qsl.net>
Message-ID: <otsnc0ldmncct3v57ig6ciu0qtod0e558d@4ax.com>
Source record: 93512

On 12 Jun 2004 16:43:35 -0700, (David Harper) wrote:

>I had a simple question in regards to phased array antenna patterns.
>If a phased array is trying to send a narrow beam in a specific
>direction, how do the other side lobes get reduced and/or eliminated?
>Are the individual antenna transmitters/elements not omnidirectional
>themselves? If not, what are the characteristics of their patterns?

There's really nothing special about a phased-array antenna.
It is a radiating aperture, just like the mouth of a horn
or the front of a parabolic "dish". The only difference
is that the phase and amplitude of the excitation across
the aperture can be much more finely adjusted to "squint"
the beam.

But the essential tradeoff remains: the larger the aperture,
the narrower the beam. And, like horns and reflectors, one
can reduce the sidelobes by not exciting the outside elements
as strongly, but with a corresponding reduction in gain from
the maximum obtainable for a given aperture size. This is
called illumination tapering and is done on all antennas
in one form or another to work the gain/sidelobe tradeoff.

>I ask this because I'm trying to understand how tracking radars can
>send narrow beams in the desired direction without significant
>secondary lobes to interfere with returns from the desired lobe.

Most radars go for wider beams with lower sidelobes because
the overall system performance is better. But the sidelobes
are only reduced, not eliminated entirely.

Oh, yeah, and about the patterns of the individual elements,
they have to be as non-directional as possible. The deal is
that the overall antenna pattern is the result of the PRODUCT
of the array factor with the pattern of the individual elements.
If the individual elements have reduced gain off boresight, the
entire antenna gain is reduced off-boresight as well, limiting
the angles at which the beam may be "squinted".

Jim, K7JEB

3958. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 06:52:42 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2j2bssFss091U1@uni-berlin.de>
Source record: 93513

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:cagok1$c4u$1@hercules.btinternet.com...
>
> "Richard" wrote
> > Thing is, I cannot understand why these files are not read only. Whether
> > copied from CD or downloaded.
>
> ================================
>
> Richard, if you can't trust yourself NOT to mess about with modifyable
> programs then you shouldn't be trying to use them.
>
> If you are unable to resurect mutilated software, an impossible task,
> vanished reliability, don't blame the author.
>

I can trust mnyself, but if the original files were write protected when the
came when downloaded, then it would be a safety measure from accidentally
altering the original files. I'm going to mess with the originals but save
the altered input files under a slightly different file name. I think I'm
making a perfectly valid point.

3959. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 07:19:43 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <E7Tyc.1219$IF3.123@bignews5.bellsouth.net>
Source record: 93514

Phased arrays are fun to play around with (on the 2-meter band especially)
You can experiment using physically manageable components.
You can switch elements phasing by using different lengths of feedline
its interesting - a good hobby in a hobby

"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406121543.2cb48211@posting.google.com...
> I had a simple question in regards to phased array antenna patterns.
> If a phased array is trying to send a narrow beam in a specific
> direction, how do the other side lobes get reduced and/or eliminated?
> Are the individual antenna transmitters/elements not omnidirectional
> themselves? If not, what are the characteristics of their patterns?
>
> I ask this because I'm trying to understand how tracking radars can
> send narrow beams in the desired direction without significant
> secondary lobes to interfere with returns from the desired lobe.
>
> Thanks in advance for any insight!
> Dave

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 5/22/2004

3960. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 09:34:16 UTC
From: David J Windisch <davidw@copper.net>
Message-ID: <40cc1fd7$1_1@newsfeed.slurp.net>
Source record: 93515

SNIP

Backfin lumps, OM?

73, Dave, N3HE

> chowder to confirm your observation (makes me glad I abandoned that
> metaphor for excellent Chesapeake Crab Cakes).

SNIP

> Richard Clark, KB7QHC

3961. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 11:10:14 UTC
From: fractenna@aol.com
Message-ID: <20040613071014.11469.00000810@mb-m11.aol.com>
Source record: 93516

>Hook, line and sinker, eh? Ah, well, the postings really are more
>often for the lurkers than the OPs.
>

Clearly, we are being watched.. Just read the "something for someone to do"
thread.... If that's not a plant then what is.

73,
Chip N1IR

3962. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 11:27:59 UTC
From: Ian Jackson <REMOVE-THIS-BIT@g3ohx.demon.co.uk>
Message-ID: <LEQGyuC$oDzAFwTh@g3ohx.demon.co.uk>
Source record: 93517

In message <hjcnc09o929jf9dvs48qslbmun4jgfui3l@4ax.com>, Richard Clark
<kb7qhc@comcast.net> writes
>On Sat, 12 Jun 2004 18:45:30 -0700, "CW" <clinton.magers@comcast.net>
>wrote:
>>Translation: fractured antennas are horseshit.
>Unfortunately, that association is an aspersion upon horseshit. ;-)

Not a good analogy. Horseshit can be quite useful (ask any organic
gardener).
Ian.
--

3963. Re: Murch UT2000B

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 12:06:53 UTC
From: bum@att.net
Message-ID: <umgoc0pbqp328f8t9idf4asu0cn6sbh0jt@4ax.com>
Source record: 93518

Thanks for the reply Dave. You confirmed what both Kurt and I thought.
Kurt is N5VV and the owner of the 2000B.

73..deJohn/K4WJ

On Sat, 12 Jun 2004 23:20:51 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:

>Was NOT sold as a kit!! I use the Murch UT2000A. I've owned the 2000A
>for 30+ years. All came factory wired.
>
>The 2000A is 80 - 10 meters. The 2000B is 160 - 10 meters with SWR built in.
>
>Sounds like someone 'fiddled' with it!!
>
>Deacon Dave, W1MCE
>
>bum@att.net wrote:
>
>> Does anyone know if Murch sold the UT2000B as a kit?
>>
>> A friend of mine has a UT2000B and found it was wired incorrectly and
>> he is wondering if the factory did this or if it was kit that someone
>> wired incorrectly.
>>
>> 73..de John/K4WJ
>> K8PXG from 18 Jun 59 to 11 Feb 97
>> K8WJ from 12 Feb 97 to 07 Apr 97

73..de John/K4WJ
K8PXG from 18 Jun 59 to 11 Feb 97
K8WJ from 12 Feb 97 to 07 Apr 97

3964. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 12:42:05 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2j30cmFselngU1@uni-berlin.de>
Source record: 93519

You could just change the file attribute of whatever you want to protect to "Read Only," after you copy it off your CD or wherever. That will prevent overwriting the original file with a corrupted version.

Find the file(s) using WIN Explorer, right click on the filename(s), then mark as read only.

"Richard" <nearlynews_email@ntlworld.com> wrote
> I can trust mnyself, but if the original files were write protected when the
> came when downloaded, then it would be a safety measure from accidentally
> altering the original files. I'm going to mess with the originals but save
> the altered input files under a slightly different file name. I think I'm
> making a perfectly valid point.

3965. Advice on FT-857 and ATAS-120

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 14:55:05 UTC
From: gargaare@yahoo.com
Message-ID: <257c0775.0406130655.4bcc4937@posting.google.com>
Source record: 93520

Gurus,

My brother who is working for an NGO is east africa wants me to buy him an HF ham radio where he can communicate with his colleagues in other parts of the world. His colleagues use CODAN, but he can't afford that brand.

A local dealer is recommending that I buy FT-857 with ATAS-120.

Here are my questions?

1- Is this combination a good fit and how reliable is it?
2- Can he communicate with other radios as far away as 3000 miles?
3- Do I need a duplexer if he is using just the HF band?
4- The radio will be mounted on a land cruiser? Where you recommend the antena mounted on?

Many many thanks for your help.

- Nur

3966. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 14:59:11 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <uo6dnbDMu_ki9lHdRVn-sQ@adelphia.com>
Source record: 93421

Richard wrote:

> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
> news:cagok1$c4u$1@hercules.btinternet.com...
>
>>"Richard" wrote
>>
>>>Thing is, I cannot understand why these files are not read only. Whether
>>>copied from CD or downloaded.
>>
>>================================
>>
>>Richard, if you can't trust yourself NOT to mess about with modifyable
>>programs then you shouldn't be trying to use them.
>>
>>If you are unable to resurect mutilated software, an impossible task,
>>vanished reliability, don't blame the author.
>>
>
>
> I can trust mnyself, but if the original files were write protected when the
> came when downloaded, then it would be a safety measure from accidentally
> altering the original files. I'm going to mess with the originals but save
> the altered input files under a slightly different file name. I think I'm
> making a perfectly valid point.

If you want write protected files, Make a CD of all the files you want
write protected, then copy them back to your hard drive.

Even if you do accidentally change thefiles, you have an original
"write protected" file to go back to.

Perhaps you are not experienced with computers. (no sin, that) It
really isn't a big deal though, to not have write protected files when
the originals are so accessible. And even then, working with a renamed
file instead of the original is along the same line of reasoning as
backing up your files. You DO back up your files, don't you?

Finally, if the files came in write protected, there would be plenty of
people that would complain about that!

- Mike KB3EIA -

3967. Re: Antenna Power for Nibiru Communication

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 15:00:32 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <uo6dnbPMu_mS8VHdRVn-sQ@adelphia.com>
Source record: 93422

K Williams wrote:

> Mike Coslo wrote:
>
>
>>Barkley wrote:
>>
>>
>>>My research and field trials demonstrated that
>>>using a space orbiting array powered by fusion generators
>>>can produce a temporal distortial.
>>>
>>>Once the distortion has opened up, use of a tunneling neutrino
>>>partial beam would be sufficient to transmit the information.
>>>
>>>Now to receive it on the other end is another story.
>>
>>
>>Wrong! Geordi used that same method once on STTNG to try to make
>>ice cream once. Didn't work then and never would.
>
>
> Geordi didn't have the right script writers. Any decent writer
> would have had him take a hair-pin and modify the food replicator
> to create the necessary neutrino beam. Of course, the replicator
> would have had to be set to "ice_cream.ben_and_jerrys" to get it
> all together.

Scot would have known what to do!

- Mike -

3968. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 15:00:57 UTC
From: Brian Howie <brian@nospam.demon.co.uk>
Message-ID: <0RoYebBpwGzAFwEo@b-howie.demon.co.uk>
Source record: 93424

In message <2j1gvuFspj2tU1@uni-berlin.de>, Richard
<nearlynews_email@ntlworld.com> writes
>
>Thing is, I cannot understand why these files are not read only. Whether
>copied from CD or downloaded.
>
Because you might want to mess around with them. :-)

Brian
--
Brian Howie

3969. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 15:02:58 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <uo6dnbLMu_k88VHdRVn-sQ@adelphia.com>
Source record: 93423

Ian Jackson wrote:

> In message <hjcnc09o929jf9dvs48qslbmun4jgfui3l@4ax.com>, Richard Clark
> <kb7qhc@comcast.net> writes
>
>> On Sat, 12 Jun 2004 18:45:30 -0700, "CW" <clinton.magers@comcast.net>
>> wrote:
>>
>>> Translation: fractured antennas are horseshit.
>>
>> Unfortunately, that association is an aspersion upon horseshit. ;-)
>
>
> Not a good analogy. Horseshit can be quite useful (ask any organic
> gardener).
> Ian.

Equine Excrement is a tad difficult for some gardening. IT has lots of plant material that needs a good bit of time to compost correctly. Mushroom growers love it, tho'.

- Mike KB3EIA -

3970. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 15:21:27 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <rhroc0lq7tlv4g18t8pg35feuenvms86ib@4ax.com>
Source record: 93425

On Sun, 13 Jun 2004 05:34:16 -0400, "David J Windisch"
<davidw@copper.net> wrote:
>Backfin lumps, OM?
>> chowder to confirm your observation (makes me glad I abandoned that
>> metaphor for excellent Chesapeake Crab Cakes).

Hi Dave,

Sorry, but that was too terse.

I wasn't in D.C. but for a short event. It was not long enough to
sample the full gustatorial offerings of the region - if that was the
implication. Also managed to run across a bottle of my favorite Rhum
St. James. (Should'a brought a bottle of that back to read this
thread through its bottom.)

73's
Richard Clark, KB7QHC

3971. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 15:42:25 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2j3aunFrob7mU1@uni-berlin.de>
Source record: 93426

"Brian Howie" <brian@nospam.demon.co.uk> wrote in message
news:0RoYebBpwGzAFwEo@b-howie.demon.co.uk...
> In message <2j1gvuFspj2tU1@uni-berlin.de>, Richard
> <nearlynews_email@ntlworld.com> writes
> >
> >Thing is, I cannot understand why these files are not read only. Whether
> >copied from CD or downloaded.
> >
> Because you might want to mess around with them. :-)

You mess but you do not alter the original.

When editing nec input files you have got to be careful not to save because
then the original file is not original anymore.

I thought it might be better to download files that come write protected
from the start.

3972. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 15:47:16 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <8G_yc.464$dq5.285@newssvr23.news.prodigy.com>
Source record: 93427

Better specify the kind of pump because a centrifugal will have a different
outcome versus a positive displacment!

--
73
Hank WD5JFR
"Al" <aldhearn@bellsouth.net> wrote in message
news:6BPyc.150$lr2.64@bignews2.bellsouth.net...
> Sometimes, it's useful to think about problems such as this in terms of
> analogous systems that behave in similar ways.
>
> For example, imagine a gasoline-powered engine driving a water pump though
a
> friction belt and pulley. The pump is attempting to pump water into a
short
> plugged pipe (shorted transmission line). After the first couple of
seconds
> the reflected water from the plugged end creates a back pressure on the
> pump, a situation in which the pump is then not capable of delivering
> additional water to that which is stored in the pipe. Now, a number of
> things can occur, short of mechanical failure of some part of the system:
>
> 1) the belt between the motor and pump can start to slip, dissipating the
> energy generated by the motor as heat lost to friction in the belt and
> pulley
>
> 2) the motor can slow or cease to function, incapable of working against
the
> increased torque (impedance) created by the belt that has been constrained
> by the pump that can't pump water into the plugged pipe.
>
> In case 1), the power is being generated by the motor, but it is not being
> delivered to the load. It is being dissipated (converted to heat) `in
> between.
> In case 2), the power simply cannot be created. The motor can't work
against
> such a load. The power is not being dissipated anywhere -- it's simply not
> being generated. As Cecil has suggested, in this case, the engine stops,
> which stops using gasoline, which reduces the demand on the Middle East
oil
> supply, which lowers prices, which .....
>
> Case 2) is not one in which reflections "cancel" the energy being
generated,

> although it can be thought of that way. Energy can't be "canceled" (a
> fundamental law). If a generator isn't delivering energy to a load, it's
> because the energy either doesn't exist (isn't being generated), or it's
> being rerouted, stored, or being converted to another form.
>
> Although this analogy could be complicated by making it a pumping system
> that generates sinusoidal water pressure waves with wavelength-related
pipe
> lengths, it doesn't need to be for it to work.
>
> Al WA4GKQ
>
>
> "Cecil Moore" <w5dxp@hotmail.com> wrote in message
> news:40ca19b7_1@corp.newsgroups.com...
> > Henry Kolesnik wrote:
> > > What if the source doesn't or can't dissipate?
> >
> > Heh, heh, you're on your own for that discussion. I personally
> > believe it is possible for reflected energy to wind up decreasing
> > the power consumption from the DC source that is supplying the finals,
> > which winds up decreasing the load on the 60 Hz power grid, which
> > decreases the oil required from the Middle East, which tends to
> > decrease the possibility of world war, which bodes well for the human
> > race, but that is another thread for another time.
> > --
> > 73, Cecil http://www.qsl.net/w5dxp
> >
> >
> >
> > -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > -----== Over 100,000 Newsgroups - 19 Different Servers! =-----
>

3973. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 15:49:30 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <el_yc.465$ux5.249@newssvr23.news.prodigy.com>
Source record: 93429

This place is where one can just about learn anything or nothing or learn
incorreclty. AKA the politics of reflections.

--
73
Hank WD5JFR
"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:0iumc0tm3vmgohtu6m5nuvhso8taajj1aq@4ax.com...
> On Fri, 11 Jun 2004 18:32:14 GMT, "Henry Kolesnik"
> <kolesnik@sbcglobal.net> wrote:
> >What if the source doesn't or can't dissipate?
>
> Hi Hank,
>
> Simple enough to find out. Disconnect the output of your transmitter.
> Set the drive level of your transmitter for full power. Defeat the
> ALC. Key down. By the clock or watch, take notes at 1 minute
> intervals for, say, 10 minutes. Prepare notes into report. Submit
> report here. Total time to perform: 30 seconds - 30 minutes depending
> mostly on access to the ALC defeat.
>
> This answers all equivocations about does/doesn't; will/won't;
> might/mightn't; could/couldn't; or can/can't. Think about it, you
> have probably spent more time than that writing to and reading from
> this thread to no certain conclusion.
>
> 73's
> Richard Clark, KB7QHC

3974. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 15:49:58 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <cotoc0l9ene7q9gnbk5v0dnnh3rsqc43v7@4ax.com>
Source record: 93428

On Sun, 13 Jun 2004 16:42:25 +0100, "Richard"
<nearlynews_email@ntlworld.com> wrote:
>I thought it might be better to download files that come write protected
>from the start.
This is your responsibility.

3975. Re: Advice on FT-857 and ATAS-120

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 16:48:48 UTC
From: M3 <***>
Message-ID: <40cc86b4.0@entanet>
Source record: 93430

farah nur wrote:
> Gurus,
>
> My brother who is working for an NGO is east africa wants me to buy
> him an HF ham radio where he can communicate with his colleagues in
> other parts of the world. His colleagues use CODAN, but he can't
> afford that brand.
>
> A local dealer is recommending that I buy FT-857 with ATAS-120.
>
> Here are my questions?
>
> 1- Is this combination a good fit and how reliable is it?
> 2- Can he communicate with other radios as far away as 3000 miles?
> 3- Do I need a duplexer if he is using just the HF band?
> 4- The radio will be mounted on a land cruiser? Where you recommend
> the antena mounted on?
>
> Many many thanks for your help.
>
> - Nur

Hi,

I use an FT857 & the ATAS120 on my vehicle and it works fine, but the antenna does need a good ground, mine is mounted on the roof. I also put an extra ground wire from the vehicle chassis to the radio and it works fine from 40M upto 70cms using a Diamond MX62M di-plexer. The antenna also prefers to be mounted high on a vehicle rather than on the side where it has the body of the vehicle next to it. As for contacting stations 3000 miles away that will depend on freq and propagation, although I have worked US stations on 17M from the UK when mobile.

Hope this helps.

3976. Re: Fractal antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 17:34:46 UTC
From: tdonaly@aol.com
Message-ID: <20040613133446.06079.00001004@mb-m17.aol.com>
Source record: 93431

Ian wrote,
>
>In message <hjcnc09o929jf9dvs48qslbmun4jgfui3l@4ax.com>, Richard Clark
><kb7qhc@comcast.net> writes
>>On Sat, 12 Jun 2004 18:45:30 -0700, "CW" <clinton.magers@comcast.net>
>>wrote:
>>>Translation: fractured antennas are horseshit.
>>Unfortunately, that association is an aspersion upon horseshit. ;-)
>
>Not a good analogy. Horseshit can be quite useful (ask any organic
>gardener).
>Ian.
>--

Right. It's absolutely indispensable to cowboys and politicians.
73,
Tom Donaly, KA6RUH

3977. ANT Recommendation for Yaesu VX-2

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 18:33:42 UTC
From: paul <p@p.com>
Message-ID: <a61zc.1613$ME7.691@newssvr27.news.prodigy.com>
Source record: 93432

Hello,

I just purchased a VX-2 and am looking to replace the stock rubber duck.
Any suggestions or recommendations would be much appreciated!

73!

3978. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 18:54:36 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <Mp1zc.42427$HG.38082@attbi_s53>
Source record: 93433

Is there any objective reality when it comes to reflections? How do we
really know?

Henry Kolesnik wrote:

> This place is where one can just about learn anything or nothing or learn
> incorreclty. AKA the politics of reflections.
>

3979. Re: Advice on FT-857 and ATAS-120

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 19:15:36 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <sJ1zc.84227$3x.47739@attbi_s54>
Source record: 93434

Check the physical size of the FT-857 and see if your friend has the
room for it.

Smaller radios with similar specifications are the FT-100D, and the ICOM
706 MK IIg. All of these units, 857, 100D and 706, run 100 watts and can
easily cover your 3000 mile range [with decent antennas] on the various
ham bands between 20 meters and 10 meters depending on atmospheric
conditions. I routinely cover 3000 mile range from my truck using a 100
watt radio, an antenna tuner, and a reasonable whip antenna.

My only question has to be with the size of the radio, not it's
performance. If you friend has the room for the 857 go for it! If not,
the FT-100D or the 706 should meet his/her needs.

Deacon Dave, W1MCE

farah nur wrote:

> Gurus,
>
> My brother who is working for an NGO is east africa wants me to buy
> him an HF ham radio where he can communicate with his colleagues in
> other parts of the world. His colleagues use CODAN, but he can't
> afford that brand.
>
> A local dealer is recommending that I buy FT-857 with ATAS-120.
>
> Here are my questions?
>
> 1- Is this combination a good fit and how reliable is it?
> 2- Can he communicate with other radios as far away as 3000 miles?
> 3- Do I need a duplexer if he is using just the HF band?
> 4- The radio will be mounted on a land cruiser? Where you recommend
> the antena mounted on?
>
> Many many thanks for your help.
>
> - Nur

3980. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 19:21:19 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <PO1zc.487$gI6.450@newssvr23.news.prodigy.com>
Source record: 93435

Well perhaps I should reword my comment. It seems like many responders are getting into the politics of reflections, some into the theory but I believe it's a science and should be explainable. Theories are used to explain what goes on inside a black box that we can't open, just an input and output. But a shorted 1/4 wave stub is about as far as you can get from a black box.. I'm curious!
There are no stupid questions, just stupid people asking and that's me.

--
73
Hank WD5JFR
"Dave Shrader" <david.shrader@comcast.net> wrote in message news:Mp1zc.42427$HG.38082@attbi_s53...
> Is there any objective reality when it comes to reflections? How do we
> really know?
>
> Henry Kolesnik wrote:
>
> > This place is where one can just about learn anything or nothing or learn
> > incorreclty. AKA the politics of reflections.
> >
>

3981. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 19:29:54 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <i9apc09s9mgn8esbb7s1imv6los25g89te@4ax.com>
Source record: 93436

On Sun, 13 Jun 2004 18:54:36 GMT, Dave Shrader
<david.shrader@comcast.net> wrote:
>Is there any objective reality when it comes to reflections? How do we
>really know?

Hi Dave,

I offered a very simple test. There is the path of an objective
result, or the path of a subjective and ponderous appeal.

You do have a rig, do you not? You could perform the several steps to
come to a conclusion I presume - otherwise disabuse me of this talent
I inferred in your behalf and state which political party you are
affiliated with.

73's
Richard Clark, KB7QHC

3982. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 19:47:07 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ccb06d_8@corp.newsgroups.com>
Source record: 93438

Dave Shrader wrote:
> Is there any objective reality when it comes to reflections? How do we
> really know?

Use a TDR. Observe TV ghosting. The reflection model is perfectly
valid and consistent and the outcomes using the reflection model
are the same as any other valid consistent model. An S-parameter
analysis uses reflection/transmission coefficients, i.e. the wave
reflection model. If an S-parameter analysis is not valid, a whole
@#$%-load of electronics should not be functioning as they do.

I'm not entirely certain, but I believe the H-parameter analysis,
the Y-parameter analysis, and the Z-parameter analysis all use
the reflection model and are valid for impedance discontinuities
in transmission lines.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3983. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 19:49:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qgbpc0d1uk88h6097ff47q02vtuqmie092@4ax.com>
Source record: 93437

Originally you asked:
>>so how does a stub work?

On Sun, 13 Jun 2004 19:21:19 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:

>Well perhaps I should reword my comment.
snip complaint of politics
>But a shorted 1/4 wave stub is about as far as you can get from a black
>box.. I'm curious!

Hi Hank,

Seems like several many have offered the simple mechanics to satisfy
the question.

Would you like to comment why they did not? If you find the
reflection based argument tedious (and it can be that in spades); then
perhaps you should offer an outline of the terms to be employed or the
constraints of the stub's application to reduce shot-gun answers that
bloat the thread.

73's
Richard Clark, KB7QHC

3984. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 19:54:37 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ccb231$1_8@corp.newsgroups.com>
Source record: 93439

Henry Kolesnik wrote:

> Well perhaps I should reword my comment. It seems like many responders are
> getting into the politics of reflections, some into the theory but I believe
> it's a science and should be explainable. Theories are used to explain what
> goes on inside a black box that we can't open, just an input and output.
> But a shorted 1/4 wave stub is about as far as you can get from a black
> box.. I'm curious!
> There are no stupid questions, just stupid people asking and that's me.

The solid-state political creed seeks to discredit reflections by using
only the solid-state shortcut physics. These shortcuts certainly work,
but they do not dictate reality. Man, not Mother Nature, takes those
shortcuts. Witness the inability of anyone to present an example of
the existence of standing-waves in a single source, single feedline,
single mismatched load system, without the existence of a forward-
traveling wave and a rearward-traveling (reflected) wave.

The same solid-state political creed dictates the definition of source
power. It says that if reflected power is taken in the source, then
it was never generated in the first place. Never mind that energy can
be proven to have made a round-trip to the load and back to the source.
--
73, Cecil http://www.qsl.net/w5dxp

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-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

3985. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 19:57:11 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ccb2c8_8@corp.newsgroups.com>
Source record: 93440

Richard Clark wrote:

> Dave Shrader <david.shrader@comcast.net> wrote:
>>Is there any objective reality when it comes to reflections? How do we
>>really know?
>
> I offered a very simple test.

First, you must prove that you are a member of objective reality.
That's a very difficult assignment, given most of your postings. :-)
--
73, Cecil http://www.qsl.net/w5dxp

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3986. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 20:06:19 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <aqcpc0hkatu5con2s3tekoki40a9dtl6kb@4ax.com>
Source record: 93441

On Sun, 13 Jun 2004 14:57:11 -0500, Cecil Moore <w5dxp@hotmail.com>
wrote:
>> I offered a very simple test.
>First, you must prove that you are a member of objective reality.
too simple to perform, hmm?

3987. Re: ANT Recommendation for Yaesu VX-2

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 20:07:29 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <tkcpc0hpcfumo31okictf4utml036kijpc@4ax.com>
Source record: 93442
Body handling: HTML body converted to readable text

On Sun, 13 Jun 2004 18:33:42 GMT, "paul" wrote:

>Hello,
>
>I just purchased a VX-2 and am looking to replace the stock rubber duck.
>Any suggestions or recommendations would be much appreciated!
>
>73!
>

Premier RD-98 is a good one. It's the very thin and flexible type which comes in handy as it's 17" long, and has an SMA connector which is what the VX-2 uses. If you don't want something that long they also make the RD-9 which is only 7" long. I have both, have found the RD-9 to be on par with the stock antenna (Yaesu, FT-50 which I believe uses the same antenna as your VX-2) though the flexibility is a nice feature; the RD-98 is head and shoulders above the stock antenna.

73,
Howard

3988. G Whip

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 20:23:33 UTC
From: M1LCR <rees.a@btopenworld.com>
Message-ID: <caid45$em0$1@hercules.btinternet.com>
Source record: 93443

Anyone got any instructions / comments on a G Whip ?

(I have the 80, 40 and 10 M Coils)

Thanks

Adrian
M1LCR

3989. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 20:53:36 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <k93zc.99293$Ly.96184@attbi_s01>
Source record: 93444

Richard Clark wrote:

SNIP

> Hi Dave,
>
> I offered a very simple test. There is the path of an objective
> result, or the path of a subjective and ponderous appeal.
>
> You do have a rig, do you not? You could perform the several steps to
> come to a conclusion I presume - otherwise disabuse me of this talent
> I inferred in your behalf and state which political party you are
> affiliated with.
>
> 73's
> Richard Clark, KB7QHC

Richard, I'm a retired EE and have used stubs extensively in USAF Missile systems C-band and S-band design. They work, they get warm, they increase the insertion loss in the transmission line system, they work, they work, ...

We use the word 'THEORY' too loosely in ham discussions. Theory is the state of experimental verification between Hypothesis and Law. Many times we use the word 'Theory' when we should say that Physics/Mathematics explain the observation as follows: etc.

In a shorted 1/4 wavelength transmission line 'stub' we have a current maximum at the physical short circuit. We have a high impedance 1/4 wavelength from the physical short circuit. The voltage and current have a sinusoidal relationship along the length of the 'stub'. There is a forward and reflected wave within the 'stub'.

There are several loss components within the 'stub' including I^2*R and V^2/Rl [Capacitive dielectric losses] and 1/2L*I^2 [Leakage Inductance losses]. Therefore the presence of a stub increase the insertion loss in the transmission line sub-system; conversely, the removal of the stub reduces the insertion loss in the transmission line sub-system.

In EM Physics, circa 1958-59, the equations of state for the stub included both a transient response and a steady state response. I have not solved these equations in more than 20 years [I probably forgot how to solve them in any event!]

With all this said and done I find it interesting to follow the discussions and learn many things, some of which are correct <grin>.

3990. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 21:06:38 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <yl3zc.42682$HG.37908@attbi_s53>
Source record: 93445

In the absence of an observer there is no objective reality.

In the absence of an observer any reality, if it exists, is unknowable.

I observe, therefore ...

+ + +

Cecil Moore wrote:

> First, you must prove that you are a member of objective reality.
> That's a very difficult assignment, given most of your postings. :-)
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>

3991. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 21:51:20 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0406131351.39aa6cd6@posting.google.com>
Source record: 93446

Richard Clark <kb7qhc@comcast.net> wrote in message
news:<vq5mc0ln7jl7flbklnrkjsbn6c6h2tp2mv@4ax.com>...
>

(Large paragraphs of Nonsensical, pyseudo-technobable snipped)

> The discussions in this group are often on shaky ground (pun intended)
> by lacking discussion of ground. The discussions in this group are
> often on that same tremulous substrate when the arguments run to
> Kirchhoff, and tectonic when Superposition is given its fanfare.
>

It seems you are still spouting out words and concepts that you
really don't understand, eh? If things are on shaky ground here,
you certainly ain't helpin'!

This is a reminder that ANYONE can post anything they want here.

Slick
Slick

3992. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 22:04:18 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <9fjpc0103lf1h2ehhj62grjrpd5i2pr165@4ax.com>
Source record: 93447

On 13 Jun 2004 14:51:20 -0700, radio913@aol.com (Dr. Slick) wrote:
> This is a reminder that ANYONE can post anything they want here.
Self-fulfilling prophesy?
>
>Slick
>Slick
redundant or hyperbolic comment?

Hi OM,

Again, you haven't the talent to attack on style nor bandwidth to challenge technical content. If you responded to the issue you are having difficulty with, then that would be another matter.

Try again. ;-)

73's
Richard Clark, KB7QHC

3993. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 22:43:52 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cailb8$10p$1@hercules.btinternet.com>
Source record: 93448

```
> With all this said and done I find it interesting to follow the
> discussions and learn many things, some of which are correct <grin>.
>
================================

How do you know you are learning anything?
```

3994. Re: ANT Recommendation for Yaesu VX-2

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-13 23:41:16 UTC
From: All Your Base <K-six-AYB@barovelli.com>
Message-ID: <sdppc0lva54vj3jk7n6qjttfs9fe66qpcj@4ax.com>
Source record: 93449
Body handling: HTML body converted to readable text

I use a Pryme RD9. Good for a radio this size - not so top heavy. Some have issues with the center pin being too short - but mine works FB.

"paul" wrote:

>Hello,
>
>I just purchased a VX-2 and am looking to replace the stock rubber duck.
>Any suggestions or recommendations would be much appreciated!
>
>73!
>

--
"From spongecake to satellites, it's gotta be Krebstar"

3995. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 00:26:39 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ccf1f0_6@corp.newsgroups.com>
Source record: 93450

Dave Shrader wrote:
> In EM Physics, circa 1958-59, the equations of state for the stub
> included both a transient response and a steady state response.

Hey Dave, looks like we both studied the same physics. But did you know
that Mother Nature changed her mind during the last 50 years? :-)
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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3996. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 00:42:43 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <caisa3$bt4$1@hercules.btinternet.com>
Source record: 93451

Perhaps I might be of assistance by providing some orders of magnitude.

A 1/2-wave stub line, 1 metre (39.37 inches) long constructed of a pair of polished copper tubes, each 1/2-inch in diameter, centers spaced 3 inches apart, at 150 MHz (not very far from 2 meters) has the following characteristics -

Zo = 299.8 ohms.
Attenuation = 0.0024 dB.
As a tuned circuit, Resonant Q = 5800.

When short-circuited -
Parallel input components of Zin -
Rsc = 0.08 ohms,
Xsc = -j*582 ohms.

When open circuited -
Series input components of Zin -
Roc = 1.11 megohms,
Xoc = j*38.6 ohms.

These and many other interesting values can be very accurately and rapidly calculated, from 20 Hz to 1 GHz, by using program RJELINE2 available, free issue, from website below.

Contributors to this newsgroup, who by no means are lacking in intelligence, may then be able to get their feet on the ground.

.....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
.....

3997. can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 03:53:49 UTC
From: wildboy74@webtv.net
Message-ID: <8192-40CD214D-218@storefull-3276.bay.webtv.net>
Source record: 93452

i wont to build a dipole ant for 10 meters can i use tv coax .or do i need to use rg.58

3998. Re: Antenna model files.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 08:40:12 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <cs40q1-ag1.ln1@skelton.news.cis.dfn.ed>
Source record: 93376

Richard wrote:

> I can trust mnyself,

You must NEVER trust yourself. Always make regular
backups. If a file is accidentally overwritten or
deleted, restore from backup.

73, Ed. EI9GQ.

--
Remove 'X' to reply by E-mail.
Linux 2.6.5

3999. Yagi, OWA and Wideband Yagi etc etc

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 09:33:04 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2j59mlFthfrlU1@uni-berlin.de>
Source record: 93453

I'm getting an initial impression that there might be three basic forms of traditional yagi (not log-periodic) when considering the issue of bandwidth.

Common Yagi (whatever that may be) . This has a fairly narrow bandwidth, not sure of the typical bandwidth in precentage terms of the designed frequency. Perhaps 1% at a guess. Here there has been no effort to concentrate on making any form of wideband antenna.

Optimised Wideband Antenna (OWA). This has a fairly wide bandwidth, not sure of the typical bandwith maybe 3 or 4 percent of the design frequency. Here some effort has been put into making something of a wideband antenna, but the design is not as wideband as is possible.

Wideband Yagi. This is typically the antenna having the widest bandwith. Not sure of the typical bandwidth, but perhaps about 7% of the design frequency.

If you were to draw up a list of traditional yagi' designs (including call letters of the designer if there is one) and place them in order of increasing bandwidth, what kind of list would you get?

Here is my measly effort:

Yagi (under no classification but yagi)
OWA
Wideband Yagi.

I'm not sure where in a list you put DL6WU, W4RNL, DJ9BV, + other designs I know not of. Does a DL6WU yagi come under OWA or wideband yagi? Has anyone drawn up a definitive classification?

4000. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 09:50:36 UTC
From: Ian Jackson <REMOVE-THIS-BIT@g3ohx.demon.co.uk>
Message-ID: <Jh0W7LFsTXzAFww4@g3ohx.demon.co.uk>
Source record: 93454

In message <8192-40CD214D-218@storefull-3276.bay.webtv.net>, g g
<wildboy74@webtv.net> writes
>i wont to build a dipole ant for 10 meters can i use tv coax .or do i
>need to use rg.58
>
Yes,
Ian.
--

4001. Re: Yagi, OWA and Wideband Yagi etc etc

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 09:59:54 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2j5b84FtchjiU1@uni-berlin.de>
Source record: 93455

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:2j59mlFthfrlU1@uni-berlin.de...

> I'm not sure where in a list you put DL6WU, W4RNL, DJ9BV, + other designs
> I know not of. Does a DL6WU yagi come under OWA or wideband yagi?
> Has anyone drawn up a definitive classification?

Further:

Is there in existence or has anyone ever thought or is there any possible usefulness in a rating system for yagi antennas? You ascribe a value to each of the main the characteristics and you publish the rating along with the design.

Something like:

Gain range (dB): 0-2 2-4 4-6.....infinite
Rating: 1 2 3 10

F/B range (dB): 0-5 5-7 7-10....infinite
Rating: 1 2 3 10

Bandwith range %: 0-0.5 0.5-1 1-2 2-4.....infinite
Rating 10

Then you would publish in the article for design something like:

G8VOQ "Super-duper-all-singing-and-dancing yagi":

Parameter Rating
Gain: 10
F/B: 10
Bandwidth: 10

4002. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 10:01:21 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406140201.2525ec15@posting.google.com>
Source record: 93456

fractenna@aol.com (Fractenna) wrote in message
news:<20040612182252.13352.00000747@mb-m26.aol.com>...
> The following is from the ARRL (main page www.arrl.org to get link) Web site.
> It would appear that the ARRL is promulgating the view that "History is being
> made". ARRL stands for: American Radio Relay League.' Relay' is an archaic term
> kept from the organization's founding days; this is not a wireless mesh network
> organization, for example.
>
> Mr. Robert Vincent is a Technical Coordinator for the ARRL.
>
> To any non-hams, I would like to point out that the ARRL is an organization
> comprising a minority of licensed radio amateurs in the US, and that many other
> highly technical radio amateurs, professional in their respective communities,
> do not necessarily agree with recent views so posed by that organization
> regarding UWB (ultrawideband); BPL (broadband over power lines) ; and the
> press-promulgated claims of the DLM antenna.
>
> Many antenna professional are members of the ARRL, while many are not.
>
> In my opinion, it is fitting and proper to give a voice and forum to this
> research effort, but ill-advised to posit it as "revolutionary" (URI press
> release) and "history being made"(ARRL web site) until after the findings have
> been presented and assessed. It is, in my opinion, more prudent for such an
> organization to present a neutral face in the absence of publicly available
> information.

What, AGAIN? Spare us Chipster, you're into some more of your online
gamesmanship and you're obviously twisting your just as obvious
dislike of the ARRL into unmitigated BS. The guy who wrote the piece
you've cited is *NOT* the "voice of the ARRL", the ARRL as an
representative organization is not involved in any of this nonsense,
not even close.

http://www.arrl.org/sections/index.html?sect=RI&monthly=1

He's just one of eighty-something volunteer ARRL "Section
Communications Managers" who are scatterd all over the country and
that's all he is. SCMs are *not* ARRL HQ technical staff or ARRL
policy generators. As this link illustrates SCMs compose and post
unedited chatty reports on activities within their ARRL sections. End
of. You've copy-pasted one paragraph of one of this guy's personal
comments on the K1DFT thing into something it's not in order to suit
your own personal agenda(s).

Not that any of this is new information for you eh Chipper?

>
> 73,
> Chip N1IR

w3rv

>
> ----------
>
> "In April, I reported that our Technical Coordinator, K1DFT had been recognized
> by the University of RI for having invented the most outstanding intellectual
> property of 2003. Recently, news articles in the New York Times, EE Times and
> Providence Journal have recognized Rob personally and his invention in very
> positive reports. His invention is called a Distributed Loaded Monopole and is
> in process of being patented. Independent validation of Rob's hard work is
> being performed and he will present a mini-seminar of the exciting new antenna
> concept at the NE Division Convention in Boxboro, August 14-15. It will
> certainly be a standing room only crowd in the Cotillion Room. Don't miss it.
> You'll be witnessing history being made. "

4003. Re: Yagi, OWA and Wideband Yagi etc etc

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 10:46:00 UTC
From: fractenna@aol.com
Message-ID: <20040614064600.08293.00001034@mb-m12.aol.com>
Source record: 93457

>Is there in existence or has anyone ever thought or is there any possible
>usefulness in a rating system for yagi antennas? You ascribe a value to
>each of the main the characteristics and you publish the rating along with
>the design.

Virtually all the latest Yagi-Uda work is aided by simulation and computer optimization. This is assessed through a 'cost function' (also known as figure of merit; objective function) which is a mathematical formula that weights bandwidth; gain; feed impedance; F/B and so on.

There is no 'one' cost function, and tailoring it requires some finesse. The tradeoff usually occurs in bandwidth compared to gain and F/B. The bigger the value of the cost function, the better the candidate design.

A simple expression that could be used is

CF= aG +bF +cW (1)

where G is gain in db; F is F/B in dB; and W is bandwidth in percent. the a,b,c coefficients thus determine which is a bit more important to you, as well as allowing relative normalization.

73,
Chip N1IR

4004. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 11:20:13 UTC
From: fractenna@aol.com
Message-ID: <20040614072013.08293.00001036@mb-m12.aol.com>
Source record: 93458

>You've copy-pasted one paragraph of one of this guy's personal
>comments on the K1DFT thing into something it's not in order to suit
>your own personal agenda(s).

Hi Brian,

Nice to hear from you.

The ARRL NE Convention at Boxboro is planning a two hour forum for Rob Vincent's work. Perhaps you might present an example where a 'new' technical subject has been given that much focus at an ARRL sponsored event?

I am of the opinion that it is proper and fitting to have this venue as a forum for Rob's work, but the time devoted would appear to indicate some sort of point of view, don't you think? Is there, for example, a separate talk by W8JI telling us why the Vincent claims are not accurate? Balance would be very nice. That is my opinion; yours may differ.

Also, your point is well taken. It would thus appear that perhaps--if there IS such a strong interest from the members--that the ARRL do a short, factual, and newsy piece on their web site. Otherwise, in an ARRL sponsored event, and an ARRL sponsored web page, there is certainly a point of view so cast, don't you think, Brian?

I do have a personal point of view, Brian, that is frankly, quite well informed and objective. It is not an agenda. I am not an activist.The ARRL has done many good things, and it has done others that some feel are more activist oriented, and--in my opinion-- not fostering new technologies such as UWB; cognitive radio; and of course, BPL. Hams, in recent years, have little (if any) to show in being part of the technological revolution in wireless that has occured in the last decade. It would be a shame if the DLM designs of Vincent were used (as a counterexample) in that context for PR sake by the ARRL or anyone else--if, and until, the claims are verified and the technology has been demonstrated to offer NEW and UNIQUE benefits.

I speculate that we will see a full, front page article on the wonders of the DLM antenna in the QST September issue, to coincide with the Boxboro ARRL Convention. Of course, that COULD be construed as an ARRL 'agenda', Brian. And, of course, my opinions may prove to be only partially justified here, and maybe totally wrong. Who knows:-)?

Brian, do you have a technical opinion on the claims of the Vincent DLM technology? I appreciate that you may wish to wait for more data.

73,
Chip N1IR

4005. Re: Yagi, OWA and Wideband Yagi etc etc

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 12:32:48 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <2j5k6fFu0tqiU1@uni-berlin.de>
Source record: 93459

"Fractenna" <fractenna@aol.com> wrote in message
news:20040614064600.08293.00001034@mb-m12.aol.com...
> >Is there in existence or has anyone ever thought or is there any possible
> >usefulness in a rating system for yagi antennas? You ascribe a value to
> >each of the main the characteristics and you publish the rating along
with
> >the design.
>
> Virtually all the latest Yagi-Uda work is aided by simulation and computer
> optimization. This is assessed through a 'cost function' (also known as
figure
> of merit; objective function) which is a mathematical formula that weights
> bandwidth; gain; feed impedance; F/B and so on.
>
> There is no 'one' cost function, and tailoring it requires some finesse.
The
> tradeoff usually occurs in bandwidth compared to gain and F/B. The bigger
the
> value of the cost function, the better the candidate design.
>
> A simple expression that could be used is
>
> CF= aG +bF +cW (1)
>
> where G is gain in db; F is F/B in dB; and W is bandwidth in percent. the
> a,b,c coefficients thus determine which is a bit more important to you,
as
> well as allowing relative normalization.
>
> 73,
> Chip N1IR

I was thinking that for every published or generic design maybe there could
be a kind of master list that you could consult.

ie like:
Rating
Antenna Gain F/B Bandwidth

OWA (5 ele) 3 3 5

Standard Yagi (5 ele) 4 3 2

DL6WU (10 ele) 5 6 2

DL6WU (15 ele) 6 6 2

But, you could just use the actual values I suppose. You would have in this case three seperate tables, this one above if low to high on the gain parameter.

4006. Re: Yagi, OWA and Wideband Yagi etc etc

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 12:48:12 UTC
From: fractenna@aol.com
Message-ID: <20040614084812.23082.00000622@mb-m21.aol.com>
Source record: 93460

>I was thinking that for every published or generic design maybe there could
>be a kind of master list that you could consult.
>
>ie like:
> Rating
>Antenna Gain F/B Bandwidth
>
>OWA (5 ele) 3 3 5
>
>Standard Yagi (5 ele) 4 3 2
>
>DL6WU (10 ele) 5 6 2
>
>DL6WU (15 ele) 6 6 2
>
>But, you could just use the actual values I suppose. You would have in this
>case three seperate tables, this one above if low to high on the gain
>parameter.
>
>

I am not aware of such a list. It would certainly be useful.

Typically, a designer has a specific need and the optimization solves for that.

73,
Chip N1IR

4007. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 13:45:09 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406140545.2f113a3e@posting.google.com>
Source record: 93461

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:<cagn08$245$1@sparta.btinternet.com>...
> "David Harper" wrote
> > I had a simple question in regards to phased array antenna patterns.
> > If a phased array is trying to send a narrow beam in a specific
> > direction, how do the other side lobes get reduced and/or eliminated?
> > Are the individual antenna transmitters/elements not omnidirectional
> > themselves? If not, what are the characteristics of their patterns?
> >
> > I ask this because I'm trying to understand how tracking radars can
> > send narrow beams in the desired direction without significant
> > secondary lobes to interfere with returns from the desired lobe.
> >
> > Thanks in advance for any insight!
>
> ============================
>
> To understand how things work it is necessary to be familiar with elementary
> trigonometry. Its quite simple really.
>
> Without trigonometry you just have to accept that's the way things are.

Being an engineer, I am quite familiar with trigonometry. I believe
you didn't fully understand my question: How do the other side lobes
get reduced and/or eliminated? Theoretically, in some phased array
antenna configurations, some lobes have an undesirably high a gain. I
was wondering what filters / engineering work arounds were used to
mitigate this. Other posts have adequately answered this question,
however. Thanks anyway.

4008. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 14:03:09 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40CDB01D.E155A0DD@cwis.net>
Source record: 93462

"g g",
Sure. The aluminum used for the shield isn't easy to solder
to, but 'TV' coax should work okay.
'Doc

4009. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 14:07:28 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <10crc9bij13qq8c@corp.supernews.com>
Source record: 93463

Ian Jackson wrote:
> In message <8192-40CD214D-218@storefull-3276.bay.webtv.net>, g g
> <wildboy74@webtv.net> writes
>
>> i wont to build a dipole ant for 10 meters can i use tv coax .or do i
>> need to use rg.58
>>
> Yes,
> Ian.

Yes, you can use 5 ohm tv coax but you will be better off using 50 ohm rg 8 or rg 58 cable as the output circuit of your radio is optimized for the 50 ohm cable. There is aloss of power in the mismatched cable. Not much but it is there.
If you must use 75 ohm cable then investigate using a matching section of 50 ohm cable.

Dave WD9BDZ

4010. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 14:34:52 UTC
From: tdonaly@aol.com
Message-ID: <20040614103452.13225.00000681@mb-m20.aol.com>
Source record: 93464

Cecil wrote,
>
>I'm not entirely certain, but I believe the H-parameter analysis,
>the Y-parameter analysis, and the Z-parameter analysis all use
>the reflection model and are valid for impedance discontinuities
>in transmission lines.
>--
>73, Cecil http://www.qsl.net/w5dxp
>
>

Those are all examples of two port parameters, good for your basic linear, time invariant system. (While you're at it, don't forget the transmission parameters, Cecil.) They'll work with any old lumped or distributed system as long as it's linear, has two ports, and is time invariant.

You can't really use S-parameters to prove reflections exist because S-parameter theory assumes reflections exist even when they don't, as in the case of
transistor characterization - much like calculating the VSWR in a zero length transmission line. They're good for analysis, though, as long as you don't get carried away and look on them as proving something about God, the Universe and Everything.
73,
Tom Donaly, KA6RUH

4011. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 14:41:11 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <8rdrc0letculaokc936flhni886i2aave0@4ax.com>
Source record: 93465

On Sun, 13 Jun 2004 22:53:49 -0500, wildboy74@webtv.net (g g) wrote:

>i wont to build a dipole ant for 10 meters can i use tv coax .or do i
>need to use rg.58

Electrically, the tv coax should work nearly as well as rg58.

Only problem I see is the foil inner shield in tv coax might be
trickier to solder to a standard pl-259 plug that you will screw onto
your transceiver. The connectors they used to attach to a tv input
won't fit your transceiver.

Bob
k5qwg

4012. Re: Looking for a crappy antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 14:56:09 UTC
From: hwh <iimeeltje@hotmail.com.nospam>
Message-ID: <40cdbcca$0$35145$e4fe514c@news.xs4all.nl>
Source record: 93466

"Mike Painter" <mddotpainter@sbcglobal.net> schreef in bericht
news:%Byxc.68690$5N1.53623@newssvr29.news.prodigy.com...
> Well, sort of.
> I want to broadcast an FM radio signal playing MP3 files in a variety of
> buildings from single story homes to multistoried buildings.
> Small dwellings are no problems but the larger ones present a problem. The
> location of the broadcast unit may be mandated by factors beyond my
control.
> The power needed to reach the opposite corner might be to high.
> Is there any way to use internal wiring as a short range antenna that
would
> be limited to the building for all practical purposes.
>
> Another possible solution that I can't find an answer to would be to put
the
> signal on an unused TV channel if the building is wired for cable.
>
> I've done a lot of Google searching but can't find anything specific.
>
> Thanks.
>
>

4013. Re: Looking for a crappy antenna.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 14:58:41 UTC
From: hwh <iimeeltje@hotmail.com.nospam>
Message-ID: <40cdbd62$0$6795$e4fe514c@news.xs4all.nl>
Source record: 93467

"Mike Painter" <mddotpainter@sbcglobal.net> schreef in bericht
news:%Byxc.68690$5N1.53623@newssvr29.news.prodigy.com...
> Well, sort of.
> I want to broadcast an FM radio signal playing MP3 files in a variety of
> buildings from single story homes to multistoried buildings.
> Small dwellings are no problems but the larger ones present a problem. The
> location of the broadcast unit may be mandated by factors beyond my
control.
> The power needed to reach the opposite corner might be to high.
> Is there any way to use internal wiring as a short range antenna that
would
> be limited to the building for all practical purposes.

In tunnels leaky feeders are used. They leak just enough signal to be picked
up at a close range.
You could try using very bad coax :-)

gr, hwh

4014. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 15:26:51 UTC
From: * <*@*.com>
Message-ID: <2j5udoFt9kqpU1@uni-berlin.de>
Source record: 93468
Cross-posted to: rec.radio.amateur.swap,alt.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

This looks FAKE, so you may want to go to the FCC site directly instead of
using his link.
Message-ID looks forged as well
Could be gathering addresses for spamming.

"yea right" <spam@spam.spam> wrote in message
Message-ID: <pan.2004.06.13.01.12.11.784504@spam.spam>
NNTP-Posting-Host: 24.8.227.96
X-Complaints-To: abuse@comcast.net
X-Trace: attbi_s54 1087089128 24.8.227.96

news:pan.2004.06.13.01.12.11.784504@spam.spam...
> The information about filing a FCC BPL comment on the ARRL web page was
> outdated. There is a new case number that should be used. 04-37 is the
> correct case number.
>
> It only takes 5 minutes to file a comment with the FCC against BPL.
>
> http://vambo.org/a/

4015. RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 16:06:12 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406140806.5752ca8@posting.google.com>
Source record: 93469

I was wondering what the general relationship between frequency and its ability to transmit through various materials? For instance, 1GHz and 1MHz obviously transmit differently through materials. I'm curious as to what material properties are involved (i.e. dielectric constant, density, etc?)

The main reason for this questions is I'm wondering how well 1+ GHz (GPS) signals transmit through about 1.5 inches of expanded polystyrene (styrofoam).

Thanks in advance for any insight!
Dave

4016. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 16:48:45 UTC
From: wildboy74@webtv.net
Message-ID: <1983-40CDD6ED-95@storefull-3273.bay.webtv.net>
Source record: 93470

i should came here in the first place the folks in the cb group
said tv coax will cause damage to my radio ,thanks 73s

4017. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 17:03:27 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <h1lzc.956$Jk5.295@lakeread02>
Source record: 93371

http://gullfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/upload_v2.hts

ET 04-37
In the Matter of Carrier Current Systems including Broadband over Power Line Systems amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line Systems

Of the current comment list at FCC, this is the only one found under search for "Broadband over Power Line Systems".

Best regards,

Jack Painter
Virginia Beach, Va

"*" <*@*.com> wrote in message news:2j5udoFt9kqpU1@uni-berlin.de...
> This looks FAKE, so you may want to go to the FCC site directly instead of
> using his link.
> Message-ID looks forged as well
> Could be gathering addresses for spamming.
>
> "yea right" <spam@spam.spam> wrote in message
> Message-ID: <pan.2004.06.13.01.12.11.784504@spam.spam>
> NNTP-Posting-Host: 24.8.227.96
> X-Complaints-To: abuse@comcast.net
> X-Trace: attbi_s54 1087089128 24.8.227.96
>
>
>
>
>
>
> news:pan.2004.06.13.01.12.11.784504@spam.spam...
> > The information about filing a FCC BPL comment on the ARRL web page was
> > outdated. There is a new case number that should be used. 04-37 is the
> > correct case number.
> >
> > It only takes 5 minutes to file a comment with the FCC against BPL.
> >
> > http://vambo.org/a/
>
>

4018. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 17:13:42 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <v1lzc.957$Jk5.888@lakeread02>
Source record: 93372

http://gullfoss2.fcc.gov/cgi-bin/websql/prod/ecfs/upload_v2.hts

ET 04-37
In the Matter of Carrier Current Systems including Broadband over Power Line Systems amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line Systems

Of the current comment list at FCC, this is the only one found under search for "Broadband over Power Line Systems".

Best regards,

Jack Painter
Virginia Beach, Va

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> X-Complaints-To: abuse@comcast.net
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>
>
>
>
>
>
> news:pan.2004.06.13.01.12.11.784504@spam.spam...
> > The information about filing a FCC BPL comment on the ARRL web page was
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> > correct case number.
> >
> > It only takes 5 minutes to file a comment with the FCC against BPL.
> >
> > http://vambo.org/a/
>
>

4019. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 17:21:32 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <b1nrc09s310m37i3hqt847p70rcedu6r3v@4ax.com>
Source record: 93373

On 14 Jun 2004 09:06:12 -0700, achilles03@hotmail.com (David Harper) wrote:
>The main reason for this questions is I'm wondering how well 1+ GHz
>(GPS) signals transmit through about 1.5 inches of expanded
>polystyrene (styrofoam).

Hi Dave,

Such material at that frequency is often used to construct a di-electric lens. That is, when the di-electric constant (which is analogous to index of refraction) is taken into account of curvature which, in turn, is of sufficient size with respect to wavelength; then you have the means to construct lens of the common shape you encounter for light lenses. This means both follow the same characteristics given the same shape. For a slab of Polystyrene, it would be equivalent to plate glass (no gain/magnification).

As long as your di-electric is free of impurities, then for all intents and purposes it is as clear to RF as glass is to light. Add impurities and you stand the chance of making sunglasses for your antenna (unfortunately the analog of sunlight would be your precious RF).

Optical lenses are hundreds to thousands to millions of wavelengths across. On the other hand, RF lenses stand to be much smaller in relation, and as such there is a minimum size whereby no advantage may be found (don't expect to build an effective, but sloppy quarterwave lens).

73's
Richard Clark, KB7QHC

4020. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 17:34:07 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <jklzc.18724$H65.11275@nwrddc02.gnilink.net>
Source record: 93374

"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406140545.2f113a3e@posting.google.com...
> "Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:<cagn08$245$1@sparta.btinternet.com>...
> > "David Harper" wrote
> > > I had a simple question in regards to phased array antenna patterns.
> > > If a phased array is trying to send a narrow beam in a specific
> > > direction, how do the other side lobes get reduced and/or eliminated?
> > > Are the individual antenna transmitters/elements not omnidirectional
> > > themselves? If not, what are the characteristics of their patterns?
> > >
> > > I ask this because I'm trying to understand how tracking radars can
> > > send narrow beams in the desired direction without significant
> > > secondary lobes to interfere with returns from the desired lobe.
> > >
> > > Thanks in advance for any insight!
> >
> > ============================
> >
> > To understand how things work it is necessary to be familiar with
elementary
> > trigonometry. Its quite simple really.
> >
> > Without trigonometry you just have to accept that's the way things are.
>
> Being an engineer, I am quite familiar with trigonometry. I believe
> you didn't fully understand my question: How do the other side lobes
> get reduced and/or eliminated? Theoretically, in some phased array
> antenna configurations, some lobes have an undesirably high a gain. I
> was wondering what filters / engineering work arounds were used to
> mitigate this. Other posts have adequately answered this question,
> however. Thanks anyway.

David

I'd submit that your question is very difficult to explain within the
consraints of a newsgroup paragraph or two in a news group. The subject of
aperature distribution has been studdied for years and years by thousands
of high level engineers.
Although it is desired to minimize the sidelobe level from scanning flat
phased arrays, there is a limit to how low the sidelobes can be made. They
sure dont go to zero.
A side looking scanning antenna of phased elements will have individual
elements who's pattern is appropriate for whatever area is being scanned.
The pattern from each element wont be omnidirectional.

It might be a good exorcize for you to draw a plot on a piece of paper with 10 antennas in a row. You can quickly see that the array will have max gain at some power distribution and have sidelobes that change appreciably when the distribution of power (and phase) is varied over the length of that array.

Jerry

4021. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 18:03:18 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <cakpdccuo1@newshost.mot.com>
Source record: 93377

"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406140806.5752ca8@posting.google.com...
> I was wondering what the general relationship between frequency and
> its ability to transmit through various materials? For instance, 1GHz
> and 1MHz obviously transmit differently through materials. I'm
> curious as to what material properties are involved (i.e. dielectric
> constant, density, etc?)
>
> The main reason for this questions is I'm wondering how well 1+ GHz
> (GPS) signals transmit through about 1.5 inches of expanded
> polystyrene (styrofoam).
>
> Thanks in advance for any insight!
> Dave

Off the cuff, I'd say it'll have no noticable effect...
Some of this can have additives which may change the equation.

Lenses...Hmmm. Interesting idea.

I can try it and see what effect I can see on the signal strength bars on
the GPS.

I do know that my older GPS (Sequential receiver) doesn't receive in the
house. I suspect it is from the foil backing on the fiber glass insulation
in the ceiling.
Steve N.
--
Steve N, K,9;d, c. i My email has no u's.

4022. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 18:04:52 UTC
From: fractenna@aol.com
Message-ID: <20040614140452.04287.00000923@mb-m13.aol.com>
Source record: 93375

>i should came here in the first place the folks in the cb group
>said tv coax will cause damage to my radio ,thanks 73s
>

What callsign do you use on 10m?

73,
Chip N1IR

4023. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 18:53:37 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406141053.74fa48f6@posting.google.com>
Source record: 93378

K7JEB <k7jeb.remove.this@qsl.net> wrote in message
news:<otsnc0ldmncct3v57ig6ciu0qtod0e558d@4ax.com>...
> On 12 Jun 2004 16:43:35 -0700, (David Harper) wrote:
>
> >I had a simple question in regards to phased array antenna patterns.
> >If a phased array is trying to send a narrow beam in a specific
> >direction, how do the other side lobes get reduced and/or eliminated?
> >Are the individual antenna transmitters/elements not omnidirectional
> >themselves? If not, what are the characteristics of their patterns?
>
> There's really nothing special about a phased-array antenna.
> It is a radiating aperture, just like the mouth of a horn
> or the front of a parabolic "dish". The only difference
> is that the phase and amplitude of the excitation across
> the aperture can be much more finely adjusted to "squint"
> the beam.
>
> But the essential tradeoff remains: the larger the aperture,
> the narrower the beam. And, like horns and reflectors, one
> can reduce the sidelobes by not exciting the outside elements
> as strongly, but with a corresponding reduction in gain from
> the maximum obtainable for a given aperture size. This is
> called illumination tapering and is done on all antennas
> in one form or another to work the gain/sidelobe tradeoff.
>
> >I ask this because I'm trying to understand how tracking radars can
> >send narrow beams in the desired direction without significant
> >secondary lobes to interfere with returns from the desired lobe.
>
> Most radars go for wider beams with lower sidelobes because
> the overall system performance is better. But the sidelobes
> are only reduced, not eliminated entirely.
>
> Oh, yeah, and about the patterns of the individual elements,
> they have to be as non-directional as possible. The deal is
> that the overall antenna pattern is the result of the PRODUCT
> of the array factor with the pattern of the individual elements.
> If the individual elements have reduced gain off boresight, the
> entire antenna gain is reduced off-boresight as well, limiting
> the angles at which the beam may be "squinted".
>
> Jim, K7JEB

Thanks! You know any simple phased array configurations that are easy to mathmatically model? I've played with a 4-element array all located on the same axis just for fun to see what resulted (and to make sure my equations were right), but I'd like to find some real-world systems (hopefully without too many elements) to play with. Any digrams exist on the net? (dimensional relationship between elements, etc).

Thanks again!
Dave

4024. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 18:55:02 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40cdf5bd_3@corp.newsgroups.com>
Source record: 93379

Tdonaly wrote:
> You can't really use S-parameters to prove reflections exist because
> S-parameter theory assumes reflections exist even when they don't, ...

On the contrary, if one assumes same-cycle reflections, the reflection model works perfectly. Why wouldn't a 50 ohm source looking into a 100 ohm resistor suffer an immediate reflection (energy rejection)? :-)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4025. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 19:10:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10cru14agiclb78@corp.supernews.com>
Source record: 93380

"Ability to transmit" is a bit vague. In any material, a wave will encounter attenuation, an impedance, and a velocity, all of which are determined by material properties of permeability, permittivity, and loss tangent. The change in impedance from free air causes reflections, and the change in velocity causes refraction. If your main concern is attenuation, it'll be negligible for the styrofoam at that frequency. If you're interested in calculating precise values or investigating other materials, a good reference is Kraus's _Electromagnetics_.

Roy Lewallen, W7EL

David Harper wrote:

> I was wondering what the general relationship between frequency and
> its ability to transmit through various materials? For instance, 1GHz
> and 1MHz obviously transmit differently through materials. I'm
> curious as to what material properties are involved (i.e. dielectric
> constant, density, etc?)
>
> The main reason for this questions is I'm wondering how well 1+ GHz
> (GPS) signals transmit through about 1.5 inches of expanded
> polystyrene (styrofoam).
>
> Thanks in advance for any insight!
> Dave

4026. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 19:16:23 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cakti7$32o$1@titan.btinternet.com>
Source record: 93381

> It might be a good exorcize for you to draw a plot on a piece of paper
> with 10 antennas in a row. You can quickly see - - - -
>
==========

In other words - trigonometry! Or geometry!

4027. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 19:18:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10crufjqpkshvd9@corp.supernews.com>
Source record: 93382

Something to keep in mind is that phased arrays with a large number of elements are simpler in one respect than ones with just a few elements. In the first case, you can make the assumption with reasonable accuracy that the feedpoint impedances of all elements are the same, since all are in essentially the same environment with respect to the other elements. For most simple phased arrays, you can't make this assumption. So while pattern analysis of simple phased arrays is easy once you assume equal element currents, actually getting those currents can be more difficult than you might assume. If you're interested only in the patterns and not how you'd actually get the currents you need, simple trig is enough. But that's not enough to enable you to actually design and build one that'll work as planned. Chapter 8 of the _ARRL Antenna Book_ describes what has to be done to make simple arrays work properly, as well as describing a few common simple arrays. There are also a few examples of phased arrays with the free EZNEC demo (http://eznec.com), where you can save yourself the math and immediately see the effect of changing element currents.

Roy Lewallen, W7EL

David Harper wrote:
>
> Thanks! You know any simple phased array configurations that are easy
> to mathmatically model? I've played with a 4-element array all
> located on the same axis just for fun to see what resulted (and to
> make sure my equations were right), but I'd like to find some
> real-world systems (hopefully without too many elements) to play with.
> Any digrams exist on the net? (dimensional relationship between
> elements, etc).
>
> Thanks again!
> Dave

4028. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 19:26:18 UTC
From: kh2d@my-deja.com
Message-ID: <40cdf895.74809310@newsgroups.bellsouth.net>
Source record: 93383
Cross-posted to: rec.radio.amateur.swap,alt.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

On Mon, 14 Jun 2004 10:26:51 -0500, "*" <*@*.com> wrote:

>This looks FAKE, so you may want to go to the FCC site directly instead of
>using his link.
>Message-ID looks forged as well
>Could be gathering addresses for spamming.

Can you say P A R A N O I D ????

The link on the guy's web site to file a comment IS the FCC's web
site:

http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi

The instructions on the ARRL web site to file a comment take you to
the exact same web site.

ARRL sez:

Goto http://www.fcc.gov/cgb/ecfs/

and click SUBMIT A FILING

which takes you to:

http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi

Turn in your badge, Dick Tracy, you are getting paranoid in your
old age. Anybody who wants to send HAM SPAM can get thousands
of email addresses from QRZ.com, no need to collect them one
at a time by having people fill out forms.

73, Jim KH2D

4029. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 19:53:40 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40ce04c6_2@news1.prserv.net>
Source record: 93384

Transmission loss through materials depends on 2 factors. Loss tangent and dielectric constant. Loss tangent is often the lesser of the problems, but is simple exchange of the wave energy for heat caused by several possible mechanisms. Look up the operating principles of microwave ovens. Dielectric constant manifests itself as an impedance mismatch at each surface, which causes reflections. At a specific frequency, this characteristic can be used to make the material transparent, as in ceramic radomes for spacecraft.

In your case, the loss tangent of polystyrene for RF is among the best if there is no moisture trapped in the foam (closed cell type preferably), and since the dielectric constant approaches that of air, then the loss at the GPS frequency will be virtually nil.

--
Crazy George
Remove N O and S P A M imbedded in return address
"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406140806.5752ca8@posting.google.com...
> I was wondering what the general relationship between frequency and
> its ability to transmit through various materials? For instance, 1GHz
> and 1MHz obviously transmit differently through materials. I'm
> curious as to what material properties are involved (i.e. dielectric
> constant, density, etc?)
>
> The main reason for this questions is I'm wondering how well 1+ GHz
> (GPS) signals transmit through about 1.5 inches of expanded
> polystyrene (styrofoam).
>
> Thanks in advance for any insight!
> Dave

4030. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 21:14:29 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <boozc.4400$lr2.2202@bignews2.bellsouth.net>
Source record: 93386

I noticed some electromagnetic waves will travel through distilled water,
and some will not... then when you put mud in it - those that could -
can't - and those that couldn't - can.

light was one

"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406140806.5752ca8@posting.google.com...
> I was wondering what the general relationship between frequency and
> its ability to transmit through various materials? For instance, 1GHz
> and 1MHz obviously transmit differently through materials. I'm
> curious as to what material properties are involved (i.e. dielectric
> constant, density, etc?)
>
> The main reason for this questions is I'm wondering how well 1+ GHz
> (GPS) signals transmit through about 1.5 inches of expanded
> polystyrene (styrofoam).
>
> Thanks in advance for any insight!
> Dave

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 5/22/2004

4031. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 21:15:15 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <Uoozc.4401$lr2.2911@bignews2.bellsouth.net>
Source record: 93385

yep, you can use it.

"g g" <wildboy74@webtv.net> wrote in message
news:8192-40CD214D-218@storefull-3276.bay.webtv.net...
> i wont to build a dipole ant for 10 meters can i use tv coax .or do i
> need to use rg.58
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.690 / Virus Database: 451 - Release Date: 5/22/2004

4032. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 21:28:52 UTC
From: tdonaly@aol.com
Message-ID: <20040614172852.00323.00000943@mb-m14.aol.com>
Source record: 93388

```
Cecil wrote,
>Message-id: <40cdf5bd_3@corp.newsgroups.com>
>
>Tdonaly wrote:
>> You can't really use S-parameters to prove reflections exist because
>> S-parameter theory assumes reflections exist even when they don't, ...
>
>On the contrary, if one assumes same-cycle reflections, the reflection
>model works perfectly. Why wouldn't a 50 ohm source looking into a 100
>ohm resistor suffer an immediate reflection (energy rejection)? :-)
>--
>73, Cecil http://www.qsl.net/w5dxp
>
>

Why wouldn't it, indeed.
73,
Tom Donaly, KA6RUH
```

4033. Mast Identification

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 21:34:29 UTC
From: Fast Pc Solutions <Steven@fastpcsolutions.net>
Message-ID: <2j6jjfFuj726U1@uni-berlin.de>
Source record: 93387

Hello All

I am trying to ID The MFG of this mast Please Visit
www.fastpcsolutions.net/id93.htm for pictures of this mast. My intention is
to erect the mast and provide for free wireless internet service for free to
The students of my count whom the board of education gave each student an
apple I book with wireless network cards in them of course i wont be able to
service the whole county but i will be able to give this service with the
right antenna to students within a 1-5 mile range.
I need to know who the MFG of this mast is so i can get structural
information about it. The inspectors department needs this information to
approve it place ment like: How much wind it will withstand and the maximum
pad depth and with i will need.

All help is greatly appreciated and if there is any engeneers that can help
me with this in getting it approvet i would appreciate it also

4034. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 21:39:20 UTC
From: Dave <noone@nowhere.com>
Message-ID: <mZGdnUmHl_SThlPdRVn-gg@crocker.com>
Source record: 93389

```
"Tdonaly" <tdonaly@aol.com> wrote in message
news:20040614172852.00323.00000943@mb-m14.aol.com...
> Cecil wrote,
> >Message-id: <40cdf5bd_3@corp.newsgroups.com>
> >
> >Tdonaly wrote:
> >> You can't really use S-parameters to prove reflections exist because
> >> S-parameter theory assumes reflections exist even when they don't,
...
> >
> >On the contrary, if one assumes same-cycle reflections, the reflection
> >model works perfectly. Why wouldn't a 50 ohm source looking into a 100
> >ohm resistor suffer an immediate reflection (energy rejection)? :-)
> >--
> >73, Cecil http://www.qsl.net/w5dxp
> >
> >
>
> Why wouldn't it, indeed.
> 73,
> Tom Donaly, KA6RUH
>
>

if there are no components that introduce a time delay it would. so no
transmission lines allowed... hence no reflections. and you are back to a
simple lumped resistor problem.
```

4035. Re: Mast Identification

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 22:07:15 UTC
From: Fast Pc Solutions <Steven@fastpcsolutions.net>
Message-ID: <2j6lhdFueng8U1@uni-berlin.de>
Source record: 93391

Thnakyou

After Posting this i stumbled accross it on a website and did some digging
and found out that it was a ROHN antenna I just got off the phone with a
reseller and he directed me to where i could obtain info on the antenna

thanks all for your support
<change219@charter.net> wrote in message
news:ulasc0dljd8ge4nb1rr78ufb44a7ane8te@4ax.com...
> I would venture to guess that it is a Rohn 25G but I'm not expert
>
>
>
>
> On Mon, 14 Jun 2004 17:34:29 -0400, "Fast Pc Solutions"
> <Steven@fastpcsolutions.net> wrote:
>
> >Hello All
> >
> >I am trying to ID The MFG of this mast Please Visit
> >www.fastpcsolutions.net/id93.htm for pictures of this mast. My intention
is
> >to erect the mast and provide for free wireless internet service for free
to
> >The students of my count whom the board of education gave each student an
> >apple I book with wireless network cards in them of course i wont be able
to
> >service the whole county but i will be able to give this service with the
> >right antenna to students within a 1-5 mile range.
> >I need to know who the MFG of this mast is so i can get structural
> >information about it. The inspectors department needs this information to
> >approve it place ment like: How much wind it will withstand and the
maximum
> >pad depth and with i will need.
> >
> >All help is greatly appreciated and if there is any engeneers that can
help
> >me with this in getting it approvet i would appreciate it also
> >
>

4036. Re: Mast Identification

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 22:46:48 UTC
From: change219@charter.net
Message-ID: <ulasc0dljd8ge4nb1rr78ufb44a7ane8te@4ax.com>
Source record: 93390

I would venture to guess that it is a Rohn 25G but I'm not expert

On Mon, 14 Jun 2004 17:34:29 -0400, "Fast Pc Solutions"
<Steven@fastpcsolutions.net> wrote:

>Hello All
>
>I am trying to ID The MFG of this mast Please Visit
>www.fastpcsolutions.net/id93.htm for pictures of this mast. My intention is
>to erect the mast and provide for free wireless internet service for free to
>The students of my count whom the board of education gave each student an
>apple I book with wireless network cards in them of course i wont be able to
>service the whole county but i will be able to give this service with the
>right antenna to students within a 1-5 mile range.
>I need to know who the MFG of this mast is so i can get structural
>information about it. The inspectors department needs this information to
>approve it place ment like: How much wind it will withstand and the maximum
>pad depth and with i will need.
>
>All help is greatly appreciated and if there is any engeneers that can help
>me with this in getting it approvet i would appreciate it also
>

4037. Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 22:52:52 UTC
From: N4LQ <n4lq@iglou.com>
Message-ID: <40ce2c39_1@news.iglou.com>
Source record: 93392

Say a beam has 5db forward gain and a front to back difference of 20db. Where does the extra 15db go? I mean, if you loose 20db off the back on transmit, I assume you also loose that much on receive. What happened to the 20db? Did it burn up as heat? What am I missing here?

--
Steve

4038. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 23:11:39 UTC
From: fractenna@aol.com
Message-ID: <20040614191139.16160.00001226@mb-m15.aol.com>
Source record: 93393

>
>Say a beam has 5db forward gain and a front to back difference of 20db.
>Where does the extra 15db go? I mean, if you loose 20db off the back on
>transmit, I assume you also loose that much on receive. What happened to the
>20db? Did it burn up as heat? What am I missing here?
>
>--
>Steve
>

The analogy to a balloon is pretty apt.

Squeeze and pinch the back so only about 1/50 th of the air that used to be there is left. The rest gets distributed towards the front, and makes the front side more than a factor of two bigger. But the ratio of the amount of air in the front to that of the back is very big--say, 100.

That's a 20dB F/B.

Hope that helps.

73,
Chip N1IR

4039. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-14 23:22:53 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <hrqzc.18954$H65.1552@nwrddc02.gnilink.net>
Source record: 93394

"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406140806.5752ca8@posting.google.com...
> I was wondering what the general relationship between frequency and
> its ability to transmit through various materials? For instance, 1GHz
> and 1MHz obviously transmit differently through materials. I'm
> curious as to what material properties are involved (i.e. dielectric
> constant, density, etc?)
>
> The main reason for this questions is I'm wondering how well 1+ GHz
> (GPS) signals transmit through about 1.5 inches of expanded
> polystyrene (styrofoam).
>
> Thanks in advance for any insight!
> Dave

Dave

How much of *what you want to know* could be learned from a test in the
microwave??

As you probably know, it will be very difficult to include enough
Polystyrene around a GPS receiver (and its antenna) to effect the accuracy
of its readings.
I get pretty good accuracy from my DeLorme GPS while it is inside my
house. That is actually a statement about the poor construction of the
house, I suppose.

Jerry

4040. NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 00:08:43 UTC
From: fractenna@aol.com
Message-ID: <20040614200843.16591.00001069@mb-m15.aol.com>
Source record: 93396

From NASA Ames Press release:

"NASA artificial intelligence (AI) software - working on a network of personal computers - has designed a satellite antenna scheduled to orbit Earth in 2005.

The antenna, able to fit into a one-inch space (2.5 by 2.5 centimeters), can receive commands and send data to Earth from the Space Technology 5 (ST5) satellites. The three satellites - each no bigger than an average TV set - will help scientists study magnetic fields in Earth's magnetosphere. NASA scientists have spent two years developing the evolutionary AI software that designed the antenna.

"The AI software examined millions of potential antenna designs before settling on a final one," said project lead Jason Lohn, a scientist at NASA's Ames Research Center, located in California's Silicon Valley. "Through a process patterned after Darwin's 'survival of the fittest,' the strongest designs survive and the less capable do not."

The software started with random antenna designs and through the evolutionary process, refined them. The computer system took about 10 hours to complete the initial antenna design process. "We told the computer program what performance the antenna should have, and the computer simulated evolution, keeping the best antenna designs that approached what we asked for. Eventually, it zeroed in on something that met the desired specifications for the mission," Lohn said.

"Not only can the software work fast, but it can adapt existing designs quickly to meet changing mission requirements," he said. Following the first design of the ST5 satellite antenna, NASA Ames scientists used the software to 're-invent' the antenna design in less than a month to meet new specifications - a very quick turn-around in the space hardware redesign process.

Scientists also can use the evolutionary AI software to invent and create new structures, computer chips and even machines, according to Lohn. "We are now using the software to design tiny microscopic machines, including gyroscopes, for spaceflight navigation," he ventured.

Four NASA Ames computer scientists wrote the AI evolutionary program that operates on 120 personal computers, which work as a team. The scientists wrote the AI software because it can create designs faster than a human being can do so.

"The software also may invent designs that no human designer would ever think of," Lohn asserted. In addition, the software also can plan devices that are smaller, lighter, consume less power, are stronger and more robust among many other things - characteristics that spaceflight requires, according to Lohn.

The Office of Exploration Systems at NASA Headquarters, Washington, is funding development of NASA Evolutionary software. Detailed information is on the Internet at:

http://ic.arc.nasa.gov/projects/esg

Space Technology 5 satellite details are on the Internet at:

http://nmp.jpl.nasa.gov/st5

Publication-size images and an on-line video are available on the World Wide Web at:

http://amesnews.arc.nasa.gov/releases/2004/antenna/antenna.html

-end-"

4041. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 01:08:13 UTC
From: John Smith <pani@yahoo.com>
Message-ID: <2j70fnFt9hgnU1@uni-berlin.de>
Source record: 93397

Sorry, but it is just a stinking paperclip on a sma.
Not much effort in that. Guess you want a patent.
Bet it doesn't fly either.

"Fractenna" <fractenna@aol.com> wrote in message
news:20040614200843.16591.00001069@mb-m15.aol.com...
> From NASA Ames Press release:
>
> <snip AI sales>

4042. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 01:40:54 UTC
From: MikeN <mnewman@clear.net.nz>
Message-ID: <moksc0duencb8uqna9pfq19kiencslbadb@4ax.com>
Source record: 93395

On Sat, 12 Jun 2004 08:35:42 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Roy Lewallen wrote:
>>I'd also like to add that the induced current isn't unpredictable, as
>>you stated. It has to follow rules like all other physical phenomena,
>>so it's entirely predictable.

Remainder deleted

Three questions emerge from my foggy brain wrt to a current project.

1. What sort of choke loading on a feed line would be most
effective at 70 cm, ferrite or coil wound from coax.

2. Could ferrite loading at a feed point take the place of say a
1/4 wave sleeve balun matching the unbalanced coax feed to a
centre-fed dipole element.

3. What grade of ferrite bead would best be useful at 70cm.

Thanks in advance.

MikeN ZL1BNB

4043. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 01:58:36 UTC
From: Evad <evad@dodgeit.com>
Message-ID: <2j73eiFu3jasU1@uni-berlin.de>
Source record: 93398

"John Smith" <pani@yahoo.com> wrote in message
news:2j70fnFt9hgnU1@uni-berlin.de...
> Sorry, but it is just a stinking paperclip on a sma.
> Not much effort in that. Guess you want a patent.
> Bet it doesn't fly either.
>

Well, when you can get 18db gain out of a paper clip VHF antenna, you done
good.
AI is better than real intelligence!

Evad

4044. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 02:14:53 UTC
From: N4LQ <n4lq@iglou.com>
Message-ID: <40ce5b95$1_1@news.iglou.com>
Source record: 93400

Then how come it doesn't give us 20db of forward gain? I mean, we blocked 20db off the back and applied it to the front and we still only have 5db of forward gain. Where did the extra 15db go?
I think those are typical figures for most triband beams I've seen advertised. 5db forward and 20db front to back. I would expect the guy on the other end to hear me by 5db stronger than a dipole and my beam to reject signals by 20db off the back. Well let's say the guy on the back side of my beam hears me at S9 then I rotate the beam around to him. My signal then goes up 20db. Right? Is that 20db of gain? Well in comparison to the other way, yes but in comparison to a dipole, no since the dipole would have been only 5db less than the beam in the favored direction. Now the dipole would be 15 db stronger than the signal off the beam's back end since it has no front to back ratio but it's only 5db down from the beam in the forward direction. Thus we conclude the dipole produces 15db more signal than the beam. Impossible.
Something just doesn't add up.

--
Steve N4LQ
"Fractenna" <fractenna@aol.com> wrote in message
news:20040614191139.16160.00001226@mb-m15.aol.com...
> >
> >Say a beam has 5db forward gain and a front to back difference of 20db.
> >Where does the extra 15db go? I mean, if you loose 20db off the back on
> >transmit, I assume you also loose that much on receive. What happened to
the
> >20db? Did it burn up as heat? What am I missing here?
> >
> >--
> >Steve
> >
>
> The analogy to a balloon is pretty apt.
>
> Squeeze and pinch the back so only about 1/50 th of the air that used to
be
> there is left. The rest gets distributed towards the front, and makes the
front
> side more than a factor of two bigger. But the ratio of the amount of air
in
> the front to that of the back is very big--say, 100.
>
> That's a 20dB F/B.
>

> Hope that helps.
>
> 73,
> Chip N1IR
>
>
>
>

4045. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 02:17:19 UTC
From: fractenna@aol.com
Message-ID: <20040614221719.16160.00001246@mb-m15.aol.com>
Source record: 93399

>Well, when you can get 18db gain out of a paper clip VHF antenna, you done
>good.
>AI is better than real intelligence!
>
>Evad

Evad,

I believe the gain comes from the effective aperture of the back-reflector --which is just a disc. The shaping of the 'paperclip' predominantly is used to affect polarization and bandwidth. It does look like a paperclip. I'm sure it isn't.

In all honesty, this particular problem is not complex and does not require 120 computers to get an answer. I suspect that at least some of the best candidates emerged in just a few minutes of CPU time. It takes about a minute or less to run NEC on each model,with a simple mesh back reflector for the disc.

73,
Chip N1IR

4046. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 02:23:52 UTC
From: fractenna@aol.com
Message-ID: <20040614222352.16591.00001080@mb-m15.aol.com>
Source record: 93401

>Then how come it doesn't give us 20db of forward gain?

It does, if you (incorrectly) define forward gain as being relative to the backside.

As I said, the signal (that) now no longer goes out the back gets its power---redistributed--and that redistribution is like pushing the air forward. It doesn't -- all-- get concentrated in one spot up front, thus the forward gain isn't 20 dB.

73,
Chip N1IR

4047. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 02:35:25 UTC
From: "NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net>
Message-ID: <Nftzc.2729$%s5.702@newssvr27.news.prodigy.com>
Source record: 93402

Steve- you are compairing apples to onions! Why?? Simply, there is no
absolute relationship between forward gain, in dB, and the front/Back ratio
(also in dB)! The forward GAIN is relative to either a DIPOLE , or an
Isotropic point source! If you were to place a dipole at the same location,
as the beam
(for arguements sake), the signal would be 5 dB louder on the beam, then on
a dipole. And an isotropic
point source (really, an immaginary "antenna", is aprox. 1.8 db dB below a
dipole (beam would be aprox. 6.8 dBi rated) The front to back ratio, on
the other hand, simply means that the signal off the front of the
beam will be 20 dB LOUDER (for want of a better word) than it will be
recieved, if the antenna is turned 180 degrees! Hope this explains it!
that is how any gain antenna works, by takeing power from an
unwanted direction, and concentrateing it in a desired direction! Jim NN7K

--
No trees were killed in the sending of this message. However, a large number
of electrons were terribly inconvenienced !

" People who never get carried away, should be! " --- Malcom Forbes

"N4LQ" <n4lq@iglou.com> wrote in message news:40ce5b95$1_1@news.iglou.com...
> Then how come it doesn't give us 20db of forward gain? I mean, we blocked
> 20db off the back and applied it to the front and we still only have 5db
of
> forward gain. Where did the extra 15db go?
> I think those are typical figures for most triband beams I've seen
> advertised. 5db forward and 20db front to back. I would expect the guy on
> the other end to hear me by 5db stronger than a dipole and my beam to
reject
> signals by 20db off the back. Well let's say the guy on the back side of
my
> beam hears me at S9 then I rotate the beam around to him. My signal then
> goes up 20db. Right? Is that 20db of gain? Well in comparison to the other
> way, yes but in comparison to a dipole, no since the dipole would have
been
> only 5db less than the beam in the favored direction. Now the dipole would
> be 15 db stronger than the signal off the beam's back end since it has no
> front to back ratio but it's only 5db down from the beam in the forward
> direction. Thus we conclude the dipole produces 15db more signal than the
> beam. Impossible.
> Something just doesn't add up.
>
> --
> Steve N4LQ

> "Fractenna" <fractenna@aol.com> wrote in message
> news:20040614191139.16160.00001226@mb-m15.aol.com...
> > >
> > >Say a beam has 5db forward gain and a front to back difference of 20db.
> > >Where does the extra 15db go? I mean, if you loose 20db off the back on
> > >transmit, I assume you also loose that much on receive. What happened
to
> the
> > >20db? Did it burn up as heat? What am I missing here?
> > >
> > >--
> > >Steve
> > >
> >
> > The analogy to a balloon is pretty apt.
> >
> > Squeeze and pinch the back so only about 1/50 th of the air that used to
> be
> > there is left. The rest gets distributed towards the front, and makes
the
> front
> > side more than a factor of two bigger. But the ratio of the amount of
air
> in
> > the front to that of the back is very big--say, 100.
> >
> > That's a 20dB F/B.
> >
> > Hope that helps.
> >
> > 73,
> > Chip N1IR
> >
> >
> >
> >
>
>

4048. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 02:43:17 UTC
From: "NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net>
Message-ID: <9ntzc.2734$gw5.1800@newssvr27.news.prodigy.com>
Source record: 93403

Oh, and one thing NOT mentioned, about the Isotropic-- It is defined to radiate equally well in ALL directions-- It has NO Front to Back Ratio (if it ever could exist!) This is why it has a loss in comparison to a dipole , which is directional parallel to it, and has great loss perpendicular to it ! -- Jim

4049. Re: Non-radiating Feedlines?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 03:29:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10csr8jc233d624@corp.supernews.com>
Source record: 93404

MikeN wrote:

> Three questions emerge from my foggy brain wrt to a current project.
>
> 1. What sort of choke loading on a feed line would be most
> effective at 70 cm, ferrite or coil wound from coax.

Probably equally effective, although it might be tricky to get a coax coil to resonate at 70 cm, while a ferrite core choke, which is inherently broadband, would be easy.

> 2. Could ferrite loading at a feed point take the place of say a
> 1/4 wave sleeve balun matching the unbalanced coax feed to a
> centre-fed dipole element.

Yes. A properly constructed sleeve balun can be made to have higher impedance, but in the application you describe, a ferrite core choke would be perfectly adequate.

> 3. What grade of ferrite bead would best be useful at 70cm.

I'd probably use type 43. That's a Fair-Rite designation, but ferrites from other vendors with initial permeability of 700-800 or so would work equally well. Cores from that material are readily available in a wide variety of shapes and sizes. Some of the 60 series ferrites would also probably be adequate at that frequency.

I suggest you visit the Fair-Rite website and take a look at the impedances of various cores at the frequency of interest, and choose ones that get you the impedance you need. (Unless you're running a lot of power, you don't need to worry about whether the impedance is resistive or reactive -- just look at its magnitude.) You can place cores on the outside of the coax and get an imedance that's the product of the number of cores and the impedance of one core. Or you can wind the coax in multiple turns on a single core and get N^2 times the single turn impedance, where N is the number of turns. 500 - 1000 ohms or so of impedance is adequate for most applications. If you have an antenna analyzer that operates at that frequency, you can measure it. Otherwise, just go by the manufacturer's stated value of impedance at the frequency of interest.

Roy Lewallen, W7EL

4050. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 03:32:32 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ce6f06_5@corp.newsgroups.com>
Source record: 93405

Dave wrote:
> "Tdonaly" <tdonaly@aol.com> wrote:
>
>>Cecil wrote,
>>>On the contrary, if one assumes same-cycle reflections, the reflection
>>>model works perfectly. Why wouldn't a 50 ohm source looking into a 100
>>>ohm resistor suffer an immediate reflection (energy rejection)? :-)

>>Why wouldn't it, indeed.

> if there are no components that introduce a time delay it would.

All real-world components introduce a time delay.

> so no
> transmission lines allowed... hence no reflections. and you are back to a
> simple lumped resistor problem.

RF energy travels at the speed of light. For the length of time it
takes for the energy to reach the resistor and reflect back to the
source, the source sees 50 ohms. That length of time is not zero.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4051. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 03:36:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10csrmlco3le3fe@corp.supernews.com>
Source record: 93406

N4LQ wrote:

> Then how come it doesn't give us 20db of forward gain? I mean, we blocked
> 20db off the back and applied it to the front and we still only have 5db of
> forward gain. Where did the extra 15db go?
>. . .
> Something just doesn't add up.

My car goes about 100 MPH (I assume) in the forward direction, but only
about 15 MPH in reverse. When I'm in reverse, where did the other 85 MPH go?

The answer to that question is about the same as the answer to yours, so
when you figure out the answer to my car question, you'll have the
answer to your antenna question.

Roy Lewallen, W7EL

4052. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 03:39:46 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40ce70b7$1_5@corp.newsgroups.com>
Source record: 93407

N4LQ wrote:
> Say a beam has 5db forward gain and a front to back difference of 20db.
> Where does the extra 15db go?

In an infinite number of other directions besides that one
single front direction.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4053. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 03:44:07 UTC
From: Da Shadow <DAS@cat.net>
Message-ID: <bguzc.4044$0z6.3664@fed1read07>
Source record: 93408

The beam width is not 1 degree -- more like 35 degrees + so the energy is spread over that area
Narrow the beamwidth and the gain goes up

--
Lamont Cranston

The Shadow Knows
"N4LQ" <n4lq@iglou.com> wrote in message news:40ce5b95$1_1@news.iglou.com...
> Then how come it doesn't give us 20db of forward gain? I mean, we blocked
> 20db off the back and applied it to the front and we still only have 5db of
> forward gain. Where did the extra 15db go?
> I think those are typical figures for most triband beams I've seen
> advertised. 5db forward and 20db front to back. I would expect the guy on
> the other end to hear me by 5db stronger than a dipole and my beam to reject
> signals by 20db off the back. Well let's say the guy on the back side of my
> beam hears me at S9 then I rotate the beam around to him. My signal then
> goes up 20db. Right? Is that 20db of gain? Well in comparison to the other
> way, yes but in comparison to a dipole, no since the dipole would have been
> only 5db less than the beam in the favored direction. Now the dipole would
> be 15 db stronger than the signal off the beam's back end since it has no
> front to back ratio but it's only 5db down from the beam in the forward
> direction. Thus we conclude the dipole produces 15db more signal than the
> beam. Impossible.
> Something just doesn't add up.
>
> --
> Steve N4LQ
> "Fractenna" <fractenna@aol.com> wrote in message
> news:20040614191139.16160.00001226@mb-m15.aol.com...
> > >
> > >Say a beam has 5db forward gain and a front to back difference of 20db.
> > >Where does the extra 15db go? I mean, if you loose 20db off the back on
> > >transmit, I assume you also loose that much on receive. What happened to
> the
> > >20db? Did it burn up as heat? What am I missing here?
> > >
> > >--
> > >Steve
> > >

> >
> > The analogy to a balloon is pretty apt.
> >
> > Squeeze and pinch the back so only about 1/50 th of the air that used to
> be
> > there is left. The rest gets distributed towards the front, and makes
the
> front
> > side more than a factor of two bigger. But the ratio of the amount of
air
> in
> > the front to that of the back is very big--say, 100.
> >
> > That's a 20dB F/B.
> >
> > Hope that helps.
> >
> > 73,
> > Chip N1IR
> >
> >
> >
> >
>
>

4054. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 03:47:32 UTC
From: L G <rolf183@yahoo.com>
Message-ID: <2j79qdFu67klU1@uni-berlin.de>
Source record: 93409

"Fractenna" <fractenna@aol.com> wrote in message
news:20040614221719.16160.00001246@mb-m15.aol.com...
> >Well, when you can get 18db gain out of a paper clip VHF antenna, you
done
> >good.
> >AI is better than real intelligence!
> >
> >Evad
>
> Evad,
>
> I believe the gain comes from the effective aperture of the back-reflector
> --which is just a disc. The shaping of the 'paperclip' predominantly is
used to
> affect polarization and bandwidth. It does look like a paperclip. I'm sure
it
> isn't.
>
> In all honesty, this particular problem is not complex and does not
require
> 120 computers to get an answer. I suspect that at least some of the best
> candidates emerged in just a few minutes of CPU time. It takes about a
minute
> or less to run NEC on each model,with a simple mesh back reflector for the
> disc.
>
> 73,
> Chip N1IR

Agree Chip. I suspect it is a feed to a parabolic or spherical to get to
18 dB.
It is the amount of aperature to intercept 18 dBi, and that is bigger in
diameter, or
a long slow wave structure. Yes, the laws of Math and physics apply --only
so much gain with a cubic inch in VHF,-- in spite of any AI approch.
Helix has been around since the 30's- 40's, I have a Quartz loaded helix for
10 GHz used
on spacecraft, bout a cubic inch. But the AI stuff, what a waist of tax
money on this kind of project, what happened to Off the Shelf?.
What bothers me is the spunup hype on AI such as "millions of designs" in a
cubic inch, right.
Anyone involved with AI knows it gets into trouble all the time, must be
patched and we make the rules it follows for evaluations.

4055. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 05:14:52 UTC
From: tdonaly@aol.com
Message-ID: <20040615011452.04221.00000745@mb-m25.aol.com>
Source record: 93410

Dave wrote,
>>
>
>if there are no components that introduce a time delay it would. so no
>transmission lines allowed... hence no reflections. and you are back to a
>simple lumped resistor problem.
>

Maybe, but don't tell that to the analytical types. Zero length transmission lines are part of the stock in trade of some people who find the concept useful.
73,
Tom Donaly, KA6RUH

4056. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 05:18:03 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <eEvzc.71115$My6.63758@fed1read05>
Source record: 93411
Cross-posted to: rec.radio.amateur.swap,alt.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

<kh2d@my-deja.com> wrote in message
news:40cdf895.74809310@newsgroups.bellsouth.net...
> On Mon, 14 Jun 2004 10:26:51 -0500, "*" <*@*.com> wrote:
>
> >This looks FAKE, so you may want to go to the FCC site directly instead
of
> >using his link.
> >Message-ID looks forged as well
> >Could be gathering addresses for spamming.
>
> Can you say P A R A N O I D ????
>
> The link on the guy's web site to file a comment IS the FCC's web
> site:
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
>
> The instructions on the ARRL web site to file a comment take you to
> the exact same web site.
>
> ARRL sez:
>
> Goto http://www.fcc.gov/cgb/ecfs/
>
> and click SUBMIT A FILING
>
> which takes you to:
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
>
> Turn in your badge, Dick Tracy, you are getting paranoid in your
> old age. Anybody who wants to send HAM SPAM can get thousands
> of email addresses from QRZ.com, no need to collect them one
> at a time by having people fill out forms.
>
> 73, Jim KH2D

Speaking as one who is fighting spyware on my computer, I vote WITH
the guy who's suspicious of a strange url that shows up in a newsgroup.
Use of strange urls is hardly confined to spammers.

4057. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 05:40:58 UTC
From: tdonaly@aol.com
Message-ID: <20040615014058.04221.00000746@mb-m25.aol.com>
Source record: 93412

Cecil wrote,
>
>RF energy travels at the speed of light. For the length of time it
>takes for the energy to reach the resistor and reflect back to the
>source, the source sees 50 ohms. That length of time is not zero.
>--
>73, Cecil http://www.qsl.net/w5dxp
>
>

Even though the length of time is not zero, it's close enough
so that the theorems of network analysis work (at least
at the lower frequencies). Of course, if you want to do a reflection analysis
on a
couple of resistors, each of which is only a minute fraction of
a wavelength long, well, it's a free country. S-parameters assume
reflections and such, and are very useful to the people who use them,
but, as an intellectual tool, it doesn't matter whether there are any real
reflections or not as long as the answers come out right. They
don't really prove reflections in and of themselves, anyway, since it's hard to

prove something based on the assumption that it's true. (I assume it, therefore

it's true.)
73,
Tom Donaly, KA6RUH

4058. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 05:51:56 UTC
From: tdonaly@aol.com
Message-ID: <20040615015156.04221.00000747@mb-m25.aol.com>
Source record: 93413

Cecil wrote,
>
>N4LQ wrote:
>> Say a beam has 5db forward gain and a front to back difference of 20db.
>> Where does the extra 15db go?
>
>In an infinite number of other directions besides that one
>single front direction.
>--
>73, Cecil http://www.qsl.net/w5dxp
>

Haven't you ever heard of the law of the conservation of
decibels, Cecil? :-)
73,
Tom Donaly, KA6RUH

4059. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 06:10:25 UTC
From: yea right <spam@spam.spam>
Message-ID: <pan.2004.06.15.06.11.37.621520@spam.spam>
Source record: 93414
Cross-posted to: rec.radio.amateur.swap,alt.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

On Mon, 14 Jun 2004 22:18:03 -0700, Sal M. Onella wrote:

> <kh2d@my-deja.com> wrote in message
> news:40cdf895.74809310@newsgroups.bellsouth.net...
>> On Mon, 14 Jun 2004 10:26:51 -0500, "*" <*@*.com> wrote:
>>
>>
> Speaking as one who is fighting spyware on my computer, I vote WITH the
> guy who's suspicious of a strange url that shows up in a newsgroup. Use
> of strange urls is hardly confined to spammers.

You should look at Linux or Mac so you can regain the use of your
computer. You should own your computer and not vis-versa!

;-)

Here is the webpage in plain ASCII text with a link to the FCC website.
Please, making a comment will only take a few minutes.

/***/

The FCC has extended the comment period for BPL. If you value radio, this
may be the last and only chance to have your voice heard to stop BPL from
destroying your hobby. The FCC has extended the comment period for BPL.

It is VERY simple to file a FCC comment. Click the link below and enter

04-37

in box #1 (proceeding number) and fill in the blanks. The simplest way to
comment is to type your comment into the box on the bottom of the form.
Sample comment below.

http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi

If you see fit, please post this to as many portent groups as possible
because numbers count!

More info at http://www.arrl.org/news/stories/2004/02/12/5/?nc=1

If you can't think of any thing to type or wish to make this as painless
as possible, you can cut-n-paste the comment I typed below.

/*****************************/

In Writing, I wish to persuade the FCC from allowing BPL to be
implemented. The destruction or at the least, deterioration of the
shortwave bands is not only a violation of ITU laws that protect

international broadcasters from interference and jamming, it will be destroying many people's life hobby. Amateur radio will be reduced to users with high-power amplifiers and large antennas. Emergency communications will be hindered to levels directly responsible for the loss of life. Also, this will hinder military HF comms reducing national security

There are many technologies that make BPL unnecessary. BPL will never be able to carry the high bandwidth demands for mass distribution of video much less the up-and-coming HDTV.

Thank You!

4060. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 09:19:07 UTC
From: HaveHFWillTravel <havhfwilltravel@anyone.net>
Message-ID: <aaftc0ln7776lgl8aeee6t4fvs802taohr@4ax.com>
Source record: 93415

Your First problem is that you went to a CB group to ask that kind of question. What were you thinking? You will have to match the antenna to bring the feed down to 50 ohms. With a properly matched antenna you should get the full 4 watt legal limit on 11 meters.
KG4CYB
On Sun, 13 Jun 2004 22:53:49 -0500, wildboy74@webtv.net (g g) wrote:

>i wont to build a dipole ant for 10 meters can i use tv coax .or do i
>need to use rg.58

4061. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 10:56:51 UTC
From: fractenna@aol.com
Message-ID: <20040615065651.05741.00000006@mb-m05.aol.com>
Source record: 93416

>Agree Chip. I suspect it is a feed to a parabolic or spherical to get to
>18 dB.
>It is the amount of aperature to intercept 18 dBi, and that is bigger in
>diameter, or
>a long slow wave structure. Yes, the laws of Math and physics apply --only
>so much gain with a cubic inch in VHF,-- in spite of any AI approch.
>Helix has been around since the 30's- 40's, I have a Quartz loaded helix for
>10 GHz used
>on spacecraft, bout a cubic inch. But the AI stuff, what a waist of tax
>money on this kind of project, what happened to Off the Shelf?.
>What bothers me is the spunup hype on AI such as "millions of designs" in a
>cubic inch, right.
>Anyone involved with AI knows it gets into trouble all the time, must be
>patched and we make the rules it follows for evaluations.
>

Hi LG,

There is great value in automatic design. I just don't think this is the best one to showcase. Just the tech support for 120 computers in a room is probably far more than it costs to get the design commercially. Commercial vendors have come along much, much further than what is described here; that design could have been delivered at a fraction of the cost.

NASA has taken a great initiative as a fostering agency on evolutionary design, but the uncomfortable issue of :'what's NASA doing in the antenna business?' does come to mind from this example.

Now if they were able to design an optimized spacecraft with this tool, that's a different story. The tool would match the challenge and the importance of the problem.

73,
Chip N1IR

4062. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 11:15:16 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40cedb7b_5@corp.newsgroups.com>
Source record: 93417

Tdonaly wrote:
> Dave wrote,
>>if there are no components that introduce a time delay it would. so no
>>transmission lines allowed... hence no reflections. and you are back to a
>>simple lumped resistor problem.
>>
> Maybe, but don't tell that to the analytical types. Zero length transmission
> lines are part of the stock in trade of some people who find the concept
> useful.

At 3 GHz, one inch of wire is close to 1/4WL. :-)
12*984'/3000 = 3.936"
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4063. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 11:24:51 UTC
From: fractenna@aol.com
Message-ID: <20040615072451.05916.00000004@mb-m05.aol.com>
Source record: 93418

>what happened to Off the Shelf?.
>>What bothers me is the spunup hype on AI such as "millions of designs" in a
>>cubic inch, right.
>>Anyone involved with AI knows it gets into trouble all the time, must be
>>patched and we make the rules it follows for evaluations.

It isn't a miracle tool. It definitely works. But be sure the right tool is used for the task:-) From first hand experience, this type of tool works extremely well--but it's only as good as the user. You simply cannot press a button and then come back with all the problems solved. It is interactive. It requires intervention and interaction along the way--if you want something practical to emerge. Or unless the problem is simple to start with.

In any case, putting a public focus on this is helpful, I just wish there was a better example given. The analogy to a 'paperclip' had already been made; that's not the best one to be labelled as!:-)

73,
Chip N1IR

4064. Radiofence Pet Containment System Radio signal shield

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 12:03:46 UTC
From: john@katy.com
Message-ID: <e0e64303.0406150403.6ec0c8ac@posting.google.com>
Source record: 93419

I need to shield radio emmisions from a 5' segment of our dog's radio fence (http://radiofence.com) to let the dog past an area in the garage - other routes I've considered won't work.

I'm thinking running the line line thru a copper pipe will get the job done.

The normal method of wrapping two legs of the run around itself won't work where I need the shield.

Thoughts, comments etc ?

4065. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 12:20:06 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2j87raFun0nqU1@uni-berlin.de>
Source record: 93420

RE: Below

One method of eliminating* sidelobes from an array is to use 1/2 lambda element spacing and in-phase, binomial power distribution to the elements.

This has been done in FM broadcast transmit arrays to reduce radiation levels on the ground immediately adjacent to the tower. Paper 5 at http://rfry.org shows some of the considerations for its use. Paper 10 at the same site is a slide show wherein slides 20 and 23 also deal with this.

R. Fry

* in free-space theory, anyway

"David Harper" <achilles03@hotmail.com> wrote
>I believe you didn't fully understand my question: How do the other side
>lobes get reduced and/or eliminated? Theoretically, in some phased
>array antenna configurations, some lobes have an undesirably high
>a gain. I was wondering what filters / engineering work arounds were
>used to mitigate this. Other posts have adequately answered this
>question, however. Thanks anyway.

4066. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 13:21:46 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406150521.381683c3@posting.google.com>
Source record: 93271

fractenna@aol.com (Fractenna) wrote in message
news<20040614072013.08293.00001036@mb-m12.aol.com>...
> >You've copy-pasted one paragraph of one of this guy's personal
> >comments on the K1DFT thing into something it's not in order to suit
> >your own personal agenda(s).
>
> Hi Brian,
>
> Nice to hear from you.
>
> The ARRL NE Convention at Boxboro is planning a two hour forum for Rob
> Vincent's work. Perhaps you might present an example where a 'new' technical
> subject has been given that much focus at an ARRL sponsored event?

I don't follow any of it. K4WGE made the definitive comment on this
one. "Open podiums gratis: Do as you will with 'em." So K1DFT is
taking advantage of the offer. Whoopie: So what?

> I am of the opinion that it is proper and fitting to have this
venue as a forum
> for Rob's work, but the time devoted would appear to indicate some sort of
> point of view, don't you think?

No. See K4WGE post. All 30 sessions are two hours long. I could get
two hours. You could get two hours. Moses could get two hours.

> Is there, for example, a separate talk by W8JI
> telling us why the Vincent claims are not accurate? Balance would be very
> nice. That is my opinion; yours may differ.

I'm sure the senior antenna gurus will provide plenty of "balance" if
K1DFT discloses his design details at the upcoming session. Until then
balance ain't gonna happen.

> Also, your point is well taken. It would thus appear that perhaps--if there IS
> such a strong interest from the members--

There's a huge difference between idle curiosity and genuine technical
interest. K1DFT's PR apparatus has managed to stir up a huge bunch of
the former at the Popular Science level amongst the membership. It's
gone far beyond just ham radio, it's also popping up all over the
physics and science junkies groups, websites and blogs. So did a
couple 200 MPG carburetor type "inventions".

> that the ARRL do a short, factual, and
> newsy piece on their web site. Otherwise, in an ARRL sponsored event, and an
> ARRL sponsored web page, there is certainly a point of view so cast, don't you

> think, Brian?

No. The posting of a place/date/time of a specific presentation is
simply a news announcement, nothing more, nothing less. Which is the
League doing it's job again.

> I do have a personal point of view, Brian, that is frankly, quite well informed
> and objective. It is not an agenda. I am not an activist.The ARRL has done many
> good things, and it has done others that some feel are more activist oriented,
> and--in my opinion-- not fostering new technologies such as UWB; cognitive
> radio; and of course, BPL.

Uh-huh. Lemme guess: Hams need to dive into cognitive radio so that
ham radio and BPL can live happily forever together in the 2-80Mhz
spectrum. Got it, yessir, we gotta do that. Maybe when pigs fly.

> Hams, in recent years, have little (if any) to show
> in being part of the technological revolution in wireless that has occured in
> the last decade.

(1) The commercials have long since surpassed the abilities of the
basement tinkerers to add anything of consequence to the related
technologies. Why whould Joe Ham futz around with his soldering iron
when he can walk out of a Wal-Mart with a shopping bag full of
wireless technology *and* change from his hunderd dollar bill? (2) I
personally know dozens of hams and I don't know one who is bemoaning
the lack of any type of high-speed comms in the ham bands. The FCC
bent over backward a few years ago to provide space for experimental
spread spectrum ops in the 70 cm band. TAPR launched into a
collaborative SS hardware development effort seven or so years ago.
Nothing. Nada. Zip, there hasn't been a single spread spectrum QSO yet
that I've heard about.

Translation: Meager to nil real interest amongst the proponents,
potential developers and the potential users of wide modes despite the
ongoing volume of whining about the lack of ham development work in
this field.

> It would be a shame if the DLM designs of Vincent were used
> (as a counterexample) in that context for PR sake by the ARRL or anyone
> else--

Makes no sense.

> if, and until, the claims are verified and the technology has been
> demonstrated to offer NEW and UNIQUE benefits.

I agree with that and I don't see where the ARRL isn't also in
agreement.

> I speculate that we will see a full, front page article on the wonders of the
> DLM antenna in the QST September issue, to coincide with the Boxboro ARRL
> Convention. Of course, that COULD be construed as an ARRL 'agenda', Brian.
> And, of course, my opinions may prove to be only partially justified here, and

> maybe totally wrong. Who knows-)?

Calm down Son, you're spring is wound too tight again.

> Brian, do you have a technical opinion on the claims of the Vincent DLM
> technology? I appreciate that you may wish to wait for more data.

No I don't have a "technical opinion" on it, there's not enough
technical info available on the thing to even start to formulate an
engineering opinion. What I do have is a healthy dose of skepticism
and I'll stick with it until such times as this magic monopole has
been thru a collection of independent tests and peer reviews.

I'm too busy to mess with this further = Two-Way exchange over.

'Bye.

>
> 73,
> Chip N1IR

w3rv

4067. source for solid copper #10 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 15:04:34 UTC
From: John Shadle <shadle@email.unc.edu>
Message-ID: <Pine.A41.4.44+UNC.0406151103310.36000-100000@login0.isis.unc.edu>
Source record: 93272

I'm trying to complete an antenna project and was wondering if anyone knew
of a source for bare, solid copper #10 AWG.

Thanks in advance,
-john, W4PAH

4068. Re: source for solid copper #10 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 15:20:18 UTC
From: jimp@specsol-spam-sux.com
Message-ID: <can43i$2va$1@mail.specsol.com>
Source record: 93273

John Shadle <shadle@email.unc.edu> wrote:
> I'm trying to complete an antenna project and was wondering if anyone knew
> of a source for bare, solid copper #10 AWG.

> Thanks in advance,
> -john, W4PAH

Local hardware store.

--
Jim Pennino

Remove -spam-sux to reply.

4069. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 15:48:06 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406150748.f445d0@posting.google.com>
Source record: 93274

achilles03@hotmail.com (David Harper) wrote in message
news:<fef44ceb.0406140806.5752ca8@posting.google.com>...
> I was wondering what the general relationship between frequency and
> its ability to transmit through various materials? For instance, 1GHz
> and 1MHz obviously transmit differently through materials. I'm
> curious as to what material properties are involved (i.e. dielectric
> constant, density, etc?)
>
> The main reason for this questions is I'm wondering how well 1+ GHz
> (GPS) signals transmit through about 1.5 inches of expanded
> polystyrene (styrofoam).
>
> Thanks in advance for any insight!
> Dave

Thanks everyone for all the info! That was definately educational and
answered my quesiton.

Dave

4070. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 15:48:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jg6uc0hflufmnn373boipin7g1dbj29up8@4ax.com>
Source record: 93275

On Tue, 15 Jun 2004 06:15:16 -0500, Cecil Moore <w5dxp@hotmail.com>
wrote:
>At 3 GHz, one inch of wire is close to 1/4WL
At 3 GHz nobody uses wire.

4071. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 15:51:13 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406150751.3e411d82@posting.google.com>
Source record: 93276

achilles03@hotmail.com (David Harper) wrote in message
news:<fef44ceb.0406121543.2cb48211@posting.google.com>...
> I had a simple question in regards to phased array antenna patterns.
> If a phased array is trying to send a narrow beam in a specific
> direction, how do the other side lobes get reduced and/or eliminated?
> Are the individual antenna transmitters/elements not omnidirectional
> themselves? If not, what are the characteristics of their patterns?
>
> I ask this because I'm trying to understand how tracking radars can
> send narrow beams in the desired direction without significant
> secondary lobes to interfere with returns from the desired lobe.
>
> Thanks in advance for any insight!
> Dave

Thanks for all the responses people. I appreciate it!

Dave

4072. Re: source for solid copper #10 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 16:02:53 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <7a7uc05lhefovkhmidc6c3l7pcehllnm97@4ax.com>
Source record: 93277

On Tue, 15 Jun 2004 11:04:34 -0400, John Shadle <shadle@email.unc.edu>
wrote:

>I'm trying to complete an antenna project and was wondering if anyone knew
>of a source for bare, solid copper #10 AWG.
>
Home Depot or any other place that sells building supplies.

Usually sold as grounding wire, often more than one size available.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4073. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 16:11:40 UTC
From: Phil <phil.bradway@verizon.net>
Message-ID: <0dFzc.29836$wi2.20516@nwrdny01.gnilink.net>
Source record: 93278

And then, there are all those side lobes!

Phil

"Da Shadow" <DAS@cat.net> wrote in message
news:bguzc.4044$0z6.3664@fed1read07...
> The beam width is not 1 degree -- more like 35 degrees + so the energy is
> spread over that area
> Narrow the beamwidth and the gain goes up
>
> --
> Lamont Cranston
>
> The Shadow Knows
> "N4LQ" <n4lq@iglou.com> wrote in message
news:40ce5b95$1_1@news.iglou.com...
> > Then how come it doesn't give us 20db of forward gain? I mean, we
blocked
> > 20db off the back and applied it to the front and we still only have 5db
> of
> > forward gain. Where did the extra 15db go?
> > I think those are typical figures for most triband beams I've seen
> > advertised. 5db forward and 20db front to back. I would expect the guy
on
> > the other end to hear me by 5db stronger than a dipole and my beam to
> reject
> > signals by 20db off the back. Well let's say the guy on the back side of
> my
> > beam hears me at S9 then I rotate the beam around to him. My signal then
> > goes up 20db. Right? Is that 20db of gain? Well in comparison to the
other
> > way, yes but in comparison to a dipole, no since the dipole would have
> been
> > only 5db less than the beam in the favored direction. Now the dipole
would
> > be 15 db stronger than the signal off the beam's back end since it has
no
> > front to back ratio but it's only 5db down from the beam in the forward
> > direction. Thus we conclude the dipole produces 15db more signal than
the
> > beam. Impossible.
> > Something just doesn't add up.
> >
> > --
> > Steve N4LQ

> > "Fractenna" <fractenna@aol.com> wrote in message
> > news:20040614191139.16160.00001226@mb-m15.aol.com...
> > > >
> > > >Say a beam has 5db forward gain and a front to back difference of
20db.
> > > >Where does the extra 15db go? I mean, if you loose 20db off the back
on
> > > >transmit, I assume you also loose that much on receive. What happened
> to
> > the
> > > > >20db? Did it burn up as heat? What am I missing here?
> > > > >
> > > >--
> > > >Steve
> > > >
> > >
> > > The analogy to a balloon is pretty apt.
> > >
> > > Squeeze and pinch the back so only about 1/50 th of the air that used
to
> > be
> > > there is left. The rest gets distributed towards the front, and makes
> the
> > front
> > > side more than a factor of two bigger. But the ratio of the amount of
> air
> > in
> > > the front to that of the back is very big--say, 100.
> > >
> > > That's a 20dB F/B.
> > >
> > > Hope that helps.
> > >
> > > 73,
> > > Chip N1IR
> > >
> > >
> > >
> > >
> >
> >
>
>

4074. Re: Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 16:52:08 UTC
From: Jimmy <Gfender@carolina.rr.com>
Message-ID: <YOFzc.52131$tH1.1844346@twister.southeast.rr.com>
Source record: 93279

"Dave Shrader" <david.shrader@comcast.net> wrote in message
news:U%Lyc.35367$HG.5456@attbi_s53...
> David Harper wrote:
>
> > I'm working on a project that involves antennas that appear to be
> > pressurized with nitrogren (approx 10psi). What purpose does this
> > serve? Does it help with transmission properties, gain, etc? It is
> > used on an aircraft, if that is a factor.
> >
> > Thanks in advance!
> > Dave
>
> In addition to the responses already posted, there is at least one other
> possible, I repeat possible, requirement for pressurized waveguides,
> antenna feedpoints, etc. It is to increase the breakdown voltage of the
> local 'atmosphere' at very high power [e.g. megawatts at microwave
> frequencies.]
>
More than possible, It is very common to have arcs in high power radar
equipment if there is moisture in the waveguide.

4075. OT - Harada Auto Antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 17:22:35 UTC
From: munged@address.com
Message-ID: <1087320155.318063@cswreg.cos.agilent.com>
Source record: 93280

Does anyone know if Harada (makers of automobile antennas for
the broadcast bands) is still in business?

Thanks & 73
Don K6LTS (email in qrz.com)

4076. Re: Phased array antenna patterns

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 17:28:28 UTC
From: K7JEB <k7jeb.remove.this@qsl.net>
Message-ID: <2cauc05lsdv265jqd0ujvat7d60klsktr9@4ax.com>
Source record: 93281

On 14 Jun 2004 11:53:37 -0700, (David Harper) wrote:

>Thanks! You know any simple phased array configurations
> that are easy to mathmatically model?...

In a follow-up to your post Roy, W7EL, suggested modeling an array with his **FREE** EZNEC demo. I'll second that motion. EZNEC is well worth learning to use if one is doing any kind of antenna analysis, even back-of-the-envelope guesstimates.

Here's what I would do to get a high-gain array with EZNEC:

Place a large number of 1/10-wavelength wires in a row, end to end, and separated from each other by 1/2 wavelength. Place a current source in the middle of each, up to the maximum number allowed by the EZNEC demo version. Set each current source to 1 amp at zero degrees. Force each wire to consist of only one segment - this makes the current in it uniform. Have EZNEC evaluate the pattern in the same plane as the wires. This is a one-dimensional phased-array.

You can vary the amplitude and phase of the individual current sources to experiment with beam steering. And you can change the spacing for the individual elements out to 1 wavelength and beyond to see what that does. It's a lot of fun to watch what happens.

This should be a relatively easy configuration to write a far-field expression for if you are so inclined. Math never was my strong suite, so I'm out of my element and can't give you much help. (Hey, we're just a bunch of ham-radio operators here).

Have fun!

Jim, K7JEB

4077. WANTED: 2/440 Base/Vert/Gnd Plane & 50' coax

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 17:40:28 UTC
From: abodo@netnitco.net
Message-ID: <8a3dbede.0406150940.3b594dcd@posting.google.com>
Source record: 93282

Greetings: I'm looking for a 2/440 vertical/ground plane/base antenna
with about 50 ft of coax....anyone got one?...tnx &
73's...tony....wa9yoz

4078. Extending a 2.4Ghz phoones range?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 17:42:49 UTC
From: Tesoro <spamme@sympatico.ca>
Message-ID: <aAGzc.24508$7H1.821993@news20.bellglobal.com>
Source record: 93284

I want to know if there is an antenna that I can attach (somehow) to my Siemens 2.4 Ghz phone that will extend the range of the handsets? Basically, I want to be able to visit neighbours with my cordless handset and still be in range. Possible or not?

4079. Re: source for solid copper #10 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 17:52:30 UTC
From: barry <wireguy@nospam.com>
Message-ID: <40CF375C.DE1E8BD@nospam.com>
Source record: 93283

hi john,

Not sure how much you need, try some # 10-2 romex type house wire 25 ' box
at any home depot, lowes or menards, etc. they also cut to length.

Just strip off what you need and plenty for projects.

73 barry

John wrote:

> I'm trying to complete an antenna project and was wondering if anyone knew
> of a source for bare, solid copper #10 AWG.
>
> Thanks in advance,
> -john, W4PAH

4080. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 18:33:25 UTC
From: K7JEB <k7jeb.remove.this@qsl.net>
Message-ID: <0pduc0hsb4qde3r9j779eijmcfpmks2kic@4ax.com>
Source record: 93285

On 15 Jun 2004 02:17:19 GMT, Fractenna wrote:

> In all honesty, this particular problem
> is not complex and does not require
> 120 computers to get an answer. I suspect
> that at least some of the best candidates
> emerged in just a few minutes of CPU time.
> It takes about a minute or less to run NEC
> on each model,with a simple mesh back
> reflector for the disc....

I have my suspicions too, Chip. Perhaps it
took the other 119 computers and 9.9 hours
of runtime to squeek out that last 0.1 dB of
gain. And maybe this is NASA just showing
that they, too, can do a "SETI at Home" kind
of thing.

Jim, K7JEB

4081. Screwdriver mobile antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 18:35:05 UTC
From: Michael Biddiscombe <michael.biddiscombe@ntlworld.com>
Message-ID: <jblzc.173$eM3.27@newsfe1-win>
Source record: 93286

After years of single band mobiling I've decided to invest in a screwdriver antenna. There seem to be 3 of 4 main manufacturers that make these types.
I would be glad of anyone's experience with these antennas.
Thanks
Mike
GW3YKZ

4082. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 18:43:16 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <cang4a$s6k$1@newshost.mot.com>
Source record: 93292

"N4LQ" <n4lq@iglou.com> wrote in message news:40ce5b95$1_1@news.iglou.com...
> Then how come it doesn't give us 20db of forward gain? I mean, we blocked
> 20db off the back and applied it to the front and we still only have 5db
of
> forward gain. Where did the extra 15db go?

Well... you won't handle it like that. dB aren't preserved in this
fashion. Power is...

The balloon analogy it good. Poke it "in" at one point so there is NO
radiation in that direction. The signal in the "poked-in" direction will be
really low or zero or MANY MANY MANY dB down...hundreds.

However, try this as another way to see it:

Imagine an antenna that radiates equally well in all directions AROUND the
antenna like an ideal vertical. It will have SOME signal strength in all
directions, which is the same.

Now, lets imagine another antenna (more complex and let's ignore how) which
only radiated HALF way around, but equally distributed, just like before.
That is, it cuts off all radiation to one side as though it was cut with a
knife -- and re-distributes the "cut-off power to the "good" half.
Nothing to the "bad" half -- everything to the "good" half.

The good half just went up 3dB, right ... twice the power.

The bad half went to zero. or infinity dB.

You don't conserve dB.

Help ???

--
Steve N, K,9;d, c. i My email has no u's.

4083. Re: Nitrogen in horn antennas / waveguides?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 18:46:42 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <cangao$s76$1@newshost.mot.com>
Source record: 93293

```
"Jimmy" <Gfender@carolina.rr.com> wrote in message
news:YOFzc.52131$tH1.1844346@twister.southeast.rr.com...
>
> "Dave Shrader" <david.shrader@comcast.net> wrote in message
> news:U%Lyc.35367$HG.5456@attbi_s53...
> > David Harper wrote:
> >
> > > I'm working on a project that involves antennas that appear to be
> > > pressurized with nitrogren (approx 10psi). What purpose does this
> > > serve? ...Dave
> >
> > ... It is to increase the breakdown voltage ...
> >
> More than possible, It is very common to have arcs in high power radar
> equipment if there is moisture in the waveguide.
>

DRY Nitrogen is always better than the unknown. A phone cable which goes
under Wonder Lake Illinois has a nitrogen tank at one end. DRY Nitrogen is
always better than the muck in this lake too.

--
Steve N, K,9;d, c. i My email has no u's.
```

4084. Re: Radiofence Pet Containment System Radio signal shield

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 18:49:56 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <canggq$s7o$1@newshost.mot.com>
Source record: 93291

"John Schmerold" <john@katy.com> wrote in message
news:e0e64303.0406150403.6ec0c8ac@posting.google.com...
> I need to shield radio emmisions from a 5' segment of our dog's radio
> fence (http://radiofence.com) to let the dog past an area in the
> garage - other routes I've considered won't work.
>
> I'm thinking running the line line thru a copper pipe will get the job
> done.
>
> The normal method of wrapping two legs of the run around itself won't
> work where I need the shield.
>
> Thoughts, comments etc ?

What frequency do these work at?
Is it low and therefore primarily magnetic pickup on the dog?

I'm currently trying to help a friend make an antenna which must be located
inside a metal ring which is blocking the radiation...

--
Steve N, K,9;d, c. i My email has no u's.

4085. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 18:51:23 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <cangjh$s82$1@newshost.mot.com>
Source record: 93290

"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406150748.f445d0@posting.google.com...
> achilles03@hotmail.com (David Harper) wrote in message
news:<fef44ceb.0406140806.5752ca8@posting.google.com>...
> > I was wondering what the general relationship between frequency and
> > its ability to transmit through various materials? For instance, 1GHz
> > and 1MHz obviously transmit differently through materials. I'm
> > curious as to what material properties are involved (i.e. dielectric
> > constant, density, etc?)
> >
> > The main reason for this questions is I'm wondering how well 1+ GHz
> > (GPS) signals transmit through about 1.5 inches of expanded
> > polystyrene (styrofoam).
> >
> > Thanks in advance for any insight!
> > Dave
>
> Thanks everyone for all the info! That was definately educational and
> answered my quesiton.
>
> Dave

It did?

--
Steve N, K,9;d, c. i My email has no u's.

4086. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 19:00:49 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <canh57sct1@newshost.mot.com>
Source record: 93294

"Cecil Moore" <w5dxp@hotmail.com> wrote in message
news:40cedb7b_5@corp.newsgroups.com...
> Tdonaly wrote:
> > Dave wrote,
> >>if there are no components that introduce a time delay it would. so no
> >>transmission lines allowed... hence no reflections. and you are back to
a
> >>simple lumped resistor problem.
> >>
> > Maybe, but don't tell that to the analytical types. Zero length
transmission
> > lines are part of the stock in trade of some people who find the concept
> > useful.
>
> At 3 GHz, one inch of wire is close to 1/4WL. :-)
> 12*984'/3000 = 3.936"
> --
> 73, Cecil http://www.qsl.net/w5dxp
>

Now I get it! (Cecil, that is) LOL

Just like the Civil Defense days... "This is a test. Had it been an actual
response, Cecil would have made an intelligent comment about the real
question". What a "tweeker", is Cecil. What a little devil. (:-)
I'm thinkn' it proves the old adage about the idle mind and a workshop....

73, Steve

P.S. Remember that sea of entropy we were supposed to drown in? Well, upon
closer examination, it turns out to be ignorance.

BTW... This is my comment on the general population, not any specifics
here...

4087. Re: Something for someone to do.

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 19:00:57 UTC
From: Zombie Wolf <zombie489@tds.net>
Message-ID: <D4-dnfRoWeAlyVLdRVn-uQ@giganews.com>
Source record: 93295
Cross-posted to: rec.radio.amateur.antenna,rec.radio.scanner

In case you dont recognize the "fractal" boy, take a look at his address. He got tired of beating his brains out over on rec.radio.amateur.antenna, since everyone filtered the hell out of him, so now he is trying to break new ground here..... Just plonk him, or this could go on for a year....

"O. Epstein" <O_Epstein@att.net> wrote in message news:b9c836fe.0406060627.643fedd6@posting.google.com...
> fractenna@aol.com (Fractenna) wrote in message news:<20040605091216.06192.00000397@mb-m13.aol.com>...
> > >>So, is anyone out there interested in providing a service to all marine band
> > >>DXers/eavesdroppers
> > >
> > Why, exactly, is there a need to 'eavesdrop'? Who, in particular, are you
> > trying to 'eavesdrop' on? How many 'eavesdroppers' would seek such 'service'?
> > >
> > I am confused by your motivations and would be better enlightened with more
> > info in this regard. I ususpect I am not alone in this confusion.
> > >
> > Many thanks,
> > >
> > 73,
> > Chip N1IR
>
> What's it to you? It's perfectly legal. What more do you need to know, and why?

4088. Re: How much voltage on a vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 19:03:24 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <canh5s$po4$1@sparta.btinternet.com>
Source record: 93287
Body handling: HTML body converted to readable text

"Bob Glenn" wrote in message
news:mfeuc099cor5lj93bkta06806d6gq73nht@news.easynews.com...
> On a typical 25 watt 2 meter setup, how much voltage would there be on
> the end of a 1/4 antenna?

==========

25 watts into a 1/4-wave vertical antenna on 2 meters -

Base current about 0.82 amps into 37 ohms,

Volts about 160, measured (if you can) at top of antenna across about 1000
ohms.

Things vary slowly with length-to-diameter ratio of the antenna conductor.

As conductor diameter increases, volts at the end tend to decrease.

Reg, G4FGQ

4089. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 19:13:21 UTC
From: fractenna@aol.com
Message-ID: <20040615151321.04692.00000014@mb-m10.aol.com>
Source record: 93288

>And maybe this is NASA just showing
>that they, too, can do a "SETI at Home" kind
>of thing.
>
>Jim, K7JEB

Remember, Jim: SETI@home has been a failure....

;-)

73,
Chip N1IR

4090. Re: OT - Harada Auto Antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 19:14:27 UTC
From: fractenna@aol.com
Message-ID: <20040615151427.04692.00000015@mb-m10.aol.com>
Source record: 93289

>Does anyone know if Harada (makers of automobile antennas for
>the broadcast bands) is still in business?
>
>Thanks & 73
>Don K6LTS

Yes.

I believe they are not in the US market anymore, but could be wrong. They are
big in other places though.

73,
Chip N1IR

4091. Re: How much voltage on a vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 20:18:44 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <canlj4bgf1@sparta.btinternet.com>
Source record: 93296
Body handling: HTML body converted to readable text

"Bob Glenn" wrote in message
news:jbkuc0htdgh7f2chvpomuj8icdmipa2k4u@news.easynews.com...
> On Tue, 15 Jun 2004 19:03:24 +0000 (UTC), "Reg Edwards"
> wrote:
>
> >
> >"Bob Glenn" wrote in message
> >news:mfeuc099cor5lj93bkta06806d6gq73nht@news.easynews.com...
> >> On a typical 25 watt 2 meter setup, how much voltage would there be on
> >> the end of a 1/4 antenna?
> >
> >==========
> >
> >25 watts into a 1/4-wave vertical antenna on 2 meters -
> >
> >Base current about 0.82 amps into 37 ohms,
> >
> >Volts about 160, measured (if you can) at top of antenna across about
1000
> >ohms.
> >
> >Things vary slowly with length-to-diameter ratio of the antenna
conductor.
> >
> >As conductor diameter increases, volts at the end tend to decrease.
> >----
> >Reg, G4FGQ
> >
>
> Thank you, 1,000 is the accepted value then?

==========

You can please yourself what the accepted value is.

But on the 2 meter band about 1000 ohms is what it actually is.

On the lower frequency bands it runs into several thousand ohms.

As I said, it's a slowly moving function of antenna length-to-diameter
ratio.

But it doesn't matter very much anyway. No need to make a fuss about it.
===
Reg.

4092. Re: How much voltage on a vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 20:43:06 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <10cuo1o20fkjs4f@corp.supernews.com>
Source record: 93297
Body handling: HTML body converted to readable text

```
"Reg Edwards" wrote in message
news:canlj4$bgf$1@sparta.btinternet.com...
>
> "Bob Glenn" wrote in message
> news:jbkuc0htdgh7f2chvpomuj8icdmipa2k4u@news.easynews.com...
> > On Tue, 15 Jun 2004 19:03:24 +0000 (UTC), "Reg Edwards"
> > wrote:
> >
> > >
> > >"Bob Glenn" wrote in message
> > >news:mfeuc099cor5lj93bkta06806d6gq73nht@news.easynews.com...
> > >> On a typical 25 watt 2 meter setup, how much voltage would there be
on
> > >> the end of a 1/4 antenna?
> > >
> > >==============================
> > >
> > >25 watts into a 1/4-wave vertical antenna on 2 meters -
> > >
> > >Base current about 0.82 amps into 37 ohms,
> > >
> > >Volts about 160, measured (if you can) at top of antenna across about
> 1000
> > >ohms.
> > >
> > >Things vary slowly with length-to-diameter ratio of the antenna
> conductor.
> > >
> > >As conductor diameter increases, volts at the end tend to decrease.
> > >----
> > >Reg, G4FGQ
> > >
> >
> > Thank you, 1,000 is the accepted value then?
>
> ============================
>
> You can please yourself what the accepted value is.
>
> But on the 2 meter band about 1000 ohms is what it actually is.
>
> On the lower frequency bands it runs into several thousand ohms.
>
```

> As I said, it's a slowly moving function of antenna length-to-diameter
> ratio.
>
> But it doesn't matter very much anyway. No need to make a fuss about it.
> ===
> Reg.
>
>
That's our Reg, spot on.
Remember, V=Q/C, where V is voltage, Q charge and C capacitance.
73
H.
NQ5H

4093. Antennabravo mobile antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 21:20:05 UTC
From: Jon <jon@portlandbill.co.uk>
Message-ID: <canp66ujl1@news7.svr.pol.co.uk>
Source record: 93298

Has anyone used the above, they look great on the website www.antennabravo.com and not a bad price either if they work. There is one review on eham.net, that is where I heard about them but I would like to know more before commiting myself.

Thanks in advance.

Jon (G2FHF)

4094. Re: How much voltage on a vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 22:43:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <i8uuc0pl7qnm5g4st2vj0om5hour3l88um@4ax.com>
Source record: 93299
Body handling: HTML body converted to readable text

On Tue, 15 Jun 2004 19:44:07 GMT, Bob Glenn
wrote:
>Thank you, 1,000 is the accepted value then?

Hi Bob,

It was derived from a contrivance of math that ignores the loss of radiation resistance. After all, the antenna doesn't exist in a vacuum, and if it did, it would still be surrounded by a medium shorting it out to the tune of 377Ohms.

It's enough to allow that it will bite (the voltage) if you contact it in equally contrived circumstances. Put an NE-2 neon bulb at the end of the antenna to confirm ionizing voltage (60-90V at least). CBers used to do that with their whips with just 5W.

73's
Richard Clark, KB7QHC

4095. Re: Screwdriver mobile antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 22:53:42 UTC
From: Rich <me@thisisnotarealaddress.com>
Message-ID: <18vuc0tvjkrkg43lu5fbu28inqliv8ggmg@4ax.com>
Source record: 93300

On Tue, 15 Jun 2004 19:35:05 +0100, "Michael Biddiscombe"
<michael.biddiscombe@ntlworld.com> wrote:

>After years of single band mobiling I've decided to invest in a screwdriver
>antenna. There seem to be 3 of 4 main manufacturers that make these types.
>I would be glad of anyone's experience with these antennas.
>Thanks
>Mike
>GW3YKZ
>
i've used both a high-sierra and yaseu ATAS antennas and both have
been fine choices. the high-sierra was the first model they
manufactured many years ago. that was on the back of my 1st
motorhome. i now use a Yaesu ATAS-100 motorized/multi-band antenna
and it too works as advertised. the ATAS is smaller and easier to
mount but covers only down thru 40m. the newer high-sierra models
require a more heft mounting solution but can tune down to 160m.

73,
rich, n9dko

4096. Re: How much voltage on a vertical?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 23:01:50 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <10cv05uk2r9a903@corp.supernews.com>
Source record: 93301
Body handling: HTML body converted to readable text

"Richard Clark" wrote in message
news:i8uuc0pl7qnm5g4st2vj0om5hour3l88um@4ax.com...
> On Tue, 15 Jun 2004 19:44:07 GMT, Bob Glenn
> wrote:
> >Thank you, 1,000 is the accepted value then?
>
> Hi Bob,
>
> It was derived from a contrivance of math that ignores the loss of
> radiation resistance. After all, the antenna doesn't exist in a
> vacuum, and if it did, it would still be surrounded by a medium
> shorting it out to the tune of 377Ohms.
>
> It's enough to allow that it will bite (the voltage) if you contact it
> in equally contrived circumstances. Put an NE-2 neon bulb at the end
> of the antenna to confirm ionizing voltage (60-90V at least). CBers
> used to do that with their whips with just 5W.
>
> 73's
> Richard Clark, KB7QHC

And some of us remember before CB.
sigh

4097. Re: Advice on FT-857 and ATAS-120

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 23:37:27 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <iwKdnQCL7ZYVFVLdUSdV9g@ptd.net>
Source record: 93302

"farah nur" <gargaare@yahoo.com> wrote in message
news:257c0775.0406130655.4bcc4937@posting.google.com...
> Gurus,
>
> My brother who is working for an NGO is east africa wants me to buy
> him an HF ham radio where he can communicate with his colleagues in
> other parts of the world. His colleagues use CODAN, but he can't
> afford that brand.

Is your brother a licensed ham? The FT-857 only transmits in the ham bands
and he would require a ham license to use those frequencies.

> A local dealer is recommending that I buy FT-857 with ATAS-120.
>
> Here are my questions?
>
> 1- Is this combination a good fit and how reliable is it?

The FT-857 is a compact HF/6m/2m/70cm radio that puts out 100W
on HF and 6m, 50W on 2m, and 25W on 70cm.

It has the built-in circuitry to control the ATAS-120 for auto-tuning from
40m up
It does not work on 160m or 80m, though the radio does.

I have that radio and antenna installed in my Ford Explorer and it works
well
for a mobile.

However, if he's not going to be operating mobile, wire dipoles at a decent
height will outperform the ATAS-120, and can be built for a number of bands
for far less than the ~$300 price of the ATAS-120.
(If he's going to be operating mobile, the ATAS-120 works well, with the
limitations
of no 160m or 80m, and its cost is less than many other "screwdriver"
antennas and
the necessary adaptor box to make the FT-857 "think" that they are an ATAS
for
autotuning.)

> 2- Can he communicate with other radios as far away as 3000 miles?

One day a couple of months ago, as I was driving back to my home in
Pennsylvania
from a meeting in New Jersey, I worked stations all up and down the US east
coast
on 40m, then switched to 20m and worked a station in Germany, then switched

to
15m and worked a station near San Diego, California ... propagation varies
and he
would need to select the right band for solar conditions, time of day, etc.

> 3- Do I need a duplexer if he is using just the HF band?

No. There are separate ports for HF/6m and for 2m/70m (a pair for those
combinations. If he's not going to use 2m/70cm, he can just leave that port
unconnected (but would have to be reasonably careful not to accidentally
switch to those bands and transmit with no antenna).

On my Ford, I use the ATAS-120 for 40m-6m and have a separate 2m/70cm
antenna on the same kind of mount on the opposite side of the SUV. That
way,
I don't have to wait for the ATAS to autotune between HF and 2m/70cm if I
want to switch between HF and the local repeaters.

> 4- The radio will be mounted on a land cruiser? Where you recommend
> the antena mounted on?

I used a CP-5M "heavy-duty trunk lip/hatchback" mount and put the pair just
behind the leading edge of the top of the rear doors (the Ford is a 4-door).
The ATAS (and most antennas) will work best up high and in the clear. If
there
are roof racks - and if they are metal and solidly grounded to the body of
the
vehicle, that might also be an option.
>
> Many many thanks for your help.

You're welcome ... just remember, the FT-857 only transmits in the ham bands
and your brother will need a ham license if he doesn't already have one - to
use
the ham bands without a license could get him in deep hot water
(confiscation of
the equipment, heavy fines, and maybe even some jail time, depending on the
country ...)

73,
Carl - wk3c

4098. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-15 23:41:07 UTC
From: Eric Oyen - N7ZZT <n7zzt@127.0.0.1>
Message-ID: <pan.2004.06.15.23.41.07.869989@127.0.0.1>
Source record: 93303

On Tue, 15 Jun 2004 19:13:21 +0000, Fractenna wrote:

>> [quoted text muted]
>
> Remember, Jim: SETI@home has been a failure....
>
> ;-)
>
> 73,
> Chip N1IR
I disagree.

define how its a failure?

as far as I am concerned, it succeeded. it demonstrated that we can find
useful data in short periods of time using "distributed processing".

sure, no intelligence was located out among the stars, but then, we still
have only scanned less than 10% of the usable sky.

just because we didn't find it doesn't mean that its not there.

DE N7ZZT
Phoenix, Arizona

--
the difference between intelligence and stupidity is that intelligence
has its limits.

4099. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 00:21:39 UTC
From: fractenna@aol.com
Message-ID: <20040615202139.23951.00000070@mb-m28.aol.com>
Source record: 93304

>just because we didn't find it doesn't mean that its not there.
>
>DE N7ZZT
>Phoenix, Arizona

Exactly. Thus it is a failure.

73,
Chip N1IR

4100. Re: OT - Harada Auto Antennas?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 00:34:06 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <1AMzc.40264$eu.17320@attbi_s02>
Source record: 93305

You might check w/ Crutchfield (in Virgina) www.crutchfield.com I believe they used to carry them, and might know of their current USA status or of equivalent substitutes.

"Fractenna" <fractenna@aol.com> wrote in message news:20040615151427.04692.00000015@mb-m10.aol.com...
> >Does anyone know if Harada (makers of automobile antennas for
> >the broadcast bands) is still in business?
> >
> >Thanks & 73
> >Don K6LTS
>
> Yes.
>
> I believe they are not in the US market anymore, but could be wrong. They are
> big in other places though.
>
> 73,
> Chip N1IR

4101. Re: source for solid copper #10 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 00:39:36 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <cFMzc.59924$Sw.35481@attbi_s51>
Source record: 93306

Try an electrical wholesaler, though it is likely annealed, not hard drawn.
Also www.mscdirect.com for "Copper Ground Wire" they have 10, 8 & 6 AWG
solid, but in long spools ~$100 each.

"John Shadle" <shadle@email.unc.edu> wrote in message
news:Pine.A41.4.44+UNC.0406151103310.36000-100000@login0.isis.unc.edu...
> I'm trying to complete an antenna project and was wondering if anyone knew
> of a source for bare, solid copper #10 AWG.
>
> Thanks in advance,
> -john, W4PAH
>

4102. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 01:03:07 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <adednc6g8ofRAVLd4p2dnA@adelphia.com>
Source record: 93307
Cross-posted to: rec.radio.amateur.swap,alt.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

yea right wrote:
> On Mon, 14 Jun 2004 22:18:03 -0700, Sal M. Onella wrote:
>
>
>
>><kh2d@my-deja.com> wrote in message
>>news:40cdf895.74809310@newsgroups.bellsouth.net...
>>
>>>On Mon, 14 Jun 2004 10:26:51 -0500, "*" <*@*.com> wrote:
>>>
>>>
>>
>>Speaking as one who is fighting spyware on my computer, I vote WITH the
>>guy who's suspicious of a strange url that shows up in a newsgroup. Use
>>of strange urls is hardly confined to spammers.
>
>
>
> You should look at Linux or Mac so you can regain the use of your
> computer. You should own your computer and not vis-versa!
>
> ;-)

Nahhh, let 'em all feel superior due to their "installed user base".
While the whole time they spend more and more of their efforts and
energy fighting off their inferior OS's security holes, we that use the
"non-standard" systems can simply do our work and play.

- Mike -

4103. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 01:12:02 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <B7Nzc.37558$2i5.13976@attbi_s52>
Source record: 93308

Look at a polar antenna plot (either in the vertical (elevation) or horizontal plane, though horiz would be best for this exercise). The greater the gain *straight* forward the less the angle that the gain is within say -3dB of the peak. F/B ratio is a measure of how much more sensitive it is dead ahead compared to dead behind, and ignores the sensitivity at any other angle, generally (but not always) there will be one large lobe pointed forward and only little bumps in sensitivity to the sides.

Another way to think of it (a thought experiment if you will) is as a garden hose w/ a fine stream out the front (very high gain and very high F/B ratio (very little water shoots straight back at you, and only a small spot that you aim at gets wet, vs. a hose w/ the end cut off and flattened to form a flat fanlike spray -- still good F/B (you stay dry) but the water goes less far and covers a bigger horiz angle. Last, imagine you unflatten the open hose end, point it straight up and hold a plate over it so water sprays in every direction horizontally -- this is an omnidirectional pattern (like a dipole, where RF leaves perpendicular to the wire or element) and goes even less distance (gain) but goes in every horizontal direction. In all cases the same amount of water comes out, but as you change the nozzle you send more in one direction at the expense of all the others. The antenna is the same when transmitting or receiving (collecting if you will) RF energy.

If your hose has some small pinholes in it you may get "side lobes" but they will usually be narrow angled or weak (low gain) -- differant cause than the antenna, but same effect for the purposed of the thought experiment.

Last, if you had a hollow spherical ball much bigger than the hose diameter that fastened on the hose's end and this ball had little holes evenly spaced all over it (and a good imagination) water would go in EVERY direction EQUALLY -- the equvalent of the *theoretical* isotropic antenna.

The analogy is not exact, but it should give a feel of the thing.

Note too some water or RF goes out at an angle from horiz (this is what you see in the vertical plane polar charts) and if you hold th ehose or antenna too close to the ground none can go down (it either soaks into the ground or bounces off and goes upward a bit) giving a slight "takeoff angle" to the beam (or stream).

That help, or only confuse?

"Fractenna" <fractenna@aol.com> wrote in message
news:20040614222352.16591.00001080@mb-m15.aol.com...
> >Then how come it doesn't give us 20db of forward gain?
>
> It does, if you (incorrectly) define forward gain as being relative to

the
> backside.
>
> As I said, the signal (that) now no longer goes out the back gets its
> power---redistributed--and that redistribution is like pushing the air
forward.
> It doesn't -- all-- get concentrated in one spot up front, thus the
forward
> gain isn't 20 dB.
>
> 73,
> Chip N1IR

4104. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 01:24:04 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <UiNzc.40517$eu.38673@attbi_s02>
Source record: 93309

Note too the dipole will need to be slightly shorter to use on 10m than on
11m, but you probably knew that already.

"HaveHFWillTravel" <havhfwilltravel@anyone.net> wrote in message
news:aaftc0ln7776lgl8aeee6t4fvs802taohr@4ax.com...
> Your First problem is that you went to a CB group to ask that kind of
> question. What were you thinking? You will have to match the antenna
> to bring the feed down to 50 ohms. With a properly matched antenna you
> should get the full 4 watt legal limit on 11 meters.
> KG4CYB
> On Sun, 13 Jun 2004 22:53:49 -0500, wildboy74@webtv.net (g g) wrote:
>
> >i wont to build a dipole ant for 10 meters can i use tv coax .or do i
> >need to use rg.58
>

4105. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 01:24:43 UTC
From: CW <"no adddress"@spam>
Message-ID: <PKCdneLeVL3APFLdRVn-uQ@comcast.com>
Source record: 93310

There are addapters for F plug to PL259. I can hear it now, "oh my god, you will loose at least a milionth of a watt if you use an adapter. That is totaly unacceptable".
"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message news:8rdrc0letculaokc936flhni886i2aave0@4ax.com...
The connectors they used to attach to a tv input
> won't fit your transceiver.
>
> Bob
> k5qwg
>
>

4106. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 01:25:31 UTC
From: CW <"no adddress"@spam>
Message-ID: <97CdnZkZi4wRPFLdRVn-jg@comcast.com>
Source record: 93311

Probably the same one he uses on 20.

"Fractenna" <fractenna@aol.com> wrote in message
news:20040614140452.04287.00000923@mb-m13.aol.com...
> >i should came here in the first place the folks in the cb group
> >said tv coax will cause damage to my radio ,thanks 73s
> >
>
> What callsign do you use on 10m?
>
> 73,
> Chip N1IR

4107. Re: How good is Antenna Specialists?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 01:29:23 UTC
From: The Masked Marvel <s_crook_remove_underbars_@comcast.net>
Message-ID: <TnNzc.55998$HG.21675@attbi_s53>
Source record: 93312

A three foot long base or center loaded A/S as probably as good as anybody's 3ft long 11m CB antenna. The K40's are a little longer whip but w/o instrumentation I doubt you'd notice most of the time.

"Dave Shrader" <david.shrader@comcast.net> wrote in message news:xaMyc.35433$HG.26665@attbi_s53...
> Bigger is better! [up to a limit of 102 inches for CB [27 MHz] use.]
>
> A 62 inch antenna is about 54 degrees long. 90 degrees long is a full
> size 102 inch whip. A 40 inch antenna is 35 degrees long.
>
> Conclusion: a 90 inch whip is typically 'the best' for mobile, a 54 inch
> antenna would be not as good as the 102 but better than the 40 inch
> antenna. The 'short' antennas use a small coil to work properly. The
> location of the coil contributes to how well the antenna works. But the
> 102 inch is still better than any shortened antenna.
>
> Chris wrote:
>
> > I have a question about a CB antenna but I'd like an opinion from someone
> > who knows more about antenna theory than the average CB'er. I have an old
> > Antenna Specialists M-902 Black Stallion antenna that I am thinking about
> > using. It looks like the one here
> > http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=3093592178 but I don't
> > know how well you can see it. It's a shunt-fed, base loaded antenna that is
> > about 3 ft. long and mounts on the trunk lip. My question is how does it
> > compare to some of the new antennas like Wilson or K40? Wilson claims to be
> > the best http://www.wilsonantenna.com/w1000.htm but are they really that
> > much better? Thanks for the help.
> >
> > Chris
> >
> >
>

4108. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 02:10:54 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40cfad67$1_3@corp.newsgroups.com>
Source record: 93313

Richard Clark wrote:

> Cecil Moore <w5dxp@hotmail.com> wrote:
>>At 3 GHz, one inch of wire is close to 1/4WL
>
> At 3 GHz nobody uses wire.

The "why" of that statement proves my point.

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

4109. Re: Radiofence Pet Containment System Radio signal shield

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 02:25:44 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40cfafb6$0$435$5cbedd26@news.real-time.com>
Source record: 93314

I don't normally comment on this stuff, but...

This is not a good way to train a dog; it makes them very
skittish/paranoid/nuts.

I have known several people that have used this method, and every one
has dropped it as ineffective, even if we ignore the cruelty.

I also saw it tried on 2 generations of German Shepherds by a neighbour
around the corner. Both are no longer at that house. No, they weren't
relocated.

It's a bad idea.

tom
K0TAR

John Schmerold wrote:
> I need to shield radio emmisions from a 5' segment of our dog's radio
> fence (http://radiofence.com) to let the dog past an area in the
> garage - other routes I've considered won't work.
>
> I'm thinking running the line line thru a copper pipe will get the job
> done.
>
> The normal method of wrapping two legs of the run around itself won't
> work where I need the shield.
>
> Thoughts, comments etc ?

4110. Re: Radiofence Pet Containment System Radio signal shield

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 02:33:11 UTC
From: John Schmerold <john@katy.com>
Message-ID: <HjOzc.981$v31.769@newssvr23.news.prodigy.com>
Source record: 93315

The Pet Containment System runs at 10 kHz

Steve Nosko wrote:
> "John Schmerold" <john@katy.com> wrote in message
> news:e0e64303.0406150403.6ec0c8ac@posting.google.com...
>
>>I need to shield radio emmisions from a 5' segment of our dog's radio
>>fence (http://radiofence.com) to let the dog past an area in the
>>garage - other routes I've considered won't work.
>>
>>I'm thinking running the line line thru a copper pipe will get the job
>>done.
>>
>>The normal method of wrapping two legs of the run around itself won't
>>work where I need the shield.
>>
>>Thoughts, comments etc ?
>
>
> What frequency do these work at?
> Is it low and therefore primarily magnetic pickup on the dog?
>
> I'm currently trying to help a friend make an antenna which must be located
> inside a metal ring which is blocking the radiation...
>

4111. Re: Radiofence Pet Containment System Radio signal shield

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 02:44:52 UTC
From: John Schmerold <john@katy.com>
Message-ID: <EuOzc.6555$QA7.3598@newssvr22.news.prodigy.com>
Source record: 93316

Not to start a holy war, but your generalization is wrong.

We are on an acre, our dogs have plenty of room to run, but we have a very busy street behind our house & don't want to risk that one of the dogs gets curious. Further these containment systems are highly effective. We have an Airedale & a Bichon. Both hear the beep before being shocked & head in the other direction.

If we were on a small lot with a large dog I'd agree with you. In my situation, I'd much rather have a skittish dog than a dead dog. As a practical matter, our dogs haven't become skittish as a result of the fence & are much happier than if they were in a pen or on a chain.

Tom Ring wrote:

> I don't normally comment on this stuff, but...
>
> This is not a good way to train a dog; it makes them very
> skittish/paranoid/nuts.
>
> I have known several people that have used this method, and every one
> has dropped it as ineffective, even if we ignore the cruelty.
>
> I also saw it tried on 2 generations of German Shepherds by a neighbour
> around the corner. Both are no longer at that house. No, they weren't
> relocated.
>
> It's a bad idea.
>
> tom
> K0TAR
>
> John Schmerold wrote:
>
>> I need to shield radio emmisions from a 5' segment of our dog's radio
>> fence (http://radiofence.com) to let the dog past an area in the
>> garage - other routes I've considered won't work.
>>
>> I'm thinking running the line line thru a copper pipe will get the job
>> done.
>>
>> The normal method of wrapping two legs of the run around itself won't
>> work where I need the shield.
>>
>> Thoughts, comments etc ?

4112. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 03:09:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <bdevc09hv85u3rsnats12ak3v1jh97d97u@4ax.com>
Source record: 93317

On Tue, 15 Jun 2004 21:10:54 -0500, Cecil Moore <w5dxp@hotmail.com>
wrote:
>>>At 3 GHz, one inch of wire is close to 1/4WL
>> At 3 GHz nobody uses wire.
>The "why" of that statement proves my point.
It is Tom's match point.

4113. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 04:05:23 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40cfc83e$1_5@corp.newsgroups.com>
Source record: 93318

Richard Clark wrote:
> Cecil Moore <w5dxp@hotmail.com> wrote:
>
>>>>At 3 GHz, one inch of wire is close to 1/4WL
>>>
>>>At 3 GHz nobody uses wire.
>>
>>The "why" of that statement proves my point.
>
> It is Tom's match point.

Doubt it. EM waves travel the same speed at 1 MHz or 3 GHZ.
If you get a reflection at 3 GHz, you certainly get a
reflection at 1 MHz. All the steady-state shortcuts in
the world won't change that fact of physics. What's sad
is you don't even realize it.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4114. Re: Radiofence Pet Containment System Radio signal shield

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 04:13:36 UTC
From: CW <"no adddress"@spam>
Message-ID: <9sidneuBFtRsVVLdRVn-uw@comcast.com>
Source record: 93319

I've never seen a bit of problem with these. Thy quickly learn where not to
go and don't go there.

"Tom Ring" <news0000@taring.org> wrote in message
news:40cfafb6$0$435$5cbedd26@news.real-time.com...
> I don't normally comment on this stuff, but...
>
> This is not a good way to train a dog; it makes them very
> skittish/paranoid/nuts.
>
> I have known several people that have used this method, and every one
> has dropped it as ineffective, even if we ignore the cruelty.
>
> I also saw it tried on 2 generations of German Shepherds by a neighbour
> around the corner. Both are no longer at that house. No, they weren't
> relocated.
>
> It's a bad idea.
>
> tom
> K0TAR
>
> John Schmerold wrote:
> > I need to shield radio emmisions from a 5' segment of our dog's radio
> > fence (http://radiofence.com) to let the dog past an area in the
> > garage - other routes I've considered won't work.
> >
> > I'm thinking running the line line thru a copper pipe will get the job
> > done.
> >
> > The normal method of wrapping two legs of the run around itself won't
> > work where I need the shield.
> >
> > Thoughts, comments etc ?

4115. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 04:24:44 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sqivc0lcjr1crhe7ogocsh22143hkedd7i@4ax.com>
Source record: 93320

On Tue, 15 Jun 2004 23:05:23 -0500, Cecil Moore <w5dxp@hotmail.com>
wrote:
>don't even realize it
;-)

4116. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 04:52:22 UTC
From: lucy <lucy@nospam.com>
Message-ID: <40CFD204.9AF5944C@nospam.com>
Source record: 93321

> hi,

Or they don't want us to find them at this time ! (;)

>
>
> define how its a failure?
>
> as far as I am concerned, it succeeded. it demonstrated that we can find
> useful data in short periods of time using "distributed processing".
>
> sure, no intelligence was located out among the stars, but then, we still
> have only scanned less than 10% of the usable sky.
>
> just because we didn't find it doesn't mean that its not there.
>
> DE N7ZZT
> Phoenix, Arizona
>
> --
> the difference between intelligence and stupidity is that intelligence
> has its limits.

4117. Re: Screwdriver mobile antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 04:54:58 UTC
From: lucy <lucy@nospam.com>
Message-ID: <40CFD2A0.2D33FB8C@nospam.com>
Source record: 93322

I like the tarheel antennas.

Just got my little tarheel and it is good.

http://www.eham.net/reviews/detail/1953 reviews here.

73 lucy

Michael wrote:

> After years of single band mobiling I've decided to invest in a screwdriver
> antenna. There seem to be 3 of 4 main manufacturers that make these types.
> I would be glad of anyone's experience with these antennas.
> Thanks
> Mike
> GW3YKZ

4118. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 05:45:06 UTC
From: kh2d@my-deja.com
Message-ID: <40cfde60.12888893@newsgroups.bellsouth.net>
Source record: 93323
Cross-posted to: rec.radio.amateur.swap,alt.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

On Mon, 14 Jun 2004 22:18:03 -0700, "Sal M. Onella"
<salmonella@food.poisoning.org> wrote:
>
>> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi

>Speaking as one who is fighting spyware on my computer, I vote WITH
>the guy who's suspicious of a strange url that shows up in a newsgroup.
>Use of strange urls is hardly confined to spammers.

Well, maybe we can learn something here.

What do you see that's "strange" about the URL above ?

Looks like a subdomain of http://www.fcc.gov to me.....

73, Jim KH2D

4119. antenna with a tent

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 09:18:19 UTC
From: Dr Brain <drbrain@hot.ee>
Message-ID: <40d0104f$1_1@news.estpak.ee>
Source record: 93324

Hi everyone,
as I understand half-wave vertical dont need much of a ground
but it would be nice to have one. And my question: while camping
using a tent that is made from aluminium-coated nylon, could one
use tents inner coating as a counterpoise to half-wave vertical.
Im sure for 1/4 wave this coating would have much too big resistance,
but for 1/2 wave where feedpoint voltages are high it should be ok?
When working from insaid the tent, rig ground connected to tent's
aluminium coating , is it electrically same situation if you were
buried under ground? Is there any performance differences expected
when rig ground is connected to insaid or outsaid of that aluminium
screen. I found this rather confusing..
Any comments?

Andrus

4120. Re: source for solid copper #10 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 10:00:49 UTC
From: "Edward A. Feustel" <edward.feustel@dartmouth.edu>
Message-ID: <cap5olfnv1@merrimack.Dartmouth.EDU>
Source record: 93325

"John Shadle" <shadle@email.unc.edu> wrote in message
news:Pine.A41.4.44+UNC.0406151103310.36000-100000@login0.isis.unc.edu...
> I'm trying to complete an antenna project and was wondering if anyone knew
> of a source for bare, solid copper #10 AWG.
>
> Thanks in advance,
> -john, W4PAH
>
Do you really want to use solid copper in the antenna? It stretches!
For a long antenna, copperweld would be much better!

Ed, N5EI

4121. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 11:43:38 UTC
From: kh2d@my-deja.com
Message-ID: <40d02fdd.33750440@newsgroups.bellsouth.net>
Source record: 93326
Cross-posted to: rec.radio.amateur.swap,alt.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

On Tue, 15 Jun 2004 21:03:07 -0400, Mike Coslo <mcoslo@adelphia.net>
wrote:

> Nahhh, let 'em all feel superior due to their "installed user base".
>While the whole time they spend more and more of their efforts and
>energy fighting off their inferior OS's security holes, we that use the
>"non-standard" systems can simply do our work and play.
>
> - Mike -

Let's not start this again, let's argue about something important,
like Morse code. Ain't enuff of you Apple Suckers and Penguin Pluckers
to be worth arguing with.

We need a new O/S, just for ham radio. We could call it Macnix. The
logo could be a roasted penguin with an apple in his mouth. And there
wouldn't be any application software so nobody would ask questions
about how to use it.....

73, Jim KH2D
Morse Code Sucks

4122. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 12:13:06 UTC
From: Eric Oyen - N7ZZT <n7zzt@127.0.0.1>
Message-ID: <pan.2004.06.16.12.13.06.193449@127.0.0.1>
Source record: 93327

On Wed, 16 Jun 2004 00:21:39 +0000, Fractenna wrote:

>> [quoted text muted]
>
> Exactly. Thus it is a failure.
>
> 73,
> Chip N1IR

Chip,
your logic escapes me, or you are reading something into my statement I
did not intend.

my point was, it wasn't proven to be a failure. in fact, the "proof of
concept" for distributed computing was, in fact, quite successfull. how
can you define that as a failure?

DE N7ZZT
Phoenix, Arizona

--
the difference between intelligence and stupidity is that intelligence
has its limits.

4123. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 12:14:01 UTC
From: Eric Oyen - N7ZZT <n7zzt@127.0.0.1>
Message-ID: <pan.2004.06.16.12.14.01.270315@127.0.0.1>
Source record: 93328

On Wed, 16 Jun 2004 04:52:22 +0000, lucy wrote:

>> [quoted text muted]
>
> Or they don't want us to find them at this time ! (;)
>
>> [quoted text muted]

more than likely, we just haven't found them yet. Speed of light
considerations being what they are, it does take a while to get here from
there.

DE N7ZZT
Phoenix, Arizona

--
the difference between intelligence and stupidity is that intelligence
has its limits.

4124. Re: Screwdriver mobile antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 12:32:32 UTC
From: Alan <alannc44@{nospam}ix.netcom.com>
Message-ID: <A5Xzc.52581$tH1.2075473@twister.southeast.rr.com>
Source record: 93329

If you don't mind stepping out of the car in order to tune, save some money
and get a manual screwdriver. I'm really enjoying my MFJ....and it was
pretty reasonably priced.
Alan
WN4HOG

--
Windsurfing Club: http://www.ibscc.org

"Michael Biddiscombe" <michael.biddiscombe@ntlworld.com> wrote in message
news:jbIzc.173$eM3.27@newsfe1-win...
> After years of single band mobiling I've decided to invest in a
screwdriver
> antenna. There seem to be 3 of 4 main manufacturers that make these
types.
> I would be glad of anyone's experience with these antennas.
> Thanks
> Mike
> GW3YKZ
>
>

4125. Re: NASA 'EVOLUTIONARY' SOFTWARE AUTOMATICALLY DESIGNS ANTENNA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 13:09:07 UTC
From: fractenna@aol.com
Message-ID: <20040616090907.04299.00000078@mb-m15.aol.com>
Source record: 93330

>my point was, it wasn't proven to be a failure. in fact, the "proof of
>concept" for distributed computing was, in fact, quite successfull. how
>can you define that as a failure?
>
>DE N7ZZT

Hi OM,

I appreciate this is an interesting topic, so let me conclude and elaborate just a bit.

You changed subjects. Your allusion was to SETI@home. Your comment was to the effect that 'because we didn't find them doesn't mean they're not out there'. Thus you affirm the failure of this premise of searching.

The failure has nothing to do with distributed computing: That is a tool--albeit a useful one--which obviously was used in a ill-posed way and failed to answer a scientific question.

That failure has nothing to do with sky coverage (which you also allude to): it has to do with waveform; high probability of intercept modalities; threshhold S/N; information theory; and so on..

But we're getting a bit too far off topic.

73,
Chip N1IR

4126. Re: Screwdriver mobile antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 13:16:29 UTC
From: Mikey <ki6pr@arrl.net>
Message-ID: <40d04873_2@newsfeed.slurp.net>
Source record: 93331

Michael, the screwdriver antennas (most of them, anyway) work quite well.
I would suggest you pick up a copy of "40+5 Years of Mobileering" by Don
Johnson W6AAQ. Don is the guy that designed the original screwdriver, and
he can (and will) sell you one of his, or tell you which of his competitors'
antennas work well, if at all.

73,
Mike KI6PR
El Rancho R.F., CA

"Michael Biddiscombe" wrote
> After years of single band mobiling I've decided to invest in a
screwdriver
> antenna. There seem to be 3 of 4 main manufacturers that make these
types.
> I would be glad of anyone's experience with these antennas.
> Thanks
> Mike
> GW3YKZ
>
>

4127. Re: antenna with a tent

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 13:52:57 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40D050B9.C2DC99F4@cwis.net>
Source record: 93332

Andrus,
The aluminum coating on your tent ~may~ work as (at least 'part' of) a ground system, depending on how large your tent is and how well connections are made. It would depend on the frequency of use (Mhz) naturally. How well it works also depends on several other factors, such as 'shape', just how thick the coating is (if it's very thin, such as with 'mylar', you may have a brief flash and no more coating! LOL).
The size (or length) of the antenna really doesn't make a lot of difference as far as the 'groundplane' is concerned, what would work for a 1/4 wave should work just as well for a 1/2 wave. If your use is in the VHF/UHF ranges, 'maybe'. If it's for HF, there are better ways of doing it...
'Doc

4128. Re: Extending a 2.4Ghz phoones range?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 14:30:36 UTC
From: Mong <mong@google.com>
Message-ID: <gQYzc.24825$eH1.11437928@newssvr28.news.prodigy.com>
Source record: 93333

2.4 GHz phones have poor RF range. You have better use 900 MHz Phone.

"Tesoro" <spamme@sympatico.ca> wrote in message
news:aAGzc.24508$7H1.821993@news20.bellglobal.com...
> I want to know if there is an antenna that I can attach (somehow) to my
> Siemens 2.4 Ghz phone that will extend the range of the handsets?
Basically,
> I want to be able to visit neighbours with my cordless handset and still
be
> in range. Possible or not?
>
>

4129. ladder line recommendations?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 14:41:30 UTC
From: Larry Gagnon <lagagnon@fakeuniserve.com>
Message-ID: <10d0n0qtfgl18af@corp.supernews.com>
Source record: 93334

I will be constructing a 135' doublet (14ga. copper 7 strand) fed with ladder line. I am trying to decide what type of ladder line to use:

1) 450 ohm commercial 14ga solid wire
2) 450 ohm commercial 14ga stranded
3) 450 ohm commercial 16ga stranded
4) make my own from 14ga stranded

I am leaning towards the commercial 16 ga stranded, partly for convenience, also I am only running 100 watts or QRP, and I think it might be a bit more flexible in the wind. I only need about 50' of feedline. Any comments from hams who have actually used any of the above and how it faired over the years would be greatly appreciated.

Larry VE7EA

--
****
to reply via email remove "fake"

4130. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 14:57:16 UTC
From: richardharrison@webtv.net
Message-ID: <17226-40D05FCC-14@storefull-3257.bay.webtv.net>
Source record: 93335

Henry, WD5JFR wrote:
"Shorts can`t dissipate power, so how does a stub work?"

Henry also wrote:
"I know that a shorted 1/4 wave stub exhibits a very high impedance. But for the 2nd harmonic it`s a 1/2 wave stub and exhibits a very low impedance or a short."

Henry is correct.

Connect a resistance directly to a transmitter. How much energy is absorbed by the resistance? Ohm`s law is the first approximation. Current is directly proportional to the applied voltage if the transmitter`s internal reistance is negligible.

The shorted 1/4-wave stub exhibits an open circuit at its mouth and accepts only enough current to supply its losss which are none in the perfect stub. So, it takes no power from the transmitter afer its circulating current is etablished.
At 2X the 1/4-wave freqency, the stub is 1/2 wavelengh and does not transform the short at one end to an open circuit at its other end. Instead, the 1/2-wave directly presents the short circuit at its far end.

How much curent can the transmitter supply to a short circuit? It depends on the internal impedance of the transmitter.

"Transmission Lines, Antennas, and Wave Guides" by King, Mimno, and Wing explains how "Even Harmonics" are suppressed by the 1/4-wave short-circuited stub on page 29. The gist is that the stub is imperfect and its resistance saps harmonic energy which is allowed into the stub by its low impedance.

Best regards, Richard Harrison, KB5WZI

4131. Re: ladder line recommendations?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 15:19:42 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <8mo0d0d2kb1uo1eobmbveac5lt8hees3vs@4ax.com>
Source record: 93336

On Wed, 16 Jun 2004 14:41:30 -0000, Larry Gagnon
<lagagnon@fakeuniserve.com> wrote:

>I will be constructing a 135' doublet (14ga. copper 7 strand) fed with
>ladder line. I am trying to decide what type of ladder line to use:
>
>1) 450 ohm commercial 14ga solid wire
>2) 450 ohm commercial 14ga stranded
>3) 450 ohm commercial 16ga stranded
>4) make my own from 14ga stranded
>
>I am leaning towards the commercial 16 ga stranded, partly for
>convenience, also I am only running 100 watts or QRP, and I think it
>might be a bit more flexible in the wind. I only need about 50' of
>feedline. Any comments from hams who have actually used any of the above
>and how it faired over the years would be greatly appreciated.
>
>Larry VE7EA

I'm using either 14 or 16 guage solid 450 ohm commercial line, and it
works fine w/100 watts, and has no probems in our moderate climate. I
don't bother to twist it every few feet, and haven't noticed anything
adverse. I'm about to put up a longer dipole with 600 ohm open line to
see if that works even better on a multi-band dipole -- you might add
that to your list of possibles; see www.w7fg.com

bob
k5qwg

4132. Re: Extending a 2.4Ghz phoones range?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 15:39:28 UTC
From: Tesoro <spamme@sympatico.ca>
Message-ID: <vSZzc.30766$7H1.1139544@news20.bellglobal.com>
Source record: 93337

Thanks for the reply. Would 5.8Ghz be better? Most of the phones I see that
fit my needs are now either 2.4Ghz or 5.8Ghz.

"Mong" <mong@google.com> wrote in message
news:gQYzc.24825$eH1.11437928@newssvr28.news.prodigy.com...
> 2.4 GHz phones have poor RF range. You have better use 900 MHz Phone.
>
>
> "Tesoro" <spamme@sympatico.ca> wrote in message
> news:aAGzc.24508$7H1.821993@news20.bellglobal.com...
> > I want to know if there is an antenna that I can attach (somehow) to my
> > Siemens 2.4 Ghz phone that will extend the range of the handsets?
> Basically,
> > I want to be able to visit neighbours with my cordless handset and still
> be
> > in range. Possible or not?
> >
> >
>
>

4133. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 16:04:02 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d070af_1@corp.newsgroups.com>
Source record: 93338

Richard Harrison wrote:
> The shorted 1/4-wave stub exhibits an open circuit at its mouth and
> accepts only enough current to supply its losss which are none in the
> perfect stub.

Richard, I think you would be surprised if you measured the RF current through the short at the shorted end. It will be the in-phase sum of the forward current and reflected current and is quite high. I once melted the insulation at the end of a shorted 1/4WL piece of RG8X. The heat came from high I^2*R losses at the short.

The SWR inside a perfect stub is infinite.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

4134. Re: Making 2.4GHz antenna more directional

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 16:06:42 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <me_zc.52605$tH1.2098539@twister.southeast.rr.com>
Source record: 93340

Does anyone know how much power these wireless units put out out? When I was in the airforce we use to estabish a 3 mile data link with only 10mW. Antennas were 1M parabolic. I still have a couple of these dish antennas that were chunked when the old equipment was updated. A hilltop to hill top link would be a fun project. Maybe something interesting to do for field day.

"Nige" <uYYYY@ntlworld.com> wrote in message news:a4nlc05qmlgul41j5n4949t2u0r23b67e0@4ax.com...
> I'm sure this has been asked before on this group, but I can't find it
> on my news server. I've got a Wi-Fi 802.11g wireless access point that
> I'd like to alter the coverage of.
>
> Has anyone any experience of making 2.4GHz antenna more directional? I
> need about 90 degrees, rather than 360. I've seen the "Pringles" DIY
> projects, but they are all to produce a beam.
>
> I was thinking of a tin cut in half lengthways, any thoughts?
>
> 73 G1NDM (no longer active)
>
>
> --
> Nige
>
> Please replace YYYY with the current year

4135. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 16:11:47 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <7j_zc.52606$tH1.2099106@twister.southeast.rr.com>
Source record: 93339

I connect to rg6 usinf an F to TNC adapter and then use a TNC to N adapter
"Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
news:8rdrc0letculaokc936flhni886i2aave0@4ax.com...
> On Sun, 13 Jun 2004 22:53:49 -0500, wildboy74@webtv.net (g g) wrote:
>
> >i wont to build a dipole ant for 10 meters can i use tv coax .or do i
> >need to use rg.58
>
> Electrically, the tv coax should work nearly as well as rg58.
>
> Only problem I see is the foil inner shield in tv coax might be
> trickier to solder to a standard pl-259 plug that you will screw onto
> your transceiver. The connectors they used to attach to a tv input
> won't fit your transceiver.
>
> Bob
> k5qwg
>
>

4136. Re: Extending a 2.4Ghz phoones range?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 16:21:34 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <TOudnSVIL9MS7k3dRVn-hg@comcast.com>
Source record: 93341

"Tesoro" <spamme@sympatico.ca> wrote in message
news:aAGzc.24508$7H1.821993@news20.bellglobal.com...
> I want to know if there is an antenna that I can attach (somehow) to my
> Siemens 2.4 Ghz phone that will extend the range of the handsets?
Basically,
> I want to be able to visit neighbours with my cordless handset and still
be
> in range. Possible or not?
>
>
How far do you want to go? I suspect that putting the high gain antenna on
the base is more practical than on the handset. Of course, your neighbors
might now get free phone service. Also, I don't know where you live, but all
of this is probably illegal, and the Telephone Gestapo will pull your
toenail out.

I have a Panasonic 900 MHz/2.4GHz phone, and the range is a little over 100
m. The 900 MHz direction works better.

Tam

4137. Re: ladder line recommendations?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 16:59:42 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <capua4$2g1b$1@news1.tribune.com>
Source record: 93342

I have seen the "solid" fatigue off fairly quickly.

I have used 22 guage and 14 guage stranded (soft not copperweld) and niether one has broken on me yet.

Use a center device to stop help control the rotation. Commercial devices (ladder lock) are about $11. I got mine at the hardware store for under $1.

http://user.mc.net/~jdewey/Ham_radio/doublet.jpg

KA9CAR

"Larry Gagnon" <lagagnon@fakeuniserve.com> wrote in message news:10d0n0qtfgl18af@corp.supernews.com...
> I will be constructing a 135' doublet (14ga. copper 7 strand) fed with
> ladder line. I am trying to decide what type of ladder line to use:
>
> 1) 450 ohm commercial 14ga solid wire
> 2) 450 ohm commercial 14ga stranded
> 3) 450 ohm commercial 16ga stranded
> 4) make my own from 14ga stranded
>
> I am leaning towards the commercial 16 ga stranded, partly for
> convenience, also I am only running 100 watts or QRP, and I think it
> might be a bit more flexible in the wind. I only need about 50' of
> feedline. Any comments from hams who have actually used any of the above
> and how it faired over the years would be greatly appreciated.
>
> Larry VE7EA
>
> --
> **********
> to reply via email remove "fake"

4138. Re: Extending a 2.4Ghz phoones range?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 17:16:14 UTC
From: richardharrison@webtv.net
Message-ID: <22341-40D0805E-54@storefull-3256.bay.webtv.net>
Source record: 93343

Tesoro wrote:
"Possible or not?"

Depends on line-of-sight path and signal strength.

The radios at both path ends must electrically be in sight of each other. Their powers can be concentrated. The wavelength is 1/8 meter, or about 5 inches.

A reflector, 1/4-wave behind the phone, about 1 or 2 inches, will concentrate the energy in the direction of the phone. A flat sheet of aluminum or aluminum foil will reflect the phone signal in the direction of the phone.
,
A reflector bent into the shape of a corner will further oncentrate the enrgy in its acute angle. A 90-degree corner reflector can give a 10 dBd gain.

Corner reflector angle, driven element spacing, and reflector size and construction are not critical. A side length for the corner reflector of 2 wavelengths, about 10 inches, is ideal according to the ARRL Antenna Book. If skeletal construction is used, the bars in the reflector must parallel the antenna polarization.

Best regards, Richard Harrison, KB5WZI

4139. Hardline useage, pro's and cons

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 17:30:50 UTC
From: aunwin <aunwin@insightbb.com>
Message-ID: <et%zc.115105$Ly.34531@attbi_s01>
Source record: 93344

I have a lot of hardline coax that I use for many things. I have some in present use as a large value inductance because of its flexibility in winding. I have now read that a wound inductance should have a smooth surface ! Why is this? Does the corrugations of the outer surface introduce facters that overide
the mechanical advantages of flexibility?
Regards
Art

4140. Re: ladder line recommendations?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 17:33:31 UTC
From: j999w@aol.com
Message-ID: <20040616133331.12124.00000092@mb-m01.aol.com>
Source record: 93345

I would think the 16g would be fine. 50ft is not all that long IMHO.

GL !

jw
K9RZZ

4141. Re: ladder line recommendations?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 17:42:37 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d087c9$1_1@corp.newsgroups.com>
Source record: 93346

J999w wrote:
> 50ft is not all that long IMHO.

If any of your appendages were 50ft long, you would be
in the Guinness Book of Records. :-)
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4142. aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 18:03:58 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <iY%zc.38671$wH4.2213061@twister.southeast.rr.com>
Source record: 93347

I want to make a 2m Yagi out of stainless steel, partly because of the corrosion resistance but mostly because I have the materials on hand. Some of my friends have tried to tell me that the higher ohmic resistance of SS will make for a poor antenna. Frankly I do see that it would make any significant difference. While SS has several times the resistance of AL I figure we are just comparing micro ohms to milliohms.at worst, probably more like micro ohm to tens of micro ohms. I am a correct on these assumptions or should I listen to my friends.

4143. Re: can you use tv coax for 10 /11.meters please help the rookie

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 18:55:12 UTC
From: Phil <phil.bradway@verizon.net>
Message-ID: <kI0Ac.32622$wi2.16502@nwrdny01.gnilink.net>
Source record: 93348

Radio Shack has an adaptor f to pl259 that I use successfully on 2 meters.

278-258 Accepts F plug. Fits SO-239 socket. $5.29

Just make sure the F connector is properly crimped, not just scrunched with
a pair of pliers.

Phil, KB2HQ

"Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
news:7j_zc.52606$tH1.2099106@twister.southeast.rr.com...
> I connect to rg6 usinf an F to TNC adapter and then use a TNC to N adapter
> "Bob Miller" <bxmillerNoSpam@texas.net> wrote in message
> news:8rdrc0letculaokc936flhni886i2aave0@4ax.com...
> > On Sun, 13 Jun 2004 22:53:49 -0500, wildboy74@webtv.net (g g) wrote:
> >
> > >i wont to build a dipole ant for 10 meters can i use tv coax .or do i
> > >need to use rg.58
> >
> > Electrically, the tv coax should work nearly as well as rg58.
> >
> > Only problem I see is the foil inner shield in tv coax might be
> > trickier to solder to a standard pl-259 plug that you will screw onto
> > your transceiver. The connectors they used to attach to a tv input
> > won't fit your transceiver.
> >
> > Bob
> > k5qwg
> >
> >
>
>

4144. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 19:03:10 UTC
From: richardharrison@webtv.net
Message-ID: <8058-40D0996E-89@storefull-3251.bay.webtv.net>
Source record: 93350

Cecil, W5DXP wrote:
"Richard, I think you would be surprised if ypu measured RF current through the short at the shorted end."

I expect high circulating current but without loss not much current is required of the power source.

In his 1955 edition on page 106 Terman says:
"Thus, if the line is short-circuited at the load, then at frequencies in the vicinity of a frequency for which the length is an odd number of quarter wavelengths long, the impedance will be high and will vary with frequency in the vicinity of resonance (i.e., frequency corresponding to quarter wavelength) in exactly the same manner as does the impedance of an ordinary parallel resonant circuit. It is therefore possible to describe resonance on a transmission line in terms of impedance at resonance and the equivalent Q of the resonance curve.

On page 107, Terman gives a 200 MHz example. 2-inch air-dielectric coax is used for 1/4-wave short-circiuited stubs about 15 inches long. The resonant impedance is more than 250,000 ohms with a Q of 3000.

How much current flows into an impedance of more than 1/4-million ohms?

Best regards, Richard Harrison, KB5WZI

4145. Good 144/440 mobile antenna recommendations

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 19:06:04 UTC
From: kb@shadowstorm.com
Message-ID: <40d099af.21415784@127.0.0.1>
Source record: 93349

Can anyone recommend a good mobile 144/440 MHz mobile antenna to use
with a Yaesu FT-7800R (50 watt) mobile rig?

Thanks,

Michael

4146. Re: ladder line recommendations?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 19:31:29 UTC
From: Wes <n7ws@_yahoo.com>
Message-ID: <jr71d0p96kd9828fn97adjd421606cdfif@4ax.com>
Source record: 93351

On Wed, 16 Jun 2004 08:32:14 -0700, Dan Richardson
<<ChangeThisToCallSign>@mendolink.com> wrote:

|On Wed, 16 Jun 2004 14:41:30 -0000, Larry Gagnon
|<lagagnon@fakeuniserve.com> wrote:
|
|>Any comments from hams who have actually used any of the above
|>and how it faired over the years would be greatly appreciated.
[snip]
|

Gad Danny. Why are you promoting getting my stuff there. I've
politely asked him to remove my papers from his site but never even
got a response.

Had he actually asked for permission, I would have gladly given it,
although he, as did I, should also ask ARRL since they hold the
copyright. As it stands, he *does not* have permission to have the
material on his site. (Could this be the "Phil" of Fractenna fame?)

The original work can be found here:

http://users.triconet.org/wesandlinda/

Wes, N7WS

4147. Re: G Whip

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 19:34:58 UTC
From: RADIOTWO <steveremovewright@ntlworld.com>
Message-ID: <Y92Ac.133$Fb4.63@newsfe5-win>
Source record: 93352

"M1LCR" <rees.a@btopenworld.com> wrote in message
news:caid45$em0$1@hercules.btinternet.com...
> Anyone got any instructions / comments on a G Whip ?
>
> (I have the 80, 40 and 10 M Coils)
>
> Thanks
>
> Adrian
> M1LCR
>
>

Hi Adrian,

I read your last post, and some of the replys, but from what you discribe
they don't sound like the G-whips I have,

Mine are a single coil and whip for each band.

Are you sure they are G-whips ?

Steve.

4148. Re: Extending a 2.4Ghz phoones range?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 19:51:22 UTC
From: Tesoro <spamme@sympatico.ca>
Message-ID: <Ey1Ac.33516$7H1.1194237@news20.bellglobal.com>
Source record: 93354

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:TOudnSVIL9MS7k3dRVn-hg@comcast.com...
>
> "Tesoro" <spamme@sympatico.ca> wrote in message
> news:aAGzc.24508$7H1.821993@news20.bellglobal.com...
> > I want to know if there is an antenna that I can attach (somehow) to my
> > Siemens 2.4 Ghz phone that will extend the range of the handsets?
> Basically,
> > I want to be able to visit neighbours with my cordless handset and still
> be
> > in range. Possible or not?
> >
> >
> How far do you want to go? I suspect that putting the high gain antenna on
> the base is more practical than on the handset. Of course, your neighbors
> might now get free phone service. Also, I don't know where you live, but
all
> of this is probably illegal, and the Telephone Gestapo will pull your
> toenail out.
>
> I have a Panasonic 900 MHz/2.4GHz phone, and the range is a little over
100
> m. The 900 MHz direction works better.
>
> Tam
>

I just want to visit the neighbours within 50 or 100m of my home. Seems as
though I can't get good reception even 3 houses down (30m?). I was thinking
if it was possible to add an outdoor type antenna to boost the range. I
thought I should be able to go at least a few houses away but I was wrong.
Thanks for your reply...

4149. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 19:57:08 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <oC1Ac.7305$Wr.2690@newsread1.news.pas.earthlink.net>
Source record: 93353

"Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
news:iY%zc.38671$wH4.2213061@twister.southeast.rr.com...
> I want to make a 2m Yagi out of stainless steel, partly because of the
> corrosion resistance but mostly because I have the materials on hand. Some
> of my friends have tried to tell me that the higher ohmic resistance of SS
> will make for a poor antenna. Frankly I do see that it would make any
> significant difference. While SS has several times the resistance of AL I
> figure we are just comparing micro ohms to milliohms.at worst, probably
more
> like micro ohm to tens of micro ohms. I am a correct on these assumptions
or
> should I listen to my friends.
>

If you have the materials go ahead and make the antenna. SS is just harder
to work with for most people and weighs more. YOu will loose some gain but
unless you are into very weak signal work it will not be too noticable. I
have an 8 element quagi for the 220 mhz band I made using SS welding rods
for the directors. It works beter than a 6 element beam I had up in the
same place. It also works much beter than the 11 element CC antenna that
was also in the same place.

4150. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 21:15:12 UTC
From: notvalid@charter.net
Message-ID: <dtd1d0pi4hhq6kjrin46n57cgv53npg0qp@4ax.com>
Source record: 93355

Use the SS. I just finished building a dual band J-Pole 2m/70cm and
used SS. It works just fine. 2m SWR ranges from 1.0:1 to 1.4:1 and I
have had great success hitting distant (40 miles) repeaters on ~5w at
only 20' AGL at my location, but about 5' BELOW average ground level
for the entire city... Go figure, I bought the place in the bottom of
the hole! :)

On Wed, 16 Jun 2004 18:03:58 GMT, "Jimmie" <Gfender@carolina
dot.rr.dot com> wrote:

>I want to make a 2m Yagi out of stainless steel, partly because of the
>corrosion resistance but mostly because I have the materials on hand. Some
>of my friends have tried to tell me that the higher ohmic resistance of SS
>will make for a poor antenna. Frankly I do see that it would make any
>significant difference. While SS has several times the resistance of AL I
>figure we are just comparing micro ohms to milliohms.at worst, probably more
>like micro ohm to tens of micro ohms. I am a correct on these assumptions or
>should I listen to my friends.
>

4151. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 21:17:21 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406160823.317fc1e8@posting.google.com>
Source record: 93356

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:<cangjh$s82$1@newshost.mot.com>...
> "David Harper" <achilles03@hotmail.com> wrote in message
> news:fef44ceb.0406150748.f445d0@posting.google.com...
> > Thanks everyone for all the info! That was definately educational and
> > answered my quesiton.
> >
> > Dave
>
>
> It did?

Yeah, now I can amaze all my friends and co-workers. All I need to do
now is get some of that "male enhancement" Enzyte and I'll probably be
CEO by next month.

What I was looking for was really this: tangent loss and dielectric
constant are the two main factors that determine RF propogation
properties through a material.

4152. Re: Extending a 2.4Ghz phoones range?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 22:45:32 UTC
From: Tesoro <spamme@sympatico.ca>
Message-ID: <X54Ac.33602$7H1.1235850@news20.bellglobal.com>
Source record: 93357

```
"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:67idnUUhLMpSLE3dRVn-jg@comcast.com...
>
> "Tesoro" <spamme@sympatico.ca> wrote in message
> news:Ey1Ac.33516$7H1.1194237@news20.bellglobal.com...
> >
> > "Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> > news:TOudnSVIL9MS7k3dRVn-hg@comcast.com...
> > >
> > > "Tesoro" <spamme@sympatico.ca> wrote in message
> > > news:aAGzc.24508$7H1.821993@news20.bellglobal.com...
> > > > I want to know if there is an antenna that I can attach (somehow) to
> my
> > > > Siemens 2.4 Ghz phone that will extend the range of the handsets?
> > > Basically,
> > > > I want to be able to visit neighbours with my cordless handset and
> still
> > > be
> > > > in range. Possible or not?
> > > >
> > > >
> > > How far do you want to go? I suspect that putting the high gain
antenna
> on
> > > the base is more practical than on the handset. Of course, your
> neighbors
> > > might now get free phone service. Also, I don't know where you live,
but
> > all
> > > of this is probably illegal, and the Telephone Gestapo will pull your
> > > toenail out.
> > >
> > > I have a Panasonic 900 MHz/2.4GHz phone, and the range is a little
over
> > 100
> > > m. The 900 MHz direction works better.
> > >
> > > Tam
> > >
> >
> > I just want to visit the neighbours within 50 or 100m of my home. Seems
as
> > though I can't get good reception even 3 houses down (30m?). I was
> thinking
```

> > if it was possible to add an outdoor type antenna to boost the range. I
> > thought I should be able to go at least a few houses away but I was
wrong.
> > Thanks for your reply...
> >
> >
> Can you relocate the base station? Mine is on top of the refridgerator,
> which might serve as a ground plane. 3 houses away is no problem for the
> Panasonic, at least out doors. You might try the reflector idea. If you
have
> insulation in the walls with an aluminum foil vapor barrier, or aluminum
> siding, you probably won't get out unless there is a clear path through a
> window.
>
> Tam
>

I will try to move the base unit closer to a window and see if that helps.
The fridge thing sounds interesting, I may give that a try, nothing to lose.
Again, thanks for helping...

4153. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 23:06:30 UTC
From: W4UDX <w4udx@bellsouth.net>
Message-ID: <0h4Ac.8285$IF3.8169@bignews5.bellsouth.net>
Source record: 93358

Forgot to mention.... it kinda reminded me of when that one guy who was looking for a 160M HT...

Mark W4UDX

"W4UDX" <w4udx@bellsouth.net> wrote in message news:Yb4Ac.8247$IF3.4140@bignews5.bellsouth.net...
> N4LQ has been a licensed ham since 1964, I would dare say he already knew
> the answer to this goofy question and was just looking for some funny
> responses.....
>
> Mark W4UDX
>
>
> "N4LQ" <n4lq@iglou.com> wrote in message news:40ce2c39_1@news.iglou.com...
> > Say a beam has 5db forward gain and a front to back difference of 20db.
> > Where does the extra 15db go? I mean, if you loose 20db off the back on
> > transmit, I assume you also loose that much on receive. What happened to
> the
> > 20db? Did it burn up as heat? What am I missing here?
> >
> > --
> > Steve
> >
> >
>
>

4154. Re: Identify beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 23:14:00 UTC
From: W4UDX <w4udx@bellsouth.net>
Message-ID: <vs4Ac.44530$Kd5.12228@bignews4.bellsouth.net>
Source record: 93359

Sounds like a TET...

"Terry Ashland" <t_ashland@yahoo.com> wrote in message
news:6e6aeba9.0406091800.3b5cdcd9@posting.google.com...
> Hi,
> I may be acquiring a tower and beam from an SK. I am having problems
> trying to figure out what kind of beam it is. I think its been up
> there awhile. It is a 4 element beam with two driven elements spaced
> about 1 to 2' apart. Its probably a 10-15-20 beam. Any help would be
> appreciated.
> 73,
> Terry, WK0F

4155. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 23:38:43 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <KP4Ac.44533$Kd5.8666@bignews4.bellsouth.net>
Source record: 93360

go for it - the added R may increase bandwidth a little

"Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
news:iY%zc.38671$wH4.2213061@twister.southeast.rr.com...
> I want to make a 2m Yagi out of stainless steel, partly because of the
> corrosion resistance but mostly because I have the materials on hand. Some
> of my friends have tried to tell me that the higher ohmic resistance of SS
> will make for a poor antenna. Frankly I do see that it would make any
> significant difference. While SS has several times the resistance of AL I
> figure we are just comparing micro ohms to milliohms.at worst, probably
more
> like micro ohm to tens of micro ohms. I am a correct on these assumptions
or
> should I listen to my friends.
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.707 / Virus Database: 463 - Release Date: 6/15/2004

4156. Re: Making 2.4GHz antenna more directional

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 23:43:40 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40d0db37$0$432$5cbedd26@news.real-time.com>
Source record: 93361

Depending on the card, and whether you have twiddled any special
registers in it, up to around 100mW. I believe the current distance
record from the contest they have every so often is around 50 miles.
People regularly do 10 to 20 miles.

Antenna plans, as well as manufactured antennas, and bidirectional power
amps are readily available. And may or may not be legal, depending on
many things, like if you are a ham using the correct (lower, I think)
channels, etc, etc.

I have a couple 2.4GHz bidir amps plus patch antennas at work that we
just recieved to play with. Haven't fired them up yet. Yes, they are
legal in this case, and we are also a wireless (and wired) ISP.

If you want to play with a good Access Point, get a Linksys WRT54G, and
flash it with the modified version from Sveasoft. This greatly enhances
the capabilities, adding such things as ssh access, kernel based
stateful firewalling, full routing capabilities, traffic shaping, etc.

tom
K0TAR

Jimmie wrote:

> Does anyone know how much power these wireless units put out out? When I was
> in the airforce we use to estabish a 3 mile data link with only 10mW.
> Antennas were 1M parabolic. I still have a couple of these dish antennas
> that were chunked when the old equipment was updated. A hilltop to hill top
> link would be a fun project. Maybe something interesting to do for field
> day.
>
>

4157. W7FG "True" Ladder-Line vs. 450 Ohm?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-16 23:53:18 UTC
From: Bert Craig <wa2si@arrl.netNOSPAM>
Message-ID: <O35Ac.8444$0b.6635870@news4.srv.hcvlny.cv.net>
Source record: 93362

The subject line sez it all. Is there any noticable difference? #14 stranded copper 450 ribbon type vs.

http://www.w7fg.com/ant.htm

Thanks in advance.

--
73 de Bert
WA2SI

4158. Re: Extending a 2.4Ghz phoones range?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 00:15:56 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <mfo1d0hsp06qpq90mftm15lc24197nt8a0@4ax.com>
Source record: 93363

On Wed, 16 Jun 2004 18:45:32 -0400, "Tesoro" <spamme@sympatico.ca>
wrote:

>I will try to move the base unit closer to a window and see if that helps.
>The fridge thing sounds interesting, I may give that a try, nothing to lose.
>Again, thanks for helping...
>
In that frequency range, it is almost purely line-of-sight. Anything
from VHF on up, the higher the transmitting antenna, the better the
range will be. If you have a second floor, put it up there and you
should get the range you want, although some building materials will
interfere.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4159. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 00:16:53 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <olo1d05dr2155m76i1p2e9no1e0piotc7a@4ax.com>
Source record: 93364

On Wed, 16 Jun 2004 19:06:30 -0400, "W4UDX" <w4udx@bellsouth.net>
wrote:

>Forgot to mention.... it kinda reminded me of when that one guy who was
>looking for a 160M HT...
>
>Mark W4UDX
>
The transceiver is portable, except for the antenna. ;-)

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4160. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 00:17:14 UTC
From: "NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net>
Message-ID: <eq5Ac.72886$5x.10364@newssvr29.news.prodigy.com>
Source record: 93365

Why NOT ??? Afterall, the "Gibson Girl" worked on 500 kHz !! Now THAT is
REAL QRP DX!
;>) Jim NN7K

Mark wrote:
> Forgot to mention.... it kinda reminded me of when that one guy who was
> looking for a 160M HT...
>
> Mark W4UDX
>

4161. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 01:03:46 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d0ef30_2@corp.newsgroups.com>
Source record: 93366

Richard Harrison wrote:
> How much current flows into an impedance of more than 1/4-million ohms?

As you know, transmission lines transform impedances. That stub likely has an SWR around 5000:1. Assuming a driving voltage of 250V, the current at the 1/4-million ohm point is about 0.001 amps. However, 1/4WL away, at the short in the 1/4WL stub, the current will be ~5 amps with a voltage of ~0.05V. That's an impedance of ~0.01 ohm. The shorted stub has transformed the impedance from 1/4-million ohms at the mouth to ~0.01 ohm at the short. That's what transmission lines do.

The question is not, "How much current flows into an impedance of more than 1/4-million ohms?" The question is: How much current flows 1/4WL away from that point at the shorted end of the stub? The answer is the sum of the forward current and reflected current. The voltage at the shorted end of a 1/4WL stub is the difference between the forward voltage and the reflected voltage.

The voltage at the mouth of the stub is the sum of the forward voltage and reflected voltage. The current at the mouth of the stub is the difference between the forward current and reflected current. In the example above, that difference is ~0.001 amp. The forward current flowing inside the stub is ~2.505 amps and the reflected current flowing inside the stub is ~2.495 amps.

If you don't believe the above, simply measure the RF current at the shorted end of the stub. Someone modeled it the other day and even the modeling program indicated that the current was sky high at the shorted end of a 1/4WL stub.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

4162. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 01:10:31 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d0f0c8$1_2@corp.newsgroups.com>
Source record: 93367

W4UDX wrote:
> Forgot to mention.... it kinda reminded me of when that one guy who was
> looking for a 160M HT...

We had quite a few 160M HT's right after WWII, thanks to MARS
and military surplus equipment.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

4163. Re: W7FG "True" Ladder-Line vs. 450 Ohm?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 02:02:18 UTC
From: N4LQ <n4lq@iglou.com>
Message-ID: <40d0fbd2$1_1@news.iglou.com>
Source record: 93368

I beleive the FG stuff is only 16ga so yes, it would have a bit more resistance loss but the design would lessen the effect of moisture however it would be harder to install since it has fewer spreaders. Probably better to make your own line. Much more fun!

--
Steve N4LQ
"Bert Craig" <wa2si@arrl.netNOSPAM> wrote in message news:O35Ac.8444$0b.6635870@news4.srv.hcvlny.cv.net...
> The subject line sez it all. Is there any noticable difference? #14 stranded
> copper 450 ribbon type vs.
>
> http://www.w7fg.com/ant.htm
>
> Thanks in advance.
>
> --
> 73 de Bert
> WA2SI
>
>

4164. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 02:37:58 UTC
From: richardharrison@webtv.net
Message-ID: <4441-40D10406-129@storefull-3258.bay.webtv.net>
Source record: 93369

Cecil, W5DXP wrote:
"Someone modeled it the other day and even the modeling program indicated that the current was sky high at the shorted end of a 1/4 WL stub."

Agreed that the resistance of the short is small and allows a large current even when the volts are low. The small load resistance, ZL is transformed into another resistance, ZS that is inversely proportional to ZL. Terman expresses this in equation (4-31) as:

ZS = Zo squared / ZL

So, the smaller ZL, the larger ZS. As ZL goes to zero, ZS goes to infinity.

A high impedance means: accepts little current for a given voltage. The open end of a good 1/4-wave short-circuited stub is defined as a high impedance. So much so that it is also called a "metallic insulator".

Best regards, Richard Harrison, KB5WZI

4165. Re: A horizontal "sleeve" antenna for 20m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 02:55:17 UTC
From: Al - VA3KAI <niittyma@sympatico.ca>
Message-ID: <oK7Ac.35653$7H1.1331818@news20.bellglobal.com>
Source record: 93221

Thierry,

Check out the following URL - great feedback on eHam.net Reviews from users.
Might solve your problems for many bands!

http://www.parelectronics.com/end_fedz.htm

Al, va3kai

"hello" <hello@nospam.com> wrote in message
news:SxLvc.49522$zm5.25179@nntpserver.swip.net...
>
> HI
> I want to put a dipole for 20m in my garden.
> A tree and the home roof will be ok to fix the extremity.
> My problem is the feed point : If IA center feed it , the feed line will
> just hang at the center of the garden, something not acceptable by the
> YL :-)
>
> So I'm looking for a way to feed it by one "side".
> I could endfeed it, but impedance matching is not so easy at such a high
> impedance.
> Then, after reading lots of post in this newsgroup, I read about the
> sleeve antenna : generaly a vertical dipole where one leg is a sleeve.
> Coax enter in the sleeve to the center feed point.
> I think this antenna could work horizontaly and for HF and solve my
> problem. Now, hanging horizontaly a 5m long metallic sleeve is surely
> not a good idea, but at HF , I thing that man could replace the sleeve
> by some wire cage.
> So I end up with the idea of a cage or biconic dipole , with the coax
> entering horizontaly in the middle of the cage to the center.
>
> What do you think of this idea ?
> How many wire for the cage 2 (a bowtie), 3, more ?
> Do you have a better one for my particular constrains ?
>
> Lots of questions, but I'm sure you will have lots of answers !
>
> Thanks in advance
>
> Thierry
> F4DWV

4166. Re: Good 144/440 mobile antenna recommendations

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 02:55:32 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <kj12d0t81dpp53n9fo5ndbvn5camu69ued@4ax.com>
Source record: 93370

On Wed, 16 Jun 2004 19:06:04 GMT, kb@shadowstorm.com (Michael Rawls)
wrote:

>
> Can anyone recommend a good mobile 144/440 MHz mobile antenna to use
>with a Yaesu FT-7800R (50 watt) mobile rig?
>
>Thanks,
>
>Michael
Michael,
I recommend the Larsen NMO2/70C; good quality and value. For mounting
options you may also wish to check out Diamond - a wide selection of
trunk/hood lip mounts & luggage rack mounts.

Good luck & 73,
Howard

4167. Re: W7FG "True" Ladder-Line vs. 450 Ohm?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 04:06:40 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <kt52d09ipp76p0admv2l5d8trqs18dkdrd@4ax.com>
Source record: 93222

On Wed, 16 Jun 2004 22:02:18 -0400, "N4LQ" <n4lq@iglou.com> wrote:

>I beleive the FG stuff is only 16ga so yes, it would have a bit more
>resistance loss but the design would lessen the effect of moisture however
>it would be harder to install since it has fewer spreaders.

It has spreaders positioned every 20". The two lines are 3.75 inches
apart, which gives 600 ohms, according to a table I looked at in one
of the antenna books.

> Probably better
>to make your own line. Much more fun!

You have funny ideas of fun... :-)

Bob
k5qwg

4168. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 04:17:59 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d11cb4$1_3@corp.newsgroups.com>
Source record: 93223

Richard Harrison wrote:
> A high impedance means: accepts little current for a given voltage. The
> open end of a good 1/4-wave short-circuited stub is defined as a high
> impedance. So much so that it is also called a "metallic insulator".

If it was indeed a high physical impedance, like a 250K resistor, it could
be removed and no much would happen at its resonant frequency. Unfortunately,
it is not a physical impedance and is merely a V/I ratio, a virtual impedance.
There is nothing at the mouth of the stub capable of causing reflections.
All the reflections occur at the shorted end of the stub.

The forward and reflected voltages add in phase and the forward and
reflected currents add 180 degrees out of phase at the mouth of the stub.
The ratio of forward voltage to forward current is the Z0 of the stub as
is the ratio of reflected voltage to reflected current.
--
73, Cecil http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4169. Re: ladder line recommendations?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 05:14:23 UTC
From: Wes <n7ws@_yahoo.com>
Message-ID: <v4a2d0lg79b15i9dv4aps70q78ttpe40pl@4ax.com>
Source record: 93224

On Wed, 16 Jun 2004 13:31:05 -0700, Dan Richardson
<<ChangeThisToCallSign>@mendolink.com> wrote:

|On Wed, 16 Jun 2004 12:31:29 -0700, Wes <n7ws@_yahoo.com> wrote:
|
|>Gad Danny. Why are you promoting getting my stuff there.
|
|I did a quick google search and that was the first URL I found and
|paid no attention other that the content looked okay.
|
|Begging your forgiveness Sir.

Well....okay.

4170. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 05:18:16 UTC
From: Wes <n7ws@_yahoo.com>
Message-ID: <fca2d01pdgvml8reg4rfta21vhlch1fub7@4ax.com>
Source record: 93225

On Wed, 16 Jun 2004 18:03:58 GMT, "Jimmie" <Gfender@carolina
dot.rr.dot com> wrote:

|I want to make a 2m Yagi out of stainless steel, partly because of the
|corrosion resistance but mostly because I have the materials on hand. Some
|of my friends have tried to tell me that the higher ohmic resistance of SS
|will make for a poor antenna. Frankly I do see that it would make any
|significant difference. While SS has several times the resistance of AL I
|figure we are just comparing micro ohms to milliohms.at worst, probably more
|like micro ohm to tens of micro ohms. I am a correct on these assumptions or
|should I listen to my friends.
|

Listen to your friends.

4171. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 05:19:27 UTC
From: Wes <n7ws@_yahoo.com>
Message-ID: <vca2d09bqv4pr3vd76ui5jbjhbs0pumtq8@4ax.com>
Source record: 93226

On Wed, 16 Jun 2004 19:38:43 -0400, "Hal Rosser"
<hmrosser@bellsouth.net> wrote:

|go for it - the added R may increase bandwidth a little

Yep, and while you're at it, add a 20 dB resistive pad at the
feedpoint. The bandwidth will be super.

4172. Re: Update! Filing FCC comment against BPL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 05:42:19 UTC
From: "Sal M. Onella" <salmonella@food.poisoning.org>
Message-ID: <YaaAc.4889$tC5.4026@fed1read02>
Source record: 93227
Cross-posted to: rec.radio.amateur.swap,alt.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.equipment

<kh2d@my-deja.com> wrote in message
news:40cfde60.12888893@newsgroups.bellsouth.net...
> On Mon, 14 Jun 2004 22:18:03 -0700, "Sal M. Onella"
> <salmonella@food.poisoning.org> wrote:
> >
> >> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
> >
> >Speaking as one who is fighting spyware on my computer, I vote WITH
> >the guy who's suspicious of a strange url that shows up in a newsgroup.
> >Use of strange urls is hardly confined to spammers.
> >
> Well, maybe we can learn something here.
>
> What do you see that's "strange" about the URL above ?
>
> Looks like a subdomain of http://www.fcc.gov to me.....
>
> 73, Jim KH2D
>
>

You are absolutely correct, but that wasn't the "strange URL" I meant. The
post
that started this thread is as follows (from June 12):

<quote>
The information about filing a FCC BPL comment on the ARRL web page was
outdated. There is a new case number that should be used. 04-37 is the
correct case number.

It only takes 5 minutes to file a comment with the FCC against BPL.

http://vambo.org/a/
<end quote>

Somebody else questioned it first, wondering why the FCC URL wasn't just
posted;
then somebody brought up paranoia. I seconded the paranoia and I stand by
it, at
least in principle.

vambo.org, searched on google, gave me no obvious ham radio links but a
little digging
identifies a Colorado ham associated with the site. (By "digging", I mean
google &

qrz.com; no hacker weapons here -- I'd probably shoot my eye out :-)

73,
John
KD6VKW

PS: While I was composing this, Norton Internet Security intercepted a
trojan attempt.
Who's paranoid? I am.

4173. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 06:00:10 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <vpyXH9CqNT0AFA8W@ifwtech.co.uk>
Source record: 93228

Ralph Mowery wrote:
>
>"Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
>news:iY%zc.38671$wH4.2213061@twister.southeast.rr.com...
>> I want to make a 2m Yagi out of stainless steel, partly because of the
>> corrosion resistance but mostly because I have the materials on hand. Some
>> of my friends have tried to tell me that the higher ohmic resistance of SS
>> will make for a poor antenna. Frankly I do see that it would make any
>> significant difference. While SS has several times the resistance of AL I
>> figure we are just comparing micro ohms to milliohms.at worst, probably
>more
>> like micro ohm to tens of micro ohms. I am a correct on these assumptions
>or
>> should I listen to my friends.
>>
>
>If you have the materials go ahead and make the antenna. SS is just
>harder to work with for most people and weighs more. YOu will loose
>some gain but unless you are into very weak signal work it will not be
>too noticable.

That's correct - especially the last part.

In typical yagi designs, resistive losses in normal aluminum elements
are on the order of a percent - which is negligible. There are many
grades of SS, of course, but again a typical value might be a few
percent.

In Europe there is a successful range of 'Flexa-Yagis' of very
lightweight construction using elements made from thin, springy SS wire.
These yagis are only about 0.5dB down in gain compared with ali elements
at 144MHz, and maybe 1dB at 432MHz.

A few years down the line, when ali elements may have corroded, the SS
elements may even come out ahead.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

4174. Re: antenna with a tent

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 08:42:29 UTC
From: Dr Brain <drbrain@hot.ee>
Message-ID: <40d15988_1@news.estpak.ee>
Source record: 93229

yes, aluminium coatin ofa a tent is probably no-good, I just wondered
could one transmit from insaid the closed sphere when other half
of antenna still gets out from there.
Andrus

"'Doc" <w5lz@cwis.net> wrote in message news:40D050B9.C2DC99F4@cwis.net...
> Andrus,
> The aluminum coating on your tent ~may~ work as (at
> least 'part' of) a ground system, depending on how large
> your tent is and how well connections are made. It
> would depend on the frequency of use (Mhz) naturally.
> How well it works also depends on several other factors,
> such as 'shape', just how thick the coating is (if it's
> very thin, such as with 'mylar', you may have a brief
> flash and no more coating! LOL).
> The size (or length) of the antenna really doesn't
> make a lot of difference as far as the 'groundplane'
> is concerned, what would work for a 1/4 wave should
> work just as well for a 1/2 wave. If your use is in the
> VHF/UHF ranges, 'maybe'. If it's for HF, there are
> better ways of doing it...
> 'Doc

4175. Antenna tuner is nessasry for TWO-TURN coax loop??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 10:47:39 UTC
From: "WonYong,Lee" <lwy0417@hanafos.com>
Message-ID: <carssk$1od$1@news.hananet.net>
Source record: 93230

I made a pixie2, QRP rig.

and so, I need a simple antenna...7Mhz!

and double loop coax antenna is attractive very much...

http://www.greertech.com/hfloop/mymagloop.html

but...Antenna tuner is nessasry??

I can't make a tuner because, air variable capacitor is few in
korea....

only loop antenna works well??

4176. Modification to antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 11:51:16 UTC
From: JJ <Sonbo@comcast.net>
Message-ID: <2jderjF10furlU1@uni-berlin.de>
Source record: 93231

If I wanted to sell a device that slips over a omni antenna to make it more directional, would I need to get some sort of approval from the powers that be ?

4177. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 11:59:20 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <sIfAc.4067$w07.308@newsread2.news.pas.earthlink.net>
Source record: 93232

"Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
news:iY%zc.38671$wH4.2213061@twister.southeast.rr.com...
> I want to make a 2m Yagi out of stainless steel, partly because of the
> corrosion resistance but mostly because I have the materials on hand. Some
> of my friends have tried to tell me that the higher ohmic resistance of SS
> will make for a poor antenna. Frankly I do see that it would make any

Look at all the mobile antennas. For the most part they are SS. Mainly
because of the stiffness of the material. The antennas for the low bands
are usually not SS. Part of it is that the short for wavelength antennas
can not stand much resistance where it becomes a large part of the overall
"radiation resistance".
When the antenna is aproaching a 1/4 wave or more the resistance of the
material it is made of is less important.

4178. Re: Modification to antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 13:27:11 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40D19C2F.BA8136F7@cwis.net>
Source record: 93233

JJ,
Only if someone already 'owns' the idea.
'Doc

4179. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 13:28:58 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cas6aq$13c$1@titan.btinternet.com>
Source record: 93234

The loss in a stainless steel whip antenna in comparison with the TOTAL loss, including that in the ground, is always small enough to be neglected, regardless of length of the antenna.

4180. How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 13:30:19 UTC
From: mike sebring <msebring@kpunet.net>
Message-ID: <alidnaHhosl2AUzdRVn-iQ@scnresearch.com>
Source record: 93235

I live in S.E. Alaska on an island that is about 99% solid rock and i am wondering what would be a good way to get an effective ground for my rig and my antennas.
I have tried to drive a 4' ground rod in the ground and it will only go down about a foot and a half till it hits solid rock.
I have considered just burying several strands of heavy bare copper wire and using that for my ground.
Any sugjestions????
Thanks for any help any of you can give me.

EX WB8RSH soon to be KL7???

Mike

4181. Re: W7FG "True" Ladder-Line vs. 450 Ohm?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 13:30:21 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40D19CED.DA337813@cwis.net>
Source record: 93236

```
Bert,
There are differences, but they don't really amount
to much. Which would be more convenient, or available?
'Doc
```

4182. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 13:31:41 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d19e7d_5@corp.newsgroups.com>
Source record: 93237

Ralph Mowery wrote:
> The antennas for the low bands are usually not SS.

In one of the CA 75m mobile shootouts, Wally, WA6JPR, entered
a bugcatcher with an SS Fortex Coil. It was 4 dB down from
his copper loading coil (no hat) and 6.5 dB down from the top
rated screwdriver (with hat). Of course, most stingers on HF
mobile antennas are SS and are located at the high voltage -
low current end of the mobile antenna.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4183. Re: antenna with a tent

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 13:36:14 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40D19E4E.77C1EB35@cwis.net>
Source record: 93238

Andrus,
Could you transmit from 'inside' the antenna? Sure, it's
done on ships all the time.
'Doc

4184. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 13:56:02 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cas7tigvs1@sparta.btinternet.com>
Source record: 93239

Forget about a ground rod. A single ground rod makes a very poor earth in any sort of soil except salt water. It is no better than a shallow buried radial wire of the same length.

You can have a good ground with a relatively small number of shallow buried radial wires. Begin with 6 or 8 radials about 1/8th or 1/10th wavelengths long. Then increase number until RECEIVED signal strength from several stable transmissions stops increasing each time the number is increased by 50%.

Reg

4185. Re: CRT-3(A) Gibson Girl Survival Transmitter

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 14:04:25 UTC
From: Da Shadow <DAS@cat.net>
Message-ID: <KxhAc.24686$0z6.5326@fed1read07>
Source record: 93240

FYI:
AN/CRT-3(A) Transmitter set, Survival, "Gibson Girl", 500 KHz and 8364kHz
(A Model) or 8280 kHz 2 Watts. 300 foot antenna by kite or balloon

http://wing.chez.tiscali.fr/USAAF/USAAF_survival.html

http://home.hccnet.nl/l.meulstee/gibsongirl/gibsongirl.html

--
Lamont Cranston

The Shadow Knows

"NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net> wrote in
message news:eq5Ac.72886$5x.10364@newssvr29.news.prodigy.com...
> Why NOT ??? Afterall, the "Gibson Girl" worked on 500 kHz !! Now THAT is
> REAL QRP DX!
> ;>) Jim NN7K
>
>
> Mark wrote:
> > Forgot to mention.... it kinda reminded me of when that one guy who was
> > looking for a 160M HT...
> >
> > Mark W4UDX
> >
>
>

4186. Re: Modification to antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 14:04:44 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cas8ds$4qk$1@titan.btinternet.com>
Source record: 93241

```
> If I wanted to sell a device that slips over a omni antenna to make it
more
> directional, would I need to get some sort of approval from the powers
that
> be ?
>
==============================

A certificate of "it works" from James Clerk Maxwell would be useful.
```

4187. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 14:09:47 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <LChAc.29563$H65.2504@nwrddc02.gnilink.net>
Source record: 93242

"Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
news:iY%zc.38671$wH4.2213061@twister.southeast.rr.com...
> I want to make a 2m Yagi out of stainless steel, partly because of the
> corrosion resistance but mostly because I have the materials on hand. Some
> of my friends have tried to tell me that the higher ohmic resistance of SS
> will make for a poor antenna. Frankly I do see that it would make any
> significant difference. While SS has several times the resistance of AL I
> figure we are just comparing micro ohms to milliohms.at worst, probably
more
> like micro ohm to tens of micro ohms. I am a correct on these assumptions
or
> should I listen to my friends.
>
>

Jimmie

How much power can you produce at 2 meters?? If you or your friends can
put enough power into a stainless steel dipole, you can get a pretty good
idea of the power its disipating by monitoring its temperature rise.
It might be interesting to ask your friends for any of the data they have
for determining their advice to *not* use stainless. They could be right.
But, sometimes inaccurate rumors get spread and get intermingled with truth.

Jerry

4188. Re: Modification to antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 14:24:13 UTC
From: Vito <vito@crosslink.net>
Message-ID: <40d1a98f$0$7810@dingus.crosslink.net>
Source record: 93243

"JJ" <Sonbo@comcast.net> wrote in message
news:2jderjF10furlU1@uni-berlin.de...
> If I wanted to sell a device that slips over a omni antenna to make it
more
> directional, would I need to get some sort of approval from the powers
that
> be ?
>
>
YES! You must send everyone on this NG (the powers that be) $100. (c:

4189. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 14:44:33 UTC
From: richardharrison@webtv.net
Message-ID: <25954-40D1AE51-59@storefull-3252.bay.webtv.net>
Source record: 93244

Cecil, W5DXP wrote:
"There is nothing at the mouth of the stub capable of causing
reflections. All the reflections occur at the shorted end of the stub."

Correct, if the generator matches Zo. In any case, Zo limits current on the transmission line until a reflection from the mismatched load arrives back at the line input to change the impedance seen by the generator. Then, the current delivered by the generator will depend on the generator`s match to the new impedance caused by the reflection after a few iterations.

Another view of the mismatched line is to ignore what the transmitter can deliver into any load. Then, the forward and reflected waves simply cause a current in each direction depending on the strength and the current allowed by Zo.

Transmission lines are tyrannical in forcing current in a particular direction to adhere to the Zo voltage to current ratio. That`s the reason a junction between lines of differing impedances produce a reflection. The line from the source contains a voltage wave and a current wave conforming to Zo. The line of a different impedance connected to the line from the source accepts alll the voltage or current available to it which leaves a surplus of either voltage or current that must be reflected back toward its source. The source line is no less dictatorial about its Zo to the reflection than it is to the incident wave.

Best regards, Richard Harrison, KB5WZI

4190. Re: Hardline useage, pro's and cons

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 15:53:37 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <58jAc.52984$tH1.2381444@twister.southeast.rr.com>
Source record: 93246

"aunwin" <aunwin@insightbb.com> wrote in message
news:et%zc.115105$Ly.34531@attbi_s01...
> I have a lot of hardline coax that I use for many things. I have some in
> present use as a large value inductance because of its flexibility in
> winding. I have now read that a wound inductance should have a smooth
> surface ! Why is this? Does the corrugations of the outer surface
introduce
> facters that overide
> the mechanical advantages of flexibility?
> Regards
> Art
>
>

The corrugations may add length and inductance that is difficult to account.. Otherwise it is something I have never given much thought to as I have always used smooth materials to wind coils. I have noticed that when using a threaded rod for a radiator on 2 M the antenna worked out to be a little shorter than expected.

4191. Re: Modification to antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 15:58:44 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <casf3kcm1@sparta.btinternet.com>
Source record: 93245

> If I wanted to sell a device that slips over a omni antenna to make it
more
> directional, would I need to get some sort of approval from the powers
that
> be ?
>
==========

ANYTHING which slips over an omni-directional antenna will make it more
directional. You can't have net negative directivity.

Where are your customers?

4192. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 16:34:55 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <PKjAc.1329$RO3.1155@newssvr23.news.prodigy.com>
Source record: 93248

Microwave waveguide is just an infinite number of 1/4 wave stubs connected
mount to mouth.

--
73
Hank WD5JFR
"Richard Harrison" <richardharrison@webtv.net> wrote in message
news:25954-40D1AE51-59@storefull-3252.bay.webtv.net...
> Cecil, W5DXP wrote:
> "There is nothing at the mouth of the stub capable of causing
> reflections. All the reflections occur at the shorted end of the stub."
>
> Correct, if the generator matches Zo. In any case, Zo limits current on
> the transmission line until a reflection from the mismatched load
> arrives back at the line input to change the impedance seen by the
> generator. Then, the current delivered by the generator will depend on
> the generator`s match to the new impedance caused by the reflection
> after a few iterations.
>
> Another view of the mismatched line is to ignore what the transmitter
> can deliver into any load. Then, the forward and reflected waves simply
> cause a current in each direction depending on the strength and the
> current allowed by Zo.
>
> Transmission lines are tyrannical in forcing current in a particular
> direction to adhere to the Zo voltage to current ratio. That`s the
> reason a junction between lines of differing impedances produce a
> reflection. The line from the source contains a voltage wave and a
> current wave conforming to Zo. The line of a different impedance
> connected to the line from the source accepts alll the voltage or
> current available to it which leaves a surplus of either voltage or
> current that must be reflected back toward its source. The source line
> is no less dictatorial about its Zo to the reflection than it is to the
> incident wave.
>
> Best regards, Richard Harrison, KB5WZI
>

4193. To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 16:43:05 UTC
From: arrow146@aol.com
Message-ID: <20040617124305.16791.00000078@mb-m20.aol.com>
Source record: 93249

Remember back when some said my Open Stub J-pole (OSJ) design
Would not work very well.
Just take a look at 25 reviews at
<A HREF="http://www.eham.net/reviews/detail/1613">eHam.net Reviews - OSJ Model
J146/440</A>
or
http://www.eham.net/reviews/detail/1613

See if you can find the ONE review that did not give it a
5 out of 5 rating.

Changing the way J-Poles are made, "Simply the Best"

73 Al Lowe N0IMW
ArrowAntenna.com

4194. Re: Hardline useage, pro's and cons

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 17:31:03 UTC
From: notvalid@charter.net
Message-ID: <i5l3d0tdfbjqhml0eqbicqvgb9q1t8vvtv@4ax.com>
Source record: 93247

On Thu, 17 Jun 2004 15:53:37 GMT, "Jimmie" <Gfender@carolina
dot.rr.dot com> wrote:

> I have noticed that when
>using a threaded rod for a radiator on 2 M the antenna worked out to be a
>little shorter than expected.
>

This is very interesting! I had wondered about that myself! If
static is dissipated more efficiently on a sharp point, would an
antenna with a vertical with a needle point on the end tend to radiate
more energy in the vertical direction?

I have no clue about antenna performance in this situation. Just a
curious question really!

KI4DVI

4195. Re: aNTENNA MATERIAL

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 18:13:28 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <cblAc.55251$2o2.2861848@twister.southeast.rr.com>
Source record: 93250

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:oC1Ac.7305$Wr.2690@newsread1.news.pas.earthlink.net...
>
> "Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
> news:iY%zc.38671$wH4.2213061@twister.southeast.rr.com...
> > I want to make a 2m Yagi out of stainless steel, partly because of the
> > corrosion resistance but mostly because I have the materials on hand.
Some
> > of my friends have tried to tell me that the higher ohmic resistance of
SS
> > will make for a poor antenna. Frankly I do see that it would make any
> > significant difference. While SS has several times the resistance of AL
I
> > figure we are just comparing micro ohms to milliohms.at worst, probably
> more
> > like micro ohm to tens of micro ohms. I am a correct on these
assumptions
> or
> > should I listen to my friends.
> >
>
> If you have the materials go ahead and make the antenna. SS is just
harder
> to work with for most people and weighs more. YOu will loose some gain
but
> unless you are into very weak signal work it will not be too noticable. I
> have an 8 element quagi for the 220 mhz band I made using SS welding rods
> for the directors. It works beter than a 6 element beam I had up in the
> same place. It also works much beter than the 11 element CC antenna
that
> was also in the same place.
>
>
Actually I prefer working with SS over Al. Screws and pop rivets hold
better. I can braze/weld it easdily and SS holds up better while working on
it than Al(ie I just deformed a piece of Al while using a tubing cutter on
it, no such problem with SS. Yes I see how weight coud be a problem but will
limit this to UH/VHF antennas

4196. Re: Hardline useage, pro's and cons

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 18:40:18 UTC
From: aunwin <aunwin@insightbb.com>
Message-ID: <mAlAc.58535$eu.29601@attbi_s02>
Source record: 93251

Yes, I was wondering if would affect the inductance per unit length or maybe
adding distributed loading for the new historic design that is in the works.
I think it would take somebody well versed in 'Fields and Waves' to obtain
an authoritive answer on whether the field generation vectors would cancel
in the valleys
or bend and add to the generated field. I suppose the same question could be
applied to the use of a spring design that was then wound in a inductive
form possibly to obtain constant current flow over the physycal length as
opposed to the actual electrical length hich may well be more than 4 times
as long!
Regards
Art

"Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
news:58jAc.52984$tH1.2381444@twister.southeast.rr.com...
>
> "aunwin" <aunwin@insightbb.com> wrote in message
> news:et%zc.115105$Ly.34531@attbi_s01...
> > I have a lot of hardline coax that I use for many things. I have some
in
> > present use as a large value inductance because of its flexibility in
> > winding. I have now read that a wound inductance should have a smooth
> > surface ! Why is this? Does the corrugations of the outer surface
> introduce
> > facters that overide
> > the mechanical advantages of flexibility?
> > Regards
> > Art
> >
> >
>
> The corrugations may add length and inductance that is difficult to
> account.. Otherwise it is something I have never given much thought to as
I
> have always used smooth materials to wind coils. I have noticed that when
> using a threaded rod for a radiator on 2 M the antenna worked out to be a
> little shorter than expected.
>
>

4197. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 18:45:28 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <gjp3d0pr8vnfsmhigl1bs41os4kmajnqea@4ax.com>
Source record: 93252

On Thu, 17 Jun 2004 16:34:55 GMT, "Henry Kolesnik"
<kolesnik@sbcglobal.net> wrote:
>Microwave waveguide is just an infinite number of 1/4 wave stubs connected
>mount to mouth.

Hi Hank,

Actually, that would make a sealed cavity. Perhaps you meant cheek to
jowl?

73's
Richard Clark, KB7QHC

4198. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 18:48:23 UTC
From: JD <dixon@NOSPAMcae.ca>
Message-ID: <casp1n$mu9$1@dns3.cae.ca>
Source record: 93253

I have built 5 of these antennas for myself, family and friends based on
your webite description and all of them work wonderful. One of my club
Members even ran it thru ez nec and it looked great there too.
Thanks.
John, VE2JDR

"Arrow146" <arrow146@aol.com> wrote in message
news:20040617124305.16791.00000078@mb-m20.aol.com...
> Remember back when some said my Open Stub J-pole (OSJ) design
> Would not work very well.
> Just take a look at 25 reviews at
> <A HREF="http://www.eham.net/reviews/detail/1613">eHam.net Reviews - OSJ
Model
> J146/440</A>
> or
> http://www.eham.net/reviews/detail/1613
>
> See if you can find the ONE review that did not give it a
> 5 out of 5 rating.
>
> Changing the way J-Poles are made, "Simply the Best"
>
> 73 Al Lowe N0IMW
> ArrowAntenna.com

4199. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 19:02:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10d3qm51o2nm7bd@corp.supernews.com>
Source record: 93254

How is that possible, considering that a rectangular waveguide operates well in single mode over about a 1.5 to 1 frequency range, and has a different field distribution than a transmission line (TE01 vs TEM)?

Roy Lewallen, W7EL

Henry Kolesnik wrote:

> Microwave waveguide is just an infinite number of 1/4 wave stubs connected
> mount to mouth.
>

4200. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 19:48:56 UTC
From: tdonaly@aol.com
Message-ID: <20040617154856.10918.00000151@mb-m25.aol.com>
Source record: 93255

```
>
>On Thu, 17 Jun 2004 16:34:55 GMT, "Henry Kolesnik"
><kolesnik@sbcglobal.net> wrote:
>>Microwave waveguide is just an infinite number of 1/4 wave stubs connected
>>mount to mouth.
>
>Hi Hank,
>
>Actually, that would make a sealed cavity. Perhaps you meant cheek to
>jowl?
>
>73's
>Richard Clark, KB7QHC
>

I thought that was "cheek by jowl."
73,
Tom Donaly, KA6RUH
```

4201. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 20:12:26 UTC
From: richardharrison@webtv.net
Message-ID: <16259-40D1FB2A-249@storefull-3255.bay.webtv.net>
Source record: 93256

Henry, WD5JFR wrote:
"Microwave waveguide is just an infinite number of 1/4 wave stubs
connected mouth to mouth."

It`s true that a waveguide is the same as any number of shorted 1/4-wave shorted stubs connected in parallel. Their parallel connection between the same two points will not affect their resonant frequency. That`s why, as Richard Clark noted, if the 1/4-wave shorted stubs are circled around into the form of a closed container, it makes a resonant cavity. The diameter of the drum formed by the large number of 1/4-wave stubs has a diameter of 1/2-wavelength at the resonant frequency.

Rectangular waveguide is more or less aperoiodic down to the low frequency limit of its propagation. This occurs where its larger cross-section dimension is 1/2-wavelength. Attenuation rises as frequency through the waveghuide is lowered towards its cut-off at the 1/2-wavelength dimension. Below cut-off, attenuation is very high.

In the waveguide`s passband it is preferred to coax because air-insulated coax has about 3X the loss of waveguide. But, waveguides must be at least 1/2-wavelength wide which limits practical use to microwaves. A waveguide for 30 MHz would be at least 17 feet wide.

Best regards, Richard Harrison, KB5WZI

4202. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 21:25:36 UTC
From: jason <jas@kto.net>
Message-ID: <LToAc.792$L54.29@newsfe2-gui.server.ntli.net>
Source record: 93257

Hello,

It's always funny to see people saying, "best I have ever used" etc, what must they have used before!
It's not really a new design is it, maybe just similar to what is known as a "nest of dipoles" that scanner enthusiasts have. They use different radiating elements in parallel.

"Arrow146" <arrow146@aol.com> wrote in message news:20040617124305.16791.00000078@mb-m20.aol.com...
> Remember back when some said my Open Stub J-pole (OSJ) design
> Would not work very well.
> Just take a look at 25 reviews at
> <A HREF="http://www.eham.net/reviews/detail/1613">eHam.net Reviews - OSJ Model
> J146/440</A>
> or
> http://www.eham.net/reviews/detail/1613
>
> See if you can find the ONE review that did not give it a
> 5 out of 5 rating.
>
> Changing the way J-Poles are made, "Simply the Best"
>
> 73 Al Lowe N0IMW
> ArrowAntenna.com

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Version: 6.0.703 / Virus Database: 459 - Release Date: 10/06/2004

4203. Re: Modification to antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 21:26:33 UTC
From: jason <jas@kto.net>
Message-ID: <EUoAc.793$L54.70@newsfe2-gui.server.ntli.net>
Source record: 93258

I would love to see that! Have you got one for 1.8MHz ?

"JJ" <Sonbo@comcast.net> wrote in message
news:2jderjF10furlU1@uni-berlin.de...
> If I wanted to sell a device that slips over a omni antenna to make it
more
> directional, would I need to get some sort of approval from the powers
that
> be ?
>
>

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Version: 6.0.703 / Virus Database: 459 - Release Date: 10/06/2004

4204. Re: Modification to antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 21:27:28 UTC
From: jason <jas@kto.net>
Message-ID: <vVoAc.795$L54.211@newsfe2-gui.server.ntli.net>
Source record: 93259

WRONG, I clipped a thermos flask to my 2m slim jim and it didn't make it more directional.

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message news:casf3kcm1@sparta.btinternet.com...
> > If I wanted to sell a device that slips over a omni antenna to make it
> more
> > directional, would I need to get some sort of approval from the powers
> that
> > be ?
> >
> ==========
>
> ANYTHING which slips over an omni-directional antenna will make it more
> directional. You can't have net negative directivity.
>
> Where are your customers?
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.703 / Virus Database: 459 - Release Date: 10/06/2004

4205. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 21:29:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3734d0lnbulkrnlbjgt9qm54th0cavflik@4ax.com>
Source record: 93260

On 17 Jun 2004 19:48:56 GMT, tdonaly@aol.com (Tdonaly) wrote:
>>On Thu, 17 Jun 2004 16:34:55 GMT, "Henry Kolesnik"
>><kolesnik@sbcglobal.net> wrote:
>>>Microwave waveguide is just an infinite number of 1/4 wave stubs connected
>>>mount to mouth.
>>
>>Hi Hank,
>>
>>Actually, that would make a sealed cavity. Perhaps you meant cheek to
>>jowl?
>>
>>73's
>>Richard Clark, KB7QHC
>>
>I thought that was "cheek by jowl."

You are right.

73's
Richard Clark, KB7QHC

4206. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 21:36:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mc34d0dm05si88gkpc4cc109sgb0nea0ga@4ax.com>
Source record: 93261

On Thu, 17 Jun 2004 22:25:36 +0100, "jason" <jas@kto.net> wrote:
>maybe just similar to what is known as a
>"nest of dipoles" that scanner enthusiasts have. They use different
>radiating elements in parallel.

Hi Jason,

Not that at all, otherwise all of the elements would be driven, and simple observation negates that. I've reported a similar design to this group years ago that uses the SO-239 bulkhead connector wired up in similar fashion: One wire extending directly from the center pin solder tail, and another wire, parallel, soldered to any of the four holes normally used for mounting. No need whatever for the usual JPole tuning cap.

73's
Richard Clark, KB7QHC

4207. Re: Shorted 1/4 wave stub ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 22:04:29 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d216ae$1_8@corp.newsgroups.com>
Source record: 93262

Richard Clark wrote:

> "Henry Kolesnik" <kolesnik@sbcglobal.net> wrote:
>>Microwave waveguide is just an infinite number of 1/4 wave stubs connected
>>mount to mouth.
>
> Actually, that would make a sealed cavity.

He didn't say they were "shorted" stubs.

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4208. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 22:22:22 UTC
From: dplatt@radagast.org
Message-ID: <10d46cup0ortfab@corp.supernews.com>
Source record: 93263

In article <mc34d0dm05si88gkpc4cc109sgb0nea0ga@4ax.com>,
Richard Clark <kb7qhc@comcast.net> wrote:

>>maybe just similar to what is known as a
>>"nest of dipoles" that scanner enthusiasts have. They use different
>>radiating elements in parallel.
>
>Hi Jason,
>
>Not that at all, otherwise all of the elements would be driven, and
>simple observation negates that. I've reported a similar design to
>this group years ago that uses the SO-239 bulkhead connector wired up
>in similar fashion: One wire extending directly from the center pin
>solder tail, and another wire, parallel, soldered to any of the four
>holes normally used for mounting. No need whatever for the usual
>JPole tuning cap.

There's an analysis of a similar design on Cebik's web site - his
"non-standard J-pole" is a bottom-fed, non-shorted design with a
shorter-than-usual radiating section and a longer-than-usual matching
leg.

http://www.cebik.com/jp1.html

It looks to me as if the Arrow design has similar element lengths to
the one which Cebik models. The Arrow trick of using one element as
the matching leg for 2-meter and as the radiator for 440 is a slick
one.

Everyone I've spoken with who has used an Arrow 146/440 J-pole has
been very happy with it.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4209. FS Rohn Tower Sections

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 22:42:13 UTC
From: wrhood@exis.net
Message-ID: <40d21e11.8079725@news.exis.net>
Source record: 93264

Rohn 25G Tower sections - Nine (9) each 10 Ft. sections only of 25G,
no bolts or nuts (NO RUST) galvanized, guyed tower. (New cost $89.99
each plus $20 freight each) each $36.00
Pickup in Chesapeake, Va. 23323 Call (757)487-0357 or e-mail
<wrhood@exis.net>

Rohn 25AG2 Tower Top sections - Two (2) each 10 Ft. sections
only of 25AG2, no bolts or nuts (NOT 9 Ft LIKE NEW ONES) (New cost
$120.00 each plus $20 freight each) each $40.00
Pickup in Chesapeake, Va. 23323. Call (757)487-0357 or
e-mail <wrhood@exis.net>

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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4210. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 22:43:08 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cat6ps$1sl$1@sparta.btinternet.com>
Source record: 93265

ANYTHING will work!

The question arises how WELL will it work?

Without quantification, statements are meaningless.

Specially when the weakest parameters are not mentioned in specifications
and are not discussed amongst the biassed-in-favour so-called judges.

4211. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-17 23:32:17 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <5s94d0hjl0mhvuqcrkukuuqviqiupcvbl1@4ax.com>
Source record: 93266

On Thu, 17 Jun 2004 22:22:22 -0000, dplatt@radagast.org (Dave Platt)
wrote:

>>Hi Jason,
>>
>>Not that at all, otherwise all of the elements would be driven, and
>>simple observation negates that. I've reported a similar design to
>>this group years ago that uses the SO-239 bulkhead connector wired up
>>in similar fashion: One wire extending directly from the center pin
>>solder tail, and another wire, parallel, soldered to any of the four
>>holes normally used for mounting. No need whatever for the usual
>>JPole tuning cap.
>
>There's an analysis of a similar design on Cebik's web site - his
>"non-standard J-pole" is a bottom-fed, non-shorted design with a
>shorter-than-usual radiating section and a longer-than-usual matching
>leg.
>
>http://www.cebik.com/jp1.html
>

Hi Jason, Dave,

A repeat of a subset of data offered here 5 and 7 years ago from data
measured at the bench 12 years ago:

... built up from 0.085" diameter bronze tubing. In each case, the
center connection is brought out 13 inches.... with one vertical
element that paralleled the main element with a constant separation of
0.5 inch.

The variation of the second rod is called "Match Length" in the chart

Radiator Match Fo SWR
Length Length MHz 50 Ohm

13.0 6.0 485 2.8
13.0 5.75 548 2.3
13.0 5.5 556 1.8
13.0 5.25 576 1.8 (545-630 < 3:1)
13.0 5.0 624.5 1.48 (575-640 < 2:1)
13.0 4.75 638 1.08 (640-660 < 2:1)

73's
Richard Clark, KB7QHC

4212. Re: source for solid copper #10 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 00:05:40 UTC
From: Russ <carlzomer@hotmail.com>
Message-ID: <hac4d01hvbi75voj84sdk70tpirm6v5bhe@4ax.com>
Source record: 93267

On Wed, 16 Jun 2004 06:00:49 -0400, "Edward A. Feustel"
<edward.feustel@dartmouth.edu> wrote:

>
>"John Shadle" <shadle@email.unc.edu> wrote in message
>news:Pine.A41.4.44+UNC.0406151103310.36000-100000@login0.isis.unc.edu...
>> I'm trying to complete an antenna project and was wondering if anyone knew
>> of a source for bare, solid copper #10 AWG.
>>
>> Thanks in advance,
>> -john, W4PAH
>>
>Do you really want to use solid copper in the antenna? It stretches!
>For a long antenna, copperweld would be much better!
>
>Ed, N5EI
>

I actually have met John and spoke with him in person about this on
Monday night. The wire is for a small 2M beam for DFing. It needs to
be quite stiff and increased diameter will make for better B/W.

Russ - kf4wxd

4213. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 03:41:45 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <ZvtAc.3733$rf7.1198@lakeread02>
Source record: 93268

"mike sebring" <msebring@kpunet.net> wrote in message
news:aIidnaHhosl2AUzdRVn-iQ@scnresearch.com...
> I live in S.E. Alaska on an island that is about 99% solid rock and i am
> wondering what would be a good way to get an effective ground for my rig
and
> my antennas.
> I have tried to drive a 4' ground rod in the ground and it will only go
down
> about a foot and a half till it hits solid rock.
> I have considered just burying several strands of heavy bare copper wire
and
> using that for my ground.
> Any sugjestions????
> Thanks for any help any of you can give me.
>
> EX WB8RSH soon to be KL7???
>
> Mike
>

Mike, don't even bother with burying anything then, use above ground
radials. Others here have run tests of various heights above ground, from on
it up to the antenna itself. Many seemed to work quite well if I recall.
Maybe someone in the group could model an idea of your available design. For
other applications you could also use a tuned(tuner) counterpoise.

Best,

Jack Painter
Virginia Beach, VA

4214. best stealth antenna for a 50 foot tree?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 05:33:16 UTC
From: eternalsquire@comcast.net
Message-ID: <904dab11.0406172133.586c6e39@posting.google.com>
Source record: 93269

Hi,

I'm moving again, this time to an apartment complex where formally antennas are forbidden but informally the apartment management doesn't mind shortwave listening so long as the antenna is discreet and has no permanent attachment. The good news is that it is on the ground floor, and my window is only a few feet away from a 50 foot acacia tree. I live in a desert environment, and so the acacia is extremely straight with short branches (but LOTS of thorns!).

I need to keep the antenna as inconspicuous as possible, and I have the informal nod from my apartment management so long as I keep my promise that the wire will be invisible beyond about 2-3 feet. I'm planning on using number 30 kynar wire-wrap wire with insulation color as closely matched to the tree or to the apartment housing walls as possible. I'm not intending to operate more than about 20-50 watts.

I'm thinking the best idea is a wire vertical as high up in the tree as possible, or possibly an interted vee. How much base would I need for an effective inverted vee, anyway? For counterpoise, there is a long thin metal strip landscaping barrier extending for at least 100 feet in either direction, which is about 10 feet away from the acacia tree. One side of the strip contacts sandy soil, the other side of the strip contacts lawn.

I could anchor the inverted vee to the bases of a couple 30 foot trees on either side of the acacia that are about 10 feet away. Or, I could simply anchor the kynar wire with a pushpin to the base of the acacia and feet with buried submini coax to my window a few feet away.

I'm a little bit scared of using a slingshot to throw a wire into an acacia tree, because the branches are so short. Would it be feasable to slide multiple sections of PVC rod along the side of the tree just to gently place sinker over the top branch?

So, I have a decision to make, but I am not sure which would be the best one.
I am surrounded by many houses and lots of trees, which could get in the way of the signal.

Please advise,

The Eternal Squire

4215. Re: best stealth antenna for a 50 foot tree?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 06:21:29 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <qg15d0td1s30vv1sm89f9lkuim9hl527rd@4ax.com>
Source record: 93270

On 17 Jun 2004 22:33:16 -0700, eternalsquire@comcast.net (The Eternal Squire) wrote:
>I need to keep the antenna as inconspicuous as possible, and I have
>the informal nod from my apartment management so long as I keep my
>promise that the wire will be invisible beyond about 2-3 feet. I'm
>planning on using number 30 kynar wire-wrap wire with insulation color
>as closely matched to the tree or to the apartment housing walls as
>possible. I'm not intending to operate more than about 20-50 watts.

It will be fragile, but the difference between it an #12 hardly amounts to more than a half dB.

>For counterpoise, there is a
>long thin metal strip landscaping barrier extending for at least 100
>feet in either direction, which is about 10 feet away from the acacia
>tree. One side of the strip contacts sandy soil, the other side of
>the strip contacts lawn.

Sounds fine.

>I could anchor the inverted vee to the bases of a couple 30 foot trees
>on either side of the acacia that are about 10 feet away. Or, I could
>simply anchor the kynar wire with a pushpin to the base of the acacia
>and feet with buried submini coax to my window a few feet away.

A variation, but perhaps too elaborate for not much gained.

>I'm a little bit scared of using a slingshot to throw a wire into an
>acacia tree, because the branches are so short.

I can't see any downside to this except you could over-power the wire and snap it sending the weight flying beyond its intended target. It is VERY easy to snag a loop as it climbs up and if the wire holds, you could find that weight recoiled into your kisser (been there).

The right way is to scramble fill a bucket with loose loops of wire (or monofilament, or braided nylon - NOT twisted). The bucket serves as a low friction feed and the random fill of loops keeps snags to a minimum.

>Would it be feasable
>to slide multiple sections of PVC rod along the side of the tree just
>to gently place sinker over the top branch?

Not if you want to be inconspicuous about it. ;-)
Your neighbors will appreciate the humor in the old joke about one-armed paper hangers.

>So, I have a decision to make, but I am not sure which would be the
>best one.
>I am surrounded by many houses and lots of trees, which could get in
>the way of the signal.

This is NOT a problem for HF. (Simply because there is nothing you
can do about it anyway. In terms of real numbers, ï¿½3dB, it is still
no particular problem.)

73's
Richard Clark, KB7QHC

4216. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 06:34:02 UTC
From: jcooper874@webtv.net
Message-ID: <17598-40D28CDA-293@storefull-3273.bay.webtv.net>
Source record: 93171

can you build a copper pipe beam ant

4217. Re: Interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 08:59:04 UTC
From: David J Windisch <davidw@copper.net>
Message-ID: <40d2af2b_2@newsfeed.slurp.net>
Source record: 93172

Hi, Richard:
The very best crab cakes are made from backfin lumps. Sorta like "tuna" and
"albacore tuna". As for terse-ness, I'm a silent mic.
73, Dave, N3HE

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:rhroc0lq7tlv4g18t8pg35feuenvms86ib@4ax.com...
> On Sun, 13 Jun 2004 05:34:16 -0400, "David J Windisch"
> <davidw@copper.net> wrote:
> >Backfin lumps, OM?
> >> chowder to confirm your observation (makes me glad I abandoned that
> >> metaphor for excellent Chesapeake Crab Cakes).
>
> Hi Dave,
>
> Sorry, but that was too terse.
>
> I wasn't in D.C. but for a short event. It was not long enough to
> sample the full gustatorial offerings of the region - if that was the
> implication. Also managed to run across a bottle of my favorite Rhum
> St. James. (Should'a brought a bottle of that back to read this
> thread through its bottom.)
>
> 73's
> Richard Clark, KB7QHC

4218. Re: W7FG "True" Ladder-Line vs. 450 Ohm?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 10:59:07 UTC
From: "Edward A. Feustel" <edward.feustel@dartmouth.edu>
Message-ID: <cauhu2$74k$1@merrimack.Dartmouth.EDU>
Source record: 93174

"Bert Craig" <wa2si@arrl.netNOSPAM> wrote in message
news:O35Ac.8444$0b.6635870@news4.srv.hcvlny.cv.net...
> The subject line sez it all. Is there any noticable difference? #14
stranded
> copper 450 ribbon type vs.
>
> http://www.w7fg.com/ant.htm
>
> Thanks in advance.
>
> --
> 73 de Bert
> WA2SI
>
>
I am using the W7fg line. In my opinion its major advantage is the teflon
insulation.
I might note that the horizontal part of the160 Meter doublet which uses the
16 ga wire
(about 240 feet + feed) broke many times at the insulators . I replaced the
doublet part with #10 copperweld and so far no problems. This could have
been because of high winds, attachment to
trees (even with pulleys and weights). This was inconvenient to say the
least.
No problem with the feed line however.
Ed, N5EI

4219. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 11:49:26 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d2d808$1_4@corp.newsgroups.com>
Source record: 93173

nospam@nouce.bellatlantic.net wrote:
> I have two. They do work and their performance is no different than
> and other end fed halfwave, as expected and as modeled.

Al gave me one for testing many years ago. Using my Palomar FS1,
it tested out better than a 1/4WL and equal to a vertical dipole.
I also modeled it using EZNEC with the same results. It is still
going strong although, after a decade, the plastic end caps have
cracked in the AZ and TX sun. Honestly, that's the only criticism
I can think of. Those end caps are of only cosmetic value.
--
73,

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4220. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 15:16:36 UTC
From: arrow146@aol.com
Message-ID: <20040618111636.10918.00000177@mb-m25.aol.com>
Source record: 93175

<< Subject: Re: To those that said it would not work
From: nospam@nouce.bellatlantic.net
Date: 17, Thursday June, 2004 8:22 PM
Message-id: <mtn4d05toavmvj939362pqhtko6dit7cc8@4ax.com>
Hi Al,

>I have two. They do work and their performance is no different than
>and other end fed halfwave, as expected and as modeled. Also side by
>side with monoband plumber specials(1/2 cu pipe designs) it is a
>match, as in no difference. One I use for semiportable ops as it's
>dual band and easy to mount up on a portable tripod and 15ft of
>masting.

>Allison KB1gmx >>

On 17 Jun 2004 16:43:05 GMT, arrow146@aol.com (Arrow146) wrote:
As long a the copper pipe one is made correctly and has a choke
to cut down on common mode currents. And if the connections are
good, etc. And you don't mind the narrow band width.

Your right, a 1/2 wave is a 1/2 is a 1/2 wave. All have 0 dBd.

73 Al Lowe N0IMW
ArrowAntenna.com

4221. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 15:18:08 UTC
From: arrow146@aol.com
Message-ID: <20040618111808.10918.00000178@mb-m25.aol.com>
Source record: 93176

```
<< Subject: Re: To those that said it would not work
From: jcooper874@webtv.net
Date: 17, Thursday June, 2004 11:34 PM
Message-id: <17598-40D28CDA-293@storefull-3273.bay.webtv.net>

<can you build a copper pipe beam ant >>

Why would I want to ?

73 Al Lowe N0IMW
ArrowAntenna.com
```

4222. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 16:28:38 UTC
From: wildboy74@webtv.net
Message-ID: <23311-40D31836-71@storefull-3276.bay.webtv.net>
Source record: 93177

why you a cry baby .

4223. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 16:52:56 UTC
From: W4UDX <w4udx@bellsouth.net>
Message-ID: <03FAc.233$xg1.129@bignews6.bellsouth.net>
Source record: 93178

I bet they didn't have a rubber antenna with a BNC connector....

"Cecil Moore" <w5dxp@hotmail.com> wrote in message
news:40d0f0c8$1_2@corp.newsgroups.com...
> W4UDX wrote:
> > Forgot to mention.... it kinda reminded me of when that one guy who was
> > looking for a 160M HT...
>
> We had quite a few 160M HT's right after WWII, thanks to MARS
> and military surplus equipment.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4224. Re: best stealth antenna for a 50 foot tree?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 17:29:10 UTC
From: j999w@aol.com
Message-ID: <20040618132910.29549.00000163@mb-m16.aol.com>
Source record: 93179

I just put a wire into a 70ft high oak tree with a slingshot and fishing rod. Place the fishing line over the target branch then pull up some nylon twine. You can use that to pull up the final wire. It may take you several shots to get it where you want, so just use some old nuts and bolts for weight. Forget the coax and run the wire straight into your antenna tuner.

Just worked KH6 on 40cw last night with 100w ... works great!

jw
K9RZZ
Milwaukee

4225. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 18:28:08 UTC
From: tdonaly@aol.com
Message-ID: <20040618142808.19394.00000191@mb-m04.aol.com>
Source record: 93180

W4UDX wrote,
>Message-id: <03FAc.233$xg1.129@bignews6.bellsouth.net>
>
>I bet they didn't have a rubber antenna with a BNC connector....
>
>
>"Cecil Moore" <w5dxp@hotmail.com> wrote in message
>news:40d0f0c8$1_2@corp.newsgroups.com...
>> W4UDX wrote:
>> > Forgot to mention.... it kinda reminded me of when that one guy who was
>> > looking for a 160M HT...
>>
>> We had quite a few 160M HT's right after WWII, thanks to MARS
>> and military surplus equipment.
>> --
>> 73, Cecil http://www.qsl.net/w5dxp
>>
>>
>>
>> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----
>

They were probably called "walkie-talkies," too. Who thinks up the names
for things like this?
73,
Tom Donaly, KA6RUH

4226. Re: source for solid copper #10 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 22:45:06 UTC
From: Sylvan Butler <Znospam+noZs_0406@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrncd6s3i.h8c.Znospam+noZs_0406@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 93181

On Fri, 18 Jun 2004 00:05:40 GMT, Russ <carlzomer@hotmail.com> wrote:
> I actually have met John and spoke with him in person about this on
> Monday night. The wire is for a small 2M beam for DFing. It needs to
> be quite stiff and increased diameter will make for better B/W.

"quite stiff" as in self-supporting? Don't want plain copper wire
then. Even #10 copper wire will barely self-support in lengths
suitable for 2m antenna. Any weather or bump and your antenna will
need to be straightened. In the same aisle at the hardware store
they probably have bare copper up to #4 or #2. Much stronger. And
not much more money in the quantity needed for a small 2m beam.

He may want to consider using 1/4" soft copper tubing for the
greater diameter. One could, I imagine, fill the tubing with
something if it needed to be self-supporting. Or else just use
small diameter rigid tubing.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

4227. Re: source for solid copper #10 AWG

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-18 23:06:42 UTC
From: dplatt@radagast.org
Message-ID: <10d6tc2sbu78ab3@corp.supernews.com>
Source record: 93182

In article <slrncd6s3i.h8c.Znospam+noZs_0406@hpb13799Z.Zboi.hpZ.com.invalid>,
Sylvan Butler <Znospam+noZs_0406@hpb13799Z.Zboi.hpZ.com.invalid> wrote:

>He may want to consider using 1/4" soft copper tubing for the
>greater diameter. One could, I imagine, fill the tubing with
>something if it needed to be self-supporting. Or else just use
>small diameter rigid tubing.

Agreed. I'd be tempted to try brass tubing, available from good hobby
shops - it's light and rigid.

There are some very effective DF/foxhunt antenna designs on the Web
for which the elements are pieces cut out of a scrapped steel
measuring tape. The material is light, quite stiff when it snaps out
into shape, and can survive numerous whacks and bends without
suffering permanent deformation. I'm sure its electrical losses are a
good deal higher than for copper, but unless you're DF'ing really weak
signals I doubt that this would be a problem. Just make sure you put
some sort of protective coating or cap over the cut ends... they're
sharp and could easily scratch / cut / put-out-an-eye!

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4228. Re: best stealth antenna for a 50 foot tree?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 01:14:59 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406181714.7220d8fc@posting.google.com>
Source record: 93183

eternalsquire@comcast.net (The Eternal Squire) wrote in message
news:<904dab11.0406172133.586c6e39@posting.google.com>...
> Hi,
>
> I'm moving again, this time to an apartment complex where formally
> antennas are forbidden but informally the apartment management doesn't
> mind shortwave listening so long as the antenna is discreet and has no
> permanent attachment. The good news is that it is on the ground
> floor, and my window is only a few feet away from a 50 foot acacia
> tree. I live in a desert environment, and so the acacia is extremely
> straight with short branches (but LOTS of thorns!).
>
> I need to keep the antenna as inconspicuous as possible, and I have
> the informal nod from my apartment management so long as I keep my
> promise that the wire will be invisible beyond about 2-3 feet. I'm
> planning on using number 30 kynar wire-wrap wire with insulation color
> as closely matched to the tree or to the apartment housing walls as
> possible. I'm not intending to operate more than about 20-50 watts.
>
> I'm thinking the best idea is a wire vertical as high up in the tree
> as possible, or possibly an interted vee. How much base would I need
> for an effective inverted vee, anyway? For counterpoise, there is a
> long thin metal strip landscaping barrier extending for at least 100
> feet in either direction, which is about 10 feet away from the acacia
> tree. One side of the strip contacts sandy soil, the other side of
> the strip contacts lawn.
>
> I could anchor the inverted vee to the bases of a couple 30 foot trees
> on either side of the acacia that are about 10 feet away. Or, I could
> simply anchor the kynar wire with a pushpin to the base of the acacia
> and feet with buried submini coax to my window a few feet away.
>
> I'm a little bit scared of using a slingshot to throw a wire into an
> acacia tree, because the branches are so short. Would it be feasable
> to slide multiple sections of PVC rod along the side of the tree just
> to gently place sinker over the top branch?
>
> So, I have a decision to make, but I am not sure which would be the
> best one.
> I am surrounded by many houses and lots of trees, which could get in
> the way of the signal.
>
> Please advise,
>

> The Eternal Squire

No comment here on the installation and configuration issues which Mr. Clarke addressed quite adequately but with respect to the wire itself you might consider a look at a very durable #26 "thornproof" (it sez here) and near-invisible alternative:

http://www.thewireman.com/wire.html

Product #534

w3rv

4229. High SWR on scout 555

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 02:33:12 UTC
From: nightowls627@aol.comnojunk
Message-ID: <20040618223312.05704.00000139@mb-m27.aol.com>
Source record: 93184

Good evening to all. I just received a ten tec scout 555 and hooked it up to my 58 foot attic dipole through an MFJ 901b and RS swr/pwr meter. On the rs meter I am reading infinity for swr at roughly 30 watts on cw (really only mode I use) on 40 meters. On the scout meter, I am reading at most, 2:0. Now the scout has an adjustment on the bottom for power. With the radio on, into a dummy load, as I increase wattage, swr goes up and the ALC light goes out. I am not sure how to explain this but . . . when I try to tune the rig through the tuner, the meter light dims and a lot of humming is heard through the phones. The cw tone is purest when I am running about 8 watts. There is no hum, no dimming light, and the ALC light remains lit. Basically, do I need to get a better tuner, power supply(rs 3A ps in currently in use), or something else. Thanks for any opinions.

73
Greg
ki4bbl@arrl.net

4230. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 03:02:31 UTC
From: Helmut <MyCallSign@qsl.net>
Message-ID: <cb0ac7vjt01$1@news.t-online.com>
Source record: 93185

Al, where can I get that piece here in Europe??
How about the different Frequency range for our Region? 144-146 and 430 - 440?

73 de OE8SOQ
Helmut

"Arrow146" <arrow146@aol.com> schrieb im Newsbeitrag
news:20040618111636.10918.00000177@mb-m25.aol.com...
| << Subject: Re: To those that said it would not work
| From: nospam@nouce.bellatlantic.net
| Date: 17, Thursday June, 2004 8:22 PM
| Message-id: <mtn4d05toavmvj939362pqhtko6dit7cc8@4ax.com>
| Hi Al,
|
| >I have two. They do work and their performance is no different than
| >and other end fed halfwave, as expected and as modeled. Also side by
| >side with monoband plumber specials(1/2 cu pipe designs) it is a
| >match, as in no difference. One I use for semiportable ops as it's
| >dual band and easy to mount up on a portable tripod and 15ft of
| >masting.
|
| >Allison KB1gmx >>
|
| On 17 Jun 2004 16:43:05 GMT, arrow146@aol.com (Arrow146) wrote:
| As long a the copper pipe one is made correctly and has a choke
| to cut down on common mode currents. And if the connections are
| good, etc. And you don't mind the narrow band width.
|
| Your right, a 1/2 wave is a 1/2 is a 1/2 wave. All have 0 dBd.
|
| 73 Al Lowe N0IMW
| ArrowAntenna.com

4231. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 03:18:32 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d3b1cd_8@corp.newsgroups.com>
Source record: 93186

W4UDX wrote:
> I bet they didn't have a rubber antenna with a BNC connector....

Heh, heh, I'll bet you're right. The one I had was about two
feet long plus a telescoping antenna and loading coil.
Batteries were the biggest problem for me at the time.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

4232. Re: best stealth antenna for a 50 foot tree? lol at this u dont do

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 07:30:27 UTC
From: jcooper874@webtv.net
Message-ID: <24167-40D3EB93-5@storefull-3274.bay.webtv.net>
Source record: 93187

lol at my story . the first time i put a wire in a small tree i took a
piece of iron and run my string threw it .so i threw the iron up over
the tree sailed across the tree hit my friends suv he was on
his cell phone he came out of is suv scared the crap out of him he
said what the hell hit my suv . so i had to explain to him what i
was doing lucky the dint was not bad

http://community.webtv.net/jcooper874/doc
click here
http://community.webtv.net/jcooper874/haveagreatday

http://community.webtv.net/jcooper874/doc0

4233. How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 09:05:46 UTC
From: "Paul (Home) News" <pmcmahon@telstra.com>
Message-ID: <KITAc.43499$sj4.34204@news-server.bigpond.net.au>
Source record: 93188

Hi,
I have done quite a bit of numerical analysis of VHF Yagi's with usually very good agreement between theory and performance at least for gain and pattern. One of the things that seems more difficult to correctly predict however is the input impedance, and thus to design some sort of a match without some sort of subsequent trial and error. In an effort to explore the differences further I have been looking at ways of measuring the impedance directly rather than indirectly by vswr with the matching in place. I have made a number of different return loss bridges, and even tried the technique described in an old Ham Radio Article where you take two VSWR readings with and without an added series resistance. All of course making allowances for coax length etc. The problem I have is all of them give, in some cases wildly, different answers even when used on the same antenna. So my questions are:

What sort of accuracy can I expect from these sorts of methods?

Is there a better way (which doesn't involve large sums of money) to measure antenna impedance at say 146Mhz?

Thanks

Paul VK3DIP

4234. Re: High SWR on scout 555

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 10:30:51 UTC
From: KC1DI <elbc2@gwi.net>
Message-ID: <7Y-dnSMBt5xDiEnd4p2dnA@gwi.net>
Source record: 93189

Greg Doughty wrote:
> Good evening to all. I just received a ten tec scout 555 and hooked it up to
> my 58 foot attic dipole through an MFJ 901b and RS swr/pwr meter. On the rs
> meter I am reading infinity for swr at roughly 30 watts on cw (really only mode
> I use) on 40 meters. On the scout meter, I am reading at most, 2:0. Now the
> scout has an adjustment on the bottom for power. With the radio on, into a
> dummy load, as I increase wattage, swr goes up and the ALC light goes out. I
> am not sure how to explain this but . . . when I try to tune the rig through
> the tuner, the meter light dims and a lot of humming is heard through the
> phones. The cw tone is purest when I am running about 8 watts. There is no
> hum, no dimming light, and the ALC light remains lit. Basically, do I need to
> get a better tuner, power supply(rs 3A ps in currently in use), or something
> else. Thanks for any opinions.
>
>
> 73
> Greg
> ki4bbl@arrl.net

Hi Greg,

The Scout is very fussy about it's power supply you need one capable of
at least 10 amps. Also it very fussy about the voltage underload it
will act up whenever the voltage drops to about 11 or 12 volts. This
would be my first step. Get a better power supply I used a scout for
many years it's a great little rig. And the folks at Ten Tec are supper
at helping you out. So if the problem persists after you've upgrade the
power source give them a call.

73 Dave

4235. Re: High SWR on scout 555

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 13:29:26 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <4of8d0h5taemq9eahuj1ff1lrq2q9p4aau@4ax.com>
Source record: 93190

On Sat, 19 Jun 2004 06:30:51 -0400, KC1DI <elbc2@gwi.net> wrote:

>Greg Doughty wrote:
>> Good evening to all. I just received a ten tec scout 555 and hooked it up to
>> my 58 foot attic dipole through an MFJ 901b and RS swr/pwr meter. On the rs
>> meter I am reading infinity for swr at roughly 30 watts on cw (really only mode
>> I use) on 40 meters. On the scout meter, I am reading at most, 2:0. Now the
>> scout has an adjustment on the bottom for power. With the radio on, into a
>> dummy load, as I increase wattage, swr goes up and the ALC light goes out. I
>> am not sure how to explain this but . . . when I try to tune the rig through
>> the tuner, the meter light dims and a lot of humming is heard through the
>> phones. The cw tone is purest when I am running about 8 watts. There is no
>> hum, no dimming light, and the ALC light remains lit. Basically, do I need to
>> get a better tuner, power supply(rs 3A ps in currently in use), or something
>> else. Thanks for any opinions.
>>
>>
>> 73
>> Greg
>> ki4bbl@arrl.net
>
>Hi Greg,
>
>The Scout is very fussy about it's power supply you need one capable of
>at least 10 amps. Also it very fussy about the voltage underload it
>will act up whenever the voltage drops to about 11 or 12 volts. This
>would be my first step. Get a better power supply I used a scout for
>many years it's a great little rig. And the folks at Ten Tec are supper
>at helping you out. So if the problem persists after you've upgrade the
>power source give them a call.
>
>73 Dave

Also, try someone other than RS for your supply :-) You want one
that's filtered against hash -- a quiet supply appropos for
communications gear. See your local ham dealer or places like AES or
HRO.

Bob
k5qwg

4236. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 15:13:33 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb1l6t$6qa$1@titan.btinternet.com>
Source record: 93191

"Paul (Home) News" wrote
> I have done quite a bit of numerical analysis of VHF Yagi's with usually
> very good agreement between theory and performance at least for gain and
> pattern. One of the things that seems more difficult to correctly predict
> however is the input impedance, and thus to design some sort of a match
> without some sort of subsequent trial and error. In an effort to explore
the
> differences further I have been looking at ways of measuring the impedance
> directly rather than indirectly by vswr with the matching in place. I have
> made a number of different return loss bridges, and even tried the
technique
> described in an old Ham Radio Article where you take two VSWR readings
with
> and without an added series resistance. All of course making allowances
for
> coax length etc. The problem I have is all of them give, in some cases
> wildly, different answers even when used on the same antenna. So my
> questions are:
>
> What sort of accuracy can I expect from these sorts of methods?
>
> Is there a better way (which doesn't involve large sums of money) to
measure
> antenna impedance at say 146Mhz?
>
> Thanks
>
> Paul VK3DIP

==========
Paul,

Attempts to accurately determine antenna input impedance, using an
inherently ambiguous, innacurate SWR meter at the transmitter end of a line
of uncertain length and velocity, are doomed to failure.

Never expect to obtain numbers worthy of serious engineering application.
There are far too many uncertainties of unknown magnitudes.

The only way of obtaining an accurate measurement is to climb a ladder
taking with you an R plus or minus jX hand-held impedance bridge. Can you
borrow one ?

But why do you wish to know antenna input impedance when you are aleady
quite happy with using an inaccurate SWR meter to fiddle a 1-to-1 SWR at the
transmitter end.

The ultimate objective, of course, is just to obtain a 50-ohm load for the transmitter regardless of what the SWR and antenna impedance might be.

Reg, G4FGQ

4237. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 16:00:23 UTC
From: "David.Shrader" <Deacon_Dave@comcast.net>
Message-ID: <rqZAc.57026$Hg2.5940@attbi_s04>
Source record: 93192

The input impedance can be measured reasonably well at ground level.

Align the antenna so that the reflector is 'down' and the last director
is 'up'. Ground effects are minimized due to the F/B of the antenna. The
antenna is radiating straight 'up'.

Next take a 1 wavelength, allowing for velocity factor, coax line and
connect it to the antenna feedpoint.

Finally, beg, borrow, requisition, pilfer, rustle, etc., an antenna
analyzer similar to the MFJ 259B. Connect it to the other end of the 1
wavelength coax.

Select the function to read impedance. Dial in your frequency and read
the impedance.

A one minute job once the antenna, coax and meter are at hand.

+ + +

Paul (Home) News wrote:

> Hi,
> I have done quite a bit of numerical analysis of VHF Yagi's with usually
> very good agreement between theory and performance at least for gain and
> pattern. One of the things that seems more difficult to correctly predict
> however is the input impedance, and thus to design some sort of a match
> without some sort of subsequent trial and error. In an effort to explore the
> differences further I have been looking at ways of measuring the impedance
> directly rather than indirectly by vswr with the matching in place. I have
> made a number of different return loss bridges, and even tried the technique
> described in an old Ham Radio Article where you take two VSWR readings with
> and without an added series resistance. All of course making allowances for
> coax length etc. The problem I have is all of them give, in some cases
> wildly, different answers even when used on the same antenna. So my
> questions are:
>
> What sort of accuracy can I expect from these sorts of methods?
>
> Is there a better way (which doesn't involve large sums of money) to measure
> antenna impedance at say 146Mhz?
>
> Thanks
>
> Paul VK3DIP
>
>

4238. Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 17:38:23 UTC
From: pdrunen@aol.com
Message-ID: <20040619133823.05775.00000246@mb-m05.aol.com>
Source record: 93193

Hi Group,

Where can I get some good grade material for a 6 meter beam elements?

Does a hardware store such as Lowes carry anything that would work for the elements?

Beam size is 4 to 6 elements.

de KJ4UO

4239. Re: Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 17:49:43 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <M4-dnViHPq8o4UndRVn-hA@adelphia.com>
Source record: 93194

Tdonaly wrote:

> W4UDX wrote,
>
>>Message-id: <03FAc.233$xg1.129@bignews6.bellsouth.net>
>>
>>I bet they didn't have a rubber antenna with a BNC connector....
>>
>>
>>"Cecil Moore" <w5dxp@hotmail.com> wrote in message
>>news:40d0f0c8$1_2@corp.newsgroups.com...
>>
>>>W4UDX wrote:
>>>
>>>>Forgot to mention.... it kinda reminded me of when that one guy who was
>>>>looking for a 160M HT...
>>>
>>>We had quite a few 160M HT's right after WWII, thanks to MARS
>>>and military surplus equipment.
>>>--
>>>73, Cecil http://www.qsl.net/w5dxp
>>>
>>>
>>>
>>>-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>>>http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>>>-----== Over 100,000 Newsgroups - 19 Different Servers! =-----
>>
>
> They were probably called "walkie-talkies," too. Who thinks up the names
> for things like this?

Careful! Isn't Nextel trying to claim copyright on "walkie-talkie? Or
was that "Push to Talk"?

- Mike KB3EIA -

4240. Dr. Vincent's DLM antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 18:35:48 UTC
From: "Peter O. Brackett" <none@no-such-domain.nul>
Message-ID: <8I%Ac.7189$bs4.3831@newsread3.news.atl.earthlink.net>
Source record: 93195

In 14 June EE Times on page 55 we find an article on a new concept in "miniaturized" antennas following are a few titilating quotes which I have excerpted from the article. The article may be available from the EE Times WWW site: http://www.eet.com.

"University researcher calls distributed load monopole a radical take on old ideas"

"A four year skunk works effort at the University of Rhode Island in Kingston has cut the size of an antenna by as much as one third for any frequency from the kHz to the GHz range" Using conventional components..."

"I've been able to put a combination of them [old ideas] together to create a revolutionary way of building antennas. It uses basically a helix plus a load coil"

"a completely planar design is less than a third the size of today's cell phone antennas"

"And those 300 fiot tall antennas for the 900 kHz AM band that dominate the skylines would only have to be 80 feet high"

"When looking at these antennas, you pretty much have to forget everything you ever knew about antennas and keep an open mind, because some of the things I have done are vey radical"

"I reduce the inductive loading that is normally required to resonate the antenna by as much as 75%... by utilizing the distibuted capacitance around the antenna"

"it's a two dimensional helix"

"the current at the top of the antenna is 80% of the current at the base"

"Vincent said no existing modeling software could adequately model his antenna design. So he rolled his own simulation with Mathcad"

"Eight years ago antenna design was 90% black magic and 10% theory, said Vincent. But now with my design they are 10% black magic and 90% theory"

etc... etc...

Apparently Vincent received the 2004 Outstanding Intellectual Propery Award from the University of Rhode Island's Research Office, joint applicant for the patent.

Sounds fantastic I want one of these 90% black magic antennas for myself!

But, it smacks of the "fractal" hype, maybe it's just too good to be true?

The inventor is one Dr. Robert Vincent of the Physics department of the University of Rhode Island, Kingston, RI which apparently will share the "pending" patent with him. Vincent is a radio amateur [No call sign given in the EE Times article.] and claims he got the idea for his radical new antenna designs while trying to satisfy his neighbours complaints about the size of his 140 foot 160 meter antenna and so he ultimately came up with a 46 foot "DLM" antenna that was equally as good.

As usual with EE Times little or no technical detail was given!

Anyone know anything about this DLM antenna.

Comments, thoughts...

--
Peter K1PO
Indialantic By-the-Sea, FL

4241. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 18:38:44 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb217kcsq1@hercules.btinternet.com>
Source record: 93196

"David.Shrader" <Deacon_Dave@comcast.net> wrote in message
news:rqZAc.57026$Hg2.5940@attbi_s04...
> The input impedance can be measured reasonably well at ground level.
>
==========

In principle it can be done. But to determine antenna impedance from measurements (NOT SWR) made at the transmitter end of the line it is necessary ACCURATELY to know the Length, Impedance Zo, Attenuation and Velocity Factor of the line.

Line attenuation need not be known with high accuracy. But, obviously, with a longish line the information available about what is going on at the far end becomes degraded. And to rely on measurements made with an ordinary, ambiguous, inaccurate swr meter, as you have already found, is asking for trouble.

Measure input impedance, R+jX, of the line. Then use program ZL_ZIN to calculate what the antenna input impedance, R+jX, must be to provide such an input impedance.

I havn't looked at the program recently but I think an ambiguity can arise if the whole number of half-wavelengths in the line is not known. So it may help to have some idea about what's going on in the process. But you'll know when you get the right answer.

Program ZL_ZIN can be downloaded in a few seconds from website below and run immediately from its desktop icon. It's easy enough to use when the input data is known.

.....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
.....

4242. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 18:53:04 UTC
From: Howard <mensch90249@yahoo.com>
Message-ID: <2l29d0hh8m0q3186itg45p61eoh7d17k9o@4ax.com>
Source record: 93197

On 19 Jun 2004 17:38:23 GMT, pdrunen@aol.com (PDRUNEN) wrote:

>Hi Group,
>
>Where can I get some good grade material for a 6 meter beam elements?
>
>Does a hardware store such as Lowes carry anything that would work for the
>elements?
>
>Beam size is 4 to 6 elements.
>
>de KJ4UO
From what I've seen at Lowe's you'll do okay if you intend to make it
from copper pipe - but that would get pretty heavy. If you want
aluminum tubing you might check Texas Towers or look for a local
'industrial' supplier such as Tiernay which has been acquired by
Transtar.
http://www.tiernay.com/

Good Luck,
Howard

4243. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 20:09:08 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <E31Bc.3133$mG4.1264@nwrddc03.gnilink.net>
Source record: 93198

"Howard" <mensch90249@yahoo.com> wrote in message
news:2l29d0hh8m0q3186itg45p61eoh7d17k9o@4ax.com...
> On 19 Jun 2004 17:38:23 GMT, pdrunen@aol.com (PDRUNEN) wrote:
>
> >Hi Group,
> >
> >Where can I get some good grade material for a 6 meter beam elements?
> >
> >Does a hardware store such as Lowes carry anything that would work for
the
> >elements?
> >
> >Beam size is 4 to 6 elements.
> >
> >de KJ4UO
> From what I've seen at Lowe's you'll do okay if you intend to make it
> from copper pipe - but that would get pretty heavy. If you want
> aluminum tubing you might check Texas Towers or look for a local
> 'industrial' supplier such as Tiernay which has been acquired by
> Transtar.
> http://www.tiernay.com/
>
> Good Luck,
> Howard

I guess one can get a phone # off their site- but that has to be one of the
least helpful sites I have seen.

W4OP

4244. Re: Dr. Vincent's DLM antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 20:13:28 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <fd59d0hg2tlld5qla3mqblnd31skdhbfm6@4ax.com>
Source record: 93199

On Sat, 19 Jun 2004 18:35:48 GMT, "Peter O. Brackett"
<none@no-such-domain.nul> wrote:

>"A four year skunk works effort at the University of Rhode Island in
>Kingston has cut the size of an antenna by as much as one third

Let's see, 0.666 of a full sized design.

>"a completely planar design is less than a third the size of today's cell
>phone antennas"

Let's see, 0.333 of a full sized design. How tall is planar anyway?

>"And those 300 fiot tall antennas for the 900 kHz AM band that dominate the
>skylines would only have to be 80 feet high"

Let's see, 0.27 of a full sized design. Planar AM antenna?

>"it's a two dimensional helix"

Let's see, how many bottles of wine could you open with a two
dimensional cork screw?

>"the current at the top of the antenna is 80% of the current at the base"

If you couldn't get any current into the base, this could be a
problem.

>size of his 140 foot 160 meter antenna and so he ultimately came up with a
>46 foot "DLM" antenna that was equally as good.

Let's see, 0.33 of a full sized design. It would be smaller yet if it
were Planar. Equally good (ï¿½3dB)? Now there's a specification to
match!

Confirming the observation of 9 out of 10 lab-coat wearing scientists,
the presence of a three letter acronym (Appellation gain) provides
this remarkable benefit of size reduction (fewer letters) that varies
to suit the occasion.

>"Vincent said no existing modeling software could adequately model his
>antenna design. So he rolled his own simulation with Mathcad"

As for the benefit of other Appellation gain (Dr.) there is an obscure
(broken link) reference to: "Gravity Waves and their Relationship to
Interannual Variability in the Tropical Pacific, by Dr. Robert
Vincent, Department of Physics..." Another astronomer re-inventing
field math?

73's
Richard Clark, KB7QHC

4245. Re: Dr. Vincent's DLM antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 20:18:05 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb271tmcf1@titan.btinternet.com>
Source record: 93200

> Comments, thoughts...
>
> Peter K1PO
> Indialantic By-the-Sea, FL

==========

What continues to amaze me, that in the supposedly most high-tech nation on Earth, is the high proportion of suckers, amongst them professionals, who still fall for such stuff.

Even Hertz and Marconi knew better.

Heaviside abandoned the system at a very early age.

Praps its all due to the system still being in the hands of marketing, sales and advertising departments.

Or have I misunderstood the context?

Reg.

4246. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 20:27:42 UTC
From: gsm@mendelson.com
Message-ID: <slrncd986g.9oe.gsm@cable.mendelson.com>
Source record: 93201

In article <aIidnaHhosl2AUzdRVn-iQ@scnresearch.com>, mike sebring wrote:
> I live in S.E. Alaska on an island that is about 99% solid rock and i am
> wondering what would be a good way to get an effective ground for my rig and
> my antennas.
> I have tried to drive a 4' ground rod in the ground and it will only go down
> about a foot and a half till it hits solid rock.
> I have considered just burying several strands of heavy bare copper wire and
> using that for my ground.

The other answers confused an RF ground with an ELECTRICAL ground. For better antenna usage, above ground, on the ground or in the ground radial wires are the best thing. I have read several articles describing the optium length for a radial, some go as short as 1/4 wave * velocity factor, one went as long .28 wavelength. YMMV. Actual diameter of the wire is not very important.

However you will still need an ELECTRICAL ground for lightening saftey and static discharge. That should be as wide and as deep as possible. If you can only go down 1.5 feet, then a 6 foot length of 1" copper pipe layed horizontaly as far down as you can go would be a good idea. Ask a local electrician.

You don't need to worry about wetting it or adding conductive agents to the soil unless you have lightening storms when the ground is dry. Although I live in the desert, I don't. When there is a lightening risk, the ground is damp.

Geoff.

--
Geoffrey S. Mendelson, C.T.O. GW&T Ltd., Jerusalem Israel
gsm@mendelson.com gsm@gwandt.com
IL Voice: 972-544-608-069 IL Fax: 972-2-648-1443 U.S. Voice: 1-215-821-1838

4247. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 20:36:26 UTC
From: murray <murray@murrayspamfree.com>
Message-ID: <40D4A3C4.2E2FC158@murrayspamfree.com>
Source record: 93202

http://www.mcmaster.com

McMaster-Carr, online catalog has so much stuff plus lots of info on the
items,
good section on metal tubing and the types and grades available.

Good source for ss bolts and other hardware too.

I use them for aluminum rods, they ship fast from many dc over the usa.

73 murray

PDRUNEN wrote:

>
> Where can I get some good grade material for a 6 meter beam elements?
>
> Does a hardware store such as Lowes carry anything that would work for the
> elements?
>
> Beam size is 4 to 6 elements.
>
> de KJ4UO

4248. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 21:16:12 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <10d9b7674f5r798@corp.supernews.com>
Source record: 93203

As is so frequently the case, David has the scheme. Long, long ago at Green Bank, I worked on a 400 MHz feed for the 85 foot dish that consisted of two dipoles fed in phase above a reflector. Since this was for radio astronomy measurement, it was desired to have a good match at two frequencies 60 MHz apart to use with a receiver having a 30 MHz IF. ("signal" came in both images.) I worked on the stubs with the antenna feed pointing away from me in a very large room while measuring with a GR admittance bridge. The bridge is adjusted for a null while listening through headphones.
While thinking about the next adjustment, I heard the sound in the headphones go out of null and then back. Eventually I traced the in-and-out to secretaries walking back and fourth around a table to collate a report in a room way across the empty lab and on the other side of a thin wall. Energy coming back to an antenna changes its apparent Z.
Quick-like-a-little-bunny, as we say in these parts, the feed was put on the top of a step ladder outdoors pointing at the sky. When adjusted while up on the ladder, it worked as expected when placed at the focus. But that is another story.

73, Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"David.Shrader" <Deacon_Dave@comcast.net> wrote in message news:rqZAc.57026$Hg2.5940@attbi_s04...
> The input impedance can be measured reasonably well at ground level.
>
> Align the antenna so that the reflector is 'down' and the last director
> is 'up'. Ground effects are minimized due to the F/B of the antenna. The
> antenna is radiating straight 'up'.
>
> Next take a 1 wavelength, allowing for velocity factor, coax line and
> connect it to the antenna feedpoint.
>
> Finally, beg, borrow, requisition, pilfer, rustle, etc., an antenna
> analyzer similar to the MFJ 259B. Connect it to the other end of the 1
> wavelength coax.
>
> Select the function to read impedance. Dial in your frequency and read
> the impedance.

>
> A one minute job once the antenna, coax and meter are at hand.
>
> + + +
>
>

4249. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 21:44:53 UTC
From: Bob Bob <bcnntp@optusnet.com.au>
Message-ID: <nnoeq1-28n.ln1@p400bob.lse.com.au>
Source record: 93204

Hi Paul

Gordon VK2ZAB (and others) published some time ago a complex Z bridge
thing for VHF/UHF. It uses transmission lines for tuned elements and is
band specific.

Try http://www.vhfdx.oz-hams.org/measurements.html

And do other google searches using Gordons callsign

Cheers Bob VK2YQA

Paul (Home) News wrote:
> Hi,
> I have done quite a bit of numerical analysis of VHF Yagi's with usually
> very good agreement between theory and performance at least for gain and
> pattern. One of the things that seems more difficult to correctly predict
> however is the input impedance, and thus to design some sort of a match
> without some sort of subsequent trial and error. In an effort to explore the
> differences further I have been looking at ways of measuring the impedance
> directly rather than indirectly by vswr with the matching in place. I have
> made a number of different return loss bridges, and even tried the technique
> described in an old Ham Radio Article where you take two VSWR readings with
> and without an added series resistance. All of course making allowances for
> coax length etc. The problem I have is all of them give, in some cases
> wildly, different answers even when used on the same antenna. So my
> questions are:
>
> What sort of accuracy can I expect from these sorts of methods?
>
> Is there a better way (which doesn't involve large sums of money) to measure
> antenna impedance at say 146Mhz?
>
> Thanks
>
> Paul VK3DIP
>
>

4250. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-19 22:31:38 UTC
From: "David.Shrader" <Deacon_Dave@comcast.net>
Message-ID: <e93Bc.78031$0y.15340@attbi_s03>
Source record: 93205

Reg Edwards wrote:

> "David.Shrader" <Deacon_Dave@comcast.net> wrote in message
> news:rqZAc.57026$Hg2.5940@attbi_s04...
>
>>The input impedance can be measured reasonably well at ground level.
>>
>
> ================================
>
> In principle it can be done. But to determine antenna impedance from
> measurements (NOT SWR) made at the transmitter end of the line it is
> necessary ACCURATELY to know the Length, Impedance Zo, Attenuation and
> Velocity Factor of the line.

SNIP Reg, I did not specify the transmitter end of the line. I stated 1
wavelength from the antenna. In this case, 1 wavelength, the line
impedance is not a factor, but the velocity factor is.

Line attenuation at 1 wavelength at 146 MHz is generally negligible. I
did not use the SWR meter. I stated use an antenna analyzer.

I think the confusion arises because your reply is to my post and not
the original post.

DD
>
> Line attenuation need not be known with high accuracy. But, obviously, with
> a longish line the information available about what is going on at the far
> end becomes degraded. And to rely on measurements made with an ordinary,
> ambiguous, inaccurate swr meter, as you have already found, is asking for
> trouble.
>
> Measure input impedance, R+jX, of the line. Then use program ZL_ZIN to
> calculate what the antenna input impedance, R+jX, must be to provide such an
> input impedance.
>
> I havn't looked at the program recently but I think an ambiguity can arise
> if the whole number of half-wavelengths in the line is not known. So it may
> help to have some idea about what's going on in the process. But you'll know
> when you get the right answer.
>
> Program ZL_ZIN can be downloaded in a few seconds from website below and run
> immediately from its desktop icon. It's easy enough to use when the input
> data is known.
> ----

> ....
> Regards from Reg, G4FGQ
> For Free Radio Design Software go to
> http://www.btinternet.com/~g4fgq.regp
> ....
>
>

4251. Iron Horse SMA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 00:03:48 UTC
From: Dilligaf <tuskyone@yahoo.com.au>
Message-ID: <40d4d4c3$0$19419$61c65585@uq-127creek-reader-01.brisbane.pipenetworks.com.au>
Source record: 93207

Hi does the IRON HORSE range of SMA terminated HT Antennas work OK with the VX-5R/7R Range of HT's ?/ some have short centre pin any comments or thoughts from user's

Rgds

4252. Correct Diplexer/duplexer

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 00:05:18 UTC
From: Dilligaf <tuskyone@yahoo.com.au>
Message-ID: <40d4d4c3$1$19419$61c65585@uq-127creek-reader-01.brisbane.pipenetworks.com.au>
Source record: 93208

Hi can anyone inform me of the CORRECT Model of the dilexer that passe's DC
so it can be used with the ATAS 120 for VHF/UHF at same time as HF

RgDS

4253. HF / VHF / UHF Log Periodic for sale

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 00:07:45 UTC
From: fumper@aol.com
Message-ID: <20040619200745.19157.00000328@mb-m06.aol.com>
Source record: 93206

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2250961601

4254. Looking for Decent TRIband HT antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 00:14:14 UTC
From: Dilligaf <tuskyone@yahoo.com.au>
Message-ID: <40d4d6db$0$19439$61c65585@uq-127creek-reader-01.brisbane.pipenetworks.com.au>
Source record: 93209

6mtr/2mtrs/70cm to use on VX-7R
any suggestions from USER'S
got to ask the Butcher, Not the Block.

Rgds

4255. Re: Dr. Vincent's DLM antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 00:23:34 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40D4D906.3A74@wt.net>
Source record: 93210

Peter O. Brackett wrote:
>

>
> "I've been able to put a combination of them [old ideas] together to create
> a revolutionary way of building antennas. It uses basically a helix plus a
> load coil"

Sounds about like the mobile antenna I've been using for 15 years...
>
"
>
> "And those 300 fiot tall antennas for the 900 kHz AM band that dominate the
> skylines would only have to be 80 feet high"

Where have I EHeard this story before....
>
> "When looking at these antennas, you pretty much have to forget everything
> you ever knew about antennas and keep an open mind, because some of the
> things I have done are vey radical"

Chortle...I think I've heard this line before too.. MK

--
http://web.wt.net/~nm5k

4256. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 00:46:56 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb2mq0$1e$1@hercules.btinternet.com>
Source record: 93211

Dave, I was replying to the original questioner. But by immediately following your response with mine and including a comment of yours caused a little confusion. Sorry!

I agree your method will work. The problem, a practical one, is obtaining a COAXIAL line length exactly an integral number of 1/2-wavelengths long. There's no way of proving it exept by climbing a ladder and disconnecting the line from the antenna.

And it is an exact 1/2-wavelength long at ONE frequency only. But it is required to make measurements over a whole band of frequencies. To shift to other frequencies
involves calculations taking Zo into account. But Zo is not accurately known. So then you have to measure line Zo. And so on.

And you have to know exactly what you are doing because the 259B does not provide the sign of jX in R+jX.

But as I said before, all you want to know is whether or not the transmitter is loaded with 50 ohms. To hell with SWR and antenna input impedance. ;o)

Reg, G4FGQ

4257. Re: Dr. Vincent's DLM antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 02:13:43 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <AZCdnV6dKKdJb0nd4p2dnA@adelphia.com>
Source record: 93212

Peter O. Brackett wrote:

> In 14 June EE Times on page 55 we find an article on a new concept in
> "miniaturized" antennas following are a few titilating quotes which I have
> excerpted from the article. The article may be available from the EE Times
> WWW site: http://www.eet.com.
>
> ---
> ---
>
> "University researcher calls distributed load monopole a radical take on old
> ideas"
>
> "A four year skunk works effort at the University of Rhode Island in
> Kingston has cut the size of an antenna by as much as one third for any
> frequency from the kHz to the GHz range" Using conventional components..."

Okay, the antenna is 66 percent of *some* antenna.....

> "I've been able to put a combination of them [old ideas] together to create
> a revolutionary way of building antennas. It uses basically a helix plus a
> load coil"

That really isn't terribly revolutionary, is it?

> "a completely planar design is less than a third the size of today's cell
> phone antennas"

So now it's 33 percent of the size? And are all these antennas a third
of the size of todays cell phone antennas?

My point is this is criminally inaccurate writing. Does the good doctor
know that people are writing so poorly about his good work?

> "And those 300 fiot tall antennas for the 900 kHz AM band that dominate the
> skylines would only have to be 80 feet high"

Which is that... 66 percent, or 33 percent?

> "When looking at these antennas, you pretty much have to forget everything
> you ever knew about antennas and keep an open mind, because some of the
> things I have done are vey radical"

Is this like esp or bending spoones, where if you don't keep an open
mind, it won't work?

If the antenna works, it will work whether we have an oen mind or not.

> "I reduce the inductive loading that is normally required to resonate the
> antenna by as much as 75%... by utilizing the distibuted capacitance around
> the antenna"

A BCB version of this antenna must be something to behold!

> "it's a two dimensional helix"

Then it taint an 'elix!

> "the current at the top of the antenna is 80% of the current at the base"
>
> "Vincent said no existing modeling software could adequately model his
> antenna design. So he rolled his own simulation with Mathcad"

Why? All we have to do is keep an open mind!

>
> "Eight years ago antenna design was 90% black magic and 10% theory, said
> Vincent. But now with my design they are 10% black magic and 90% theory"

My final comment about this whole thing is that the whole thing is very
vague, contains a few fundamental contradictions, is written terribly,
and has some first class errors in it.

I'm becoming quite skeptical that this is even a legit website from
URI. Last week it was a technician that was getting the patent, now it
is someone else.

- Mike KB3EIA -

4258. Last Weekend To File FCC Comment

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 02:15:51 UTC
From: yea right <spam@spam.spam>
Message-ID: <pan.2004.06.20.02.17.24.921719@spam.spam>
Source record: 93213
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur,rec.radio.amateur.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx

"The limit for an unintentional emitter on HF is 30 uV/m at 30 meters from the source," he said. "If you take a dipole cut for 3.5 MHz and put it in a 30 uV/m field, you'll have a noise reading of S9 plus 16 dB at your transceiver."

The FCC has extended the comment period for BPL. If you value radio, this may be the last and only chance to have your voice heard to stop BPL from destroying your hobby. The FCC has extended the comment period for BPL.

It is VERY simple to file a FCC comment. Click the link below and enter

04-37

in box #1 (proceeding number) and fill in the blanks. The simplest way to comment is to type your comment into the box on the bottom of the form. Sample comment below.

http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi

If you see fit, please post this to as many groups as possible because numbers count! Please mention this in your nets!

More info at http://www.arrl.org/news/stories/2004/02/12/5/?nc=1

If you can't think of any thing to type or wish to make this as painless as possible, you can cut-n-paste the comment I typed below.

/******************************/

In Writing, I wish to persuade the FCC from allowing BPL to be implemented. The destruction or at the least, deterioration of the shortwave bands is not only a violation of ITU laws that protect international broadcasters from interference and jamming, it will be destroying many people's life hobby. Amateur radio will be reduced to users with high-power amplifiers and large antennas. Emergency communications will be hindered to levels directly responsible for the loss of life. Also, this will hinder military HF comms reducing national security

There are many technologies that make BPL unnecessary. BPL will never be able to carry the high bandwidth demands for mass distribution of video much less the up-and-coming HDTV.

Thank You!

4259. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 05:07:35 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40D51B97.1505@wt.net>
Source record: 93214

Howard wrote:
>
> On 19 Jun 2004 17:38:23 GMT, pdrunen@aol.com (PDRUNEN) wrote:
>
> >Hi Group,
> >
> >Where can I get some good grade material for a 6 meter beam elements?
> >
> >Does a hardware store such as Lowes carry anything that would work for the
> >elements?
> >
> >Beam size is 4 to 6 elements.
> >
> >de KJ4UO
> From what I've seen at Lowe's you'll do okay if you intend to make it
> from copper pipe - but that would get pretty heavy.

It's not really. Maybe compared to aluminum...I built a 6m 3 el totally from copper, including the boom, and it's really not that heavy at all. Might be twice?? aluminum, but a 3 el aluminum beam would be super light.
4-6 elements from copper could be handled ok. Must use hard drawn copper though. If you used 6 elements, I'd use a real thick boom, if also copper...For 3 el, I used 1/2 inch for the elements, and 1 inch for the boom. With the usual 10 ft lengths they sell for copper tube, it's easier to make just a 3 el, than larger...But I guess for larger, you could use 2 inch tube for a boom, and use a coupler between pieces to add more length..I'd use the larger 2 inch with more elements, as the boom could sag from the weight..Myself, I'd stick with 3 elements if you used copper...I brazed all the elements direct to the boom. Uses a gamma match made from 3/8 copper tube, and coax innerds "center conductor/dialectric" for a cap..Rg-8 size fits perfect inside the 3/8 copper. There is not much else at Lowes/home depot, etc that will work...I looked when I made mine...The aluminum, and other tubing, angle pieces, etc, they sell are unsuitable. Proper aluminum tube for antennas you would have to find somewhere else. MK
--
http://web.wt.net/~nm5k

4260. Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 05:40:07 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb37vn$19i$1@sparta.btinternet.com>
Source record: 93215

NOW AVAILABLE ** New Program "BALCHOKE.exe"

This program is very similar to program CHOKEBAL The main change is to input data. The ferrite core is rectangular in shape and defined in terms of thickness and length instead of a circular core diameter. The size of the core is described more conveniently in terms of the outside diameter of the ferrite ring instead of the diameter of the mean magnetic path.

The opportunity has been taken to provide, in the author's opinion, a better statistical way of estimating percent current unbalance in the twin-wire transmission line. There are also better program operating notes.

Although most numerical results are identical this second version of the program is recommended.

Program size about 36 kilobytes. Download program BALCHOKE from website below in a few seconds and run immediately from a desktop icon.

.....
Regards from Reg, G4FGQ
For Free Radio Design Software go to
http://www.btinternet.com/~g4fgq.regp
.....

4261. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 06:51:16 UTC
From: j999w@aol.com
Message-ID: <20040620025116.05640.00000306@mb-m14.aol.com>
Source record: 93216

I've ordered aluminum tubing for antenna building from Texas Towers and was quite pleased. If my inquiry on a long 2m yagi falls through, I'll be ordering again on monday.

jw
K9RZZ
Milwaukee

4262. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 06:59:30 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <mBaBc.5813$a61.83@nwrddc01.gnilink.net>
Source record: 93217

Thanks Bob (Bob)

I'm going to make one of those impedance "meters". I sure appreciate
having guys like you do all the research work for me. Thanks again.

Jerry

"Bob Bob" <bcnntp@optusnet.com.au> wrote in message
news:nnoeq1-28n.ln1@p400bob.lse.com.au...
> Hi Paul
>
> Gordon VK2ZAB (and others) published some time ago a complex Z bridge
> thing for VHF/UHF. It uses transmission lines for tuned elements and is
> band specific.
>
> Try http://www.vhfdx.oz-hams.org/measurements.html
>
> And do other google searches using Gordons callsign
>
> Cheers Bob VK2YQA
>
> Paul (Home) News wrote:
> > Hi,
> > I have done quite a bit of numerical analysis of VHF Yagi's with usually
> > very good agreement between theory and performance at least for gain and
> > pattern. One of the things that seems more difficult to correctly
predict
> > however is the input impedance, and thus to design some sort of a match
> > without some sort of subsequent trial and error. In an effort to explore
the
> > differences further I have been looking at ways of measuring the
impedance
> > directly rather than indirectly by vswr with the matching in place. I
have
> > made a number of different return loss bridges, and even tried the
technique
> > described in an old Ham Radio Article where you take two VSWR readings
with
> > and without an added series resistance. All of course making allowances
for
> > coax length etc. The problem I have is all of them give, in some cases
> > wildly, different answers even when used on the same antenna. So my
> > questions are:
> >
> > What sort of accuracy can I expect from these sorts of methods?

> >
> > Is there a better way (which doesn't involve large sums of money) to
measure
> > antenna impedance at say 146Mhz?
> >
> > Thanks
> >
> > Paul VK3DIP
> >
> >

4263. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 07:18:56 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <ATaBc.13124$Yb1.8268@nwrddc02.gnilink.net>
Source record: 93218

Reg

How can I determine how effective a balun is?? I am working at 137 MHz
and cant consider a radiation pattern range of any kind.
I have been trying a coil of small coax in a relatively low loss ferrite
toroid and then slipping a high permeability tube of more lossy ferrite on
the coax to the receiver. I thought the higher reactance with a reasonable
Q might minimize the current conducted along the feed line. Then, any
currents that do get by the reactive coil might get disipated in the lossy
and high permeability ferrite tube section.

Since I'm working without much knowledge and almost no test equipment, I'd
sure appreciate any information about how to evaluate baluns at VHF.

Jerry

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:cb37vn$19i$1@sparta.btinternet.com...
>
> NOW AVAILABLE ** New Program "BALCHOKE.exe"
>
> This program is very similar to program CHOKEBAL The main change is to
> input data. The ferrite core is rectangular in shape and defined in terms
of
> thickness and length instead of a circular core diameter. The size of the
> core is described more conveniently in terms of the outside diameter of
the
> ferrite ring instead of the diameter of the mean magnetic path.
>
> The opportunity has been taken to provide, in the author's opinion, a
better
> statistical way of estimating percent current unbalance in the twin-wire
> transmission line. There are also better program operating notes.
>
> Although most numerical results are identical this second version of the
> program is recommended.
>
> Program size about 36 kilobytes. Download program BALCHOKE from website
> below in a few seconds and run immediately from a desktop icon.
> ----
> ....
> Regards from Reg, G4FGQ
> For Free Radio Design Software go to
> http://www.btinternet.com/~g4fgq.regp
> ....

>
>

4264. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 07:47:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10dag909g8itv20@corp.supernews.com>
Source record: 93219

I want to caution you about using a half or one wavelength line to do measurements. That's a viable method if the imedance of the antenna is close to the characteristic of the line. If it's not, you'll find that even a surprisingly small line loss -- one that you'd normally consider negligible, can seriously skew your results. The calculation is straightforward presuming you know the loss -- I'm sure Reg's program would be adequate. Do some what-ifs with various antenna impedances and you'll see what I mean. The effect gets worse as the antenna and transmission line impedances get more different, and as the line gets longer. That is, a one wavelength line will have more effect than a half wavelength one.

Also, line length becomes more and more critical as the impedance of the antenna and transmission line become more different and as the line gets longer. Again, a little experimentation with the calculations will illustrate what to expect.

Even if you carefully account for the transformation of the connecting line or don't use any line at all, you have to be aware of common mode currents and how your test setup differs from your normal rig connection. And finally, even with a perfect lab setup, you'll find that good impedance measurements can be hard to make with amateur equipment.

Before you get carried away, make some measurements on the bench with your meter and using good quality loads, or at least RC combinations using chip resistors and capacitors or ones with extremely short leads. Make impedances similar to ones you hope to measure. If you can get values which are accurate enough to suit you, go to the next step and measure the same loads through a transmission line as has been suggested, and see if you're able to extract the actual load value from the measured value with sufficient accuracy.

If you get that far, you've partially answered your question about what kind of accuracy to expect, and you're ready to start figuring out how to deal with common mode currents.

Decent antenna impedance measurements aren't simple to make, even at HF. They're more difficult at VHF and above.

Roy Lewallen, W7EL

4265. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 07:53:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10dagjnsmg4gha3@corp.supernews.com>
Source record: 93220

You've gotten some good suggestions about sources and materials. I haven't seen anyone mention that if you choose aluminum, the stuff you buy at a Lowes-type store is very different than the type normally used for commercial Yagis. It's a lot softer and weaker. I don't have enough experience myself to know if it's good enough for a 6 meter beam, but if so, it'll be nowhere near as strong as something made from the proper variety of aluminum (e.g. 6061-T6) which you can get from some of the sources that have been mentioned. So don't use hardware-store aluminum tubing for anything that requires much strength or durability.

Roy Lewallen, W7EL

PDRUNEN wrote:

> Hi Group,
>
> Where can I get some good grade material for a 6 meter beam elements?
>
> Does a hardware store such as Lowes carry anything that would work for the
> elements?
>
> Beam size is 4 to 6 elements.
>
> de KJ4UO

4266. For all I have Mail Delivery Subsystem

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 08:41:45 UTC
From: Zoran Dimitrijevic <zorandi@EUnet.yu>
Message-ID: <cb3ijhai1@news.eunet.yu>
Source record: 93121

THIS WHOLE STORY IS OPENED AND PERMISSIVE FOR PUBLISH FOR EVERY WHO WISH ON WHATEVER WAY.
NO LIMIT, NOT CONTRACT
Likewise, is PERMISSIVE every my email and www address.

My self
Zoran Dimitrijevic

zorandi2002@yahoo.com
nikaca2000@yahoo.com
or
ICQ
263-211-512
or , but is email occasionally Blocked I can't send and receive
zorandi@EUnet.yu
nacom@EUnet.yu

http://www30.brinkster.com/aferatelekom
http://www30.brinkster.com/aferatelekom/Obrenovici.htm
or download
http://www30.brinkster.com/aferatelekom/Obrenovici.zip

4267. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 12:18:42 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <CgfBc.146776$Ly.12569@attbi_s01>
Source record: 93122

Reg Edwards wrote:

> Dave, I was replying to the original questioner. But by immediately
> following your response with mine and including a comment of yours caused a
> little confusion. Sorry!
>
> I agree your method will work. The problem, a practical one, is obtaining a
> COAXIAL line length exactly an integral number of 1/2-wavelengths long.

The MFJ 259B will measure the length of the line for you before test.
Leave it open circuited and connect the other end to the MFJ. It finds
the 1/2 wavelength frequency.

> There's no way of proving it exept by climbing a ladder and disconnecting
> the line from the antenna.

A bench setup with a 1 wavelength line does not require climbing and
measuring at the tower.

>
> And it is an exact 1/2-wavelength long at ONE frequency only. But it is
> required to make measurements over a whole band of frequencies. To shift to
> other frequencies
> involves calculations taking Zo into account. But Zo is not accurately
> known. So then you have to measure line Zo. And so on.

Agree it is a one frequency measurement.

>
> And you have to know exactly what you are doing because the 259B does not
> provide the sign of jX in R+jX.

But, the sign of X is very easy to determine. Increase frequency
'slightly' on the 259B and observe absolute value of X. If X increases
it is inductive. If X decreases it is capacitive. BTW the Or is a value
at antenna resonance only at one frequency. But, you a very well aware
of that. The comment is made for other readers.

>
> But as I said before, all you want to know is whether or not the transmitter
> is loaded with 50 ohms. To hell with SWR and antenna input impedance. ;o)
> ----
> Reg, G4FGQ

There is one possibility remaining. If the Yagi is to be tuned for
MAXIMUM gain, and that is the objective, then Ro will be the lowest
value at resonance. Most Ham yagis are not tuned for optimum gain as we

all know.

There is WAY WAY too much emphasis among today's hams regarding low VSWR. My 75/80 doublet has a VSWR approaching 30:1 and works just FB!! The problem is the absence of output tuning in most of the rigs available today. Oh! for my OLD VIKING II or my Drake 4C. <grin>

Gor Bless and you have my permission to celebrate the USA Father's Day.

>

4268. Re: Dr. Vincent's DLM antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 12:21:38 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40D58152.B1D41024@cwis.net>
Source record: 93123

Mike,
1. All those 'little' things sort of fall through the
bottom of that 'open mind'.

2. The technician was promoted due/do to his accomplishments.

3. Cream ain't the only thing that 'floats to the top'.

- 'Doc

4269. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 12:34:02 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb407pfdg1@sparta.btinternet.com>
Source record: 93124

Roy, your caution is well placed.

As I've said before, most amateurs and professionals (it seems from these walls) suffer from delusions of accuracy.

Their delusions are seldom frustrated by things going wrong after some tedious, supposedly highly accurate, design work has been done. They congratulate themselves on their success and sometimes follow up by writing learned papers incorporating 6 places of decimals about it.

But in engineering reallity, especially with Radio, things work simply because any bloody thing will work after a fashion. And if the transmitter is loaded with an actual but unknown impedance between 30 and 80 ohms, such that it works, they continue to remain oblivious to their delusions.

I relate this, certainly not to cast ridicule, but with the inention of enhancing the underlying beauty of this intriguing hobby of ours.

Perhaps 'suffer from' are the wrong words.

In the UK it is Father's Day. So I am about to pour myself another glass from a bottle of special reserve port, a thoughtful present from a loving 'doter'.
----
73 and 88, Reg, G4FGQ

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:10dag909g8itv20@corp.supernews.com...
> I want to caution you about using a half or one wavelength line to do
> measurements. That's a viable method if the imedance of the antenna is
> close to the characteristic of the line. If it's not, you'll find that
> even a surprisingly small line loss -- one that you'd normally consider
> negligible, can seriously skew your results. The calculation is
> straightforward presuming you know the loss -- I'm sure Reg's program
> would be adequate. Do some what-ifs with various antenna impedances and
> you'll see what I mean. The effect gets worse as the antenna and
> transmission line impedances get more different, and as the line gets
> longer. That is, a one wavelength line will have more effect than a half
> wavelength one.
>
> Also, line length becomes more and more critical as the impedance of the
> antenna and transmission line become more different and as the line gets
> longer. Again, a little experimentation with the calculations will
> illustrate what to expect.
>
> Even if you carefully account for the transformation of the connecting

> line or don't use any line at all, you have to be aware of common mode
> currents and how your test setup differs from your normal rig
> connection. And finally, even with a perfect lab setup, you'll find that
> good impedance measurements can be hard to make with amateur equipment.
>
> Before you get carried away, make some measurements on the bench with
> your meter and using good quality loads, or at least RC combinations
> using chip resistors and capacitors or ones with extremely short leads.
> Make impedances similar to ones you hope to measure. If you can get
> values which are accurate enough to suit you, go to the next step and
> measure the same loads through a transmission line as has been
> suggested, and see if you're able to extract the actual load value from
> the measured value with sufficient accuracy.
>
> If you get that far, you've partially answered your question about what
> kind of accuracy to expect, and you're ready to start figuring out how
> to deal with common mode currents.
>
> Decent antenna impedance measurements aren't simple to make, even at HF.
> They're more difficult at VHF and above.
>
> Roy Lewallen, W7EL

4270. My email is full blocked, I can`t receive ours mail, else are empty

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 13:26:23 UTC
From: Zoran Dimitrijevic <zorandi@EUnet.yu>
Message-ID: <cb43e3$6ku$15@news.eunet.yu>
Source record: 93125

My email is full blocked, I can`t receive ours mail, else are empty

Samps on I sent messages:

alt.personals
alt.personals.interracial
alt.personals.misc.
alt.personals.vancouver
alt.usage.English
news.answers
rec.tadio.amateur
rec.radio.amateur.antenna
rec,radio.amateur.boatanchors
rec.radio.amateur.digital.misc.
rec.radio.amateur.dx
rec.radio.amateur.equipment
rec.radio.amateur.homebrew
rec.radio.amateur.misc.
rec.radio.amateur.policy
rec.radio.amateur.space
rec.radio.amateur.swap
rec.radio.info
uk.railway
yu.eunet.oglasi
yu.forum.politika

where not my answers, I not see ours questions

I have free space on

zorandi@EUnet.yu 30Mb
nacomp@EUnet.yu 30Mb
zorandi2002@yahoo.com 100Mb
nikaca2000@yahoo.com 100Mb

I not receive neither messages ours because are Blocked of telepathy master

But, I working and never desist
If Somebody that commit Redirection my addresses of own site, Please.

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nacom@EUnet.yu

http://www30.brinkster.com/aferatelekom
http://www30.brinkster.com/aferatelekom/Obrenovici.htm
or download
http://www30.brinkster.com/aferatelekom/Obrenovici.zip

4271. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 13:42:17 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <fR3bZII5QZ1AFAxZ@ifwtech.co.uk>
Source record: 93127

Dave Shrader wrote:
>If the Yagi is to be tuned for MAXIMUM gain, and that is the objective,
>then Ro will be the lowest value at resonance.

That's an interesting assertion. Do you have further evidence for it?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

4272. Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 13:52:17 UTC
From: aa5qt@aol.com
Message-ID: <20040620095217.29691.00000269@mb-m18.aol.com>
Source record: 93126

I have a 6BTV that I'm about to install. It will primarily be used for 80/40/30 meters. Some questions:

I could elevate it, if it would improve performance. The manual says not to ground the radials or the antenna base, so I could mount the unit on an insulated mast, and string the radials at a 45 degree angle....

Or I could place it near the ground, or try a metal mast, or....

Any experience/suggestions?

Gary K5QT

4273. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 14:37:31 UTC
From: Da Shadow <DAS@cat.net>
Message-ID: <MihBc.4581$5t2.1719@fed1read01>
Source record: 93128

My 2 cents -- my experience with 1/4 wave verticals with ground radials has
been pretty miserable. With many many radials and good ground would probably
be Ok.

When I put the 1/4 wave up on the roof with four radials slightly
drooping -- wow what an improvement.

Also I have had good luck with the Cushcraft end fed antennas with no
radials

Your radiation may vary - hi hi

--
Lamont Cranston

The Shadow Knows
"AA5QT" <aa5qt@aol.com> wrote in message
news:20040620095217.29691.00000269@mb-m18.aol.com...
> I have a 6BTV that I'm about to install. It will primarily be used for
> 80/40/30 meters. Some questions:
>
> I could elevate it, if it would improve performance. The manual says not
to
> ground the radials or the antenna base, so I could mount the unit on an
> insulated mast, and string the radials at a 45 degree angle....
>
> Or I could place it near the ground, or try a metal mast, or....
>
> Any experience/suggestions?
>
> Gary K5QT

4274. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 15:07:19 UTC
From: Jay in the Mojave <jay123a@qnet.com>
Message-ID: <40d5a9b8$0$104$6c56adcd@news.qnet.com>
Source record: 93129

Hello PDRUNEN:

The Hardware Store Aluminum tubing may not last in severe weather and winds. Here in the Mojave Desert we see 90+ MPH winds at times.

Usually 6063 T8 or 6061 T6 Aluminum Tubing is used. The wall thickness used is .058 inches. This will normally allow the Aluminum Tubing to "Telescope" into each other in 1/8 inch increments. Like 1 OD (Outside Diameter)inch .058 will allow 7/8 OD to fit or Telescope inside it.

But be advised wall thickness tolerances sometimes can be thicker NOT allowing the Aluminum Tubing to "Telescope". The Aluminum Tubing Manufactures DO NOT make Aluminum Tubing to "Telescope" unless it is specified by a large order.

The Boom will be the hardest to design and make. Perhaps a older beam boom can be used. If you look around at the different beam antennas you will get the idea. The 6 meter beam shouldn't be a career project. I suggest using split and insulated driven elements, a Hairpin Matching System and a good Balun.

Maybe a local metal supply house can help you out.

Texas Towers sells Aluminum Tubing there at:

http://www.texastowers.com/aluminum.htm

Jay in the Mojave

PDRUNEN wrote:

> Hi Group,
>
> Where can I get some good grade material for a 6 meter beam elements?
>
> Does a hardware store such as Lowes carry anything that would work for the
> elements?
>
> Beam size is 4 to 6 elements.
>
> de KJ4UO

4275. DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 16:21:52 UTC
From: fractenna@aol.com
Message-ID: <20040620122152.04107.00000202@mb-m26.aol.com>
Source record: 93130

Some care must be exercised to see that causality has not been violated: the 'July 9' date is a typo. The right date is, of course, 9 June.

I continue to get many e-mails asking for info about DLM designs. You will, perhaps note, that the 7 June EE times article was AGAIN run--with additions--on 14 June:

http://www.eet.com/showArticle.jhtml?articleID=21600147.

Mr. Vincent describes a design that, apparently, is well within the description I discussed below on 11 June--at least that is my opinion.

As I have not seen Mr. Vincent's design, it would appear that said design is either 'obvious to those skilled in the art', or not novel in some basic way, again, an opinion. I will be most interested to see what true novelty is ascribed and approved as the 'revolution' moves forward.

Incidentally, Mr. Vincent again ascribes his design as "wide in bandwidth" yet describes substantial harmonic suppression. 'Wideband' designs are almost always big enough in passband to cover the lowest end and its harmonics.

73,
Chip N1IR

<<Temat: DLM Antenna
Od: fractenna@aol.com (Fractenna)
Grupa: rec.radio.amateur.antenna
Organizacja: AOL http://www.aol.com
Data: Jun 11 2004 12:29:42

Hello--

I've received about 2 dozen e-mails on this subject. Prior to this, I communicated with Mr. Vincent early on 9 July(SIC) and offered him the opportunity
for scientific and objective independent testing. He declined due to a test already ongoing at a facility that I feel is also capable of such testing (you may ask Mr. Vincent if you wish).

My scientific interest in this topic is exhausted. I pose the following for those interested in what is possible, and what has been done, along the lines of distributed loading of helix monopoles. I invite you to investigate the prior art for yourself.

I have not seen Mr. Vincent's design, but based upon his PR statements, it appears to be a loaded helix monopole with a CCD-like arrangement for neutralization. The design, of course, may be different and novel, although I am not of that opinion, based upon the 3 reports published in the popular press. In the absence of knowledge, it is impossible to fully assess. Still, there is value in knowing what has been done and what is possible.

The prior art is rife with distributed loading of monopoles to extensively shorten them.

Here is a prior art method that will gives a few percent bandwidth and about -2 dBd for less than 1/15 wave height. I invite you to experiment for values and placements:

* Take a half wave of wire (approximately);
* Wind it into a helix of about 10^-3 waves diameter (or less);
* Place an inductive load half way up;
* Add at least 2 and up to 6 capacitors at distributed points along the helix length;
* If you wish to truncate the current at the top, then add a small end cap hat;

Essentially this is a shrunken 1 wave dipole manifest as a 1/2 wave monopole, using CCD (distributed capacitors) to neutralize the inductance. (remember: not all cacapcitors need be discrete components). Helical designs originated with Harold Wheeler more than 50 years ago. CCD articles have predominantly appeared in ham magazines in the 70's and 80's, although the original invention is (I believe) British and over 40 years old. There are many relevant patents, all expired to my knowledge.

This design approach will 'linearize' the current (slow he wave) and do a pretty good job. A shrunken 1/2 wave monopole does better than a shrunken 1/4 monopole. When you compare it to a full-sized 1/4 wave monopole it will do well at a specific frequency.

It is an interesting question whether the relevant comparison should be to a 1/4 wave monopole or a 1/2 wave monopole. Such shrunken designs are 1/2 wave equivalents, not 1/4 wave equivalents. They will look much worse in performance compared to full sized counterparts. A 1/4 wave monopole is not a counterpart, although in a practical sense it is a much used antenna which one might seek to replace and thus compare to.

HOWEVER for such a shrunken design--

* It will be moderate to narrow band;
* It will trade gain for efficiency and is NOT efficient;
* It will run hot in continuous-on applications with moderate to high power.

Gain is not efficiency. Sometimes efficiency doesn't matter, but gain does. Other times the heating from inefficiency will kill an otherwise elegant design option.

Mr. Vincent's original PR claims, to my recollection: high efficiency; good (broad) bandwidth; very low height.

These are not mutually, physically, attainable. I, and many others, have spent enough time to know. There is no reason to believe that Mr. Vincent has attained these. What he has appeared to have attained, to my limited knowledge based on published PR, is: moderate to low efficiency; modest bandwidth, and very low height. To my knowledge, Mr. Vincent has neither done an efficiency test nor a heating test.

In terms of applications, there are very few, besides some 'ham' and CB needs, where a single band, somewhat inefficient whip is desired. Midland has a nice compromise stick for CB'ers that's using some of these ideas and is two feet high. I like their design.

--Using a heavily shortened CCD type helix monopole in a broadcast app will lead to a fire. It is not highly efficient and the wasted power will manifest as heat. As little as 30 watts of heat in a confined area will start a fire or melt components if not properly dissipated. About a 1 dB loss to heat for 1000 watts power will produce well over 100 watts dissipated heat. Ergo, even a reasonably efficient antenna is potentially dangerous if high power is used and the heat is not properly dissipated. Mr. Vincent's design PR describes melted components in some of his design efforts. This indicates inefficiency in the design tested.

--Much of the world wants 'ground independent' antennas--not monopoles

-- Microwave applications are not single frequency, with few exceptions. Even PIFA (inverted F) solutions--which are extremely low height, lower than Mr Vincen'ts-- are multibanded.

--Much of the world wants multiband antennas, or wideband antennas, not modest passbands.

73,
Chip N1IR>>

4276. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 16:38:08 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb4ehgitd1@sparta.btinternet.com>
Source record: 93131

"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:ATaBc.13124$Yb1.8268@nwrddc02.gnilink.net...
>
> How can I determine how effective a balun is?? I am working at 137 MHz
> and cant consider a radiation pattern range of any kind.
> I have been trying a coil of small coax in a relatively low loss ferrite
> toroid and then slipping a high permeability tube of more lossy ferrite on
> the coax to the receiver. I thought the higher reactance with a
reasonable
> Q might minimize the current conducted along the feed line. Then, any
> currents that do get by the reactive coil might get disipated in the lossy
> and high permeability ferrite tube section.
>
> Since I'm working without much knowledge and almost no test equipment,
I'd
> sure appreciate any information about how to evaluate baluns at VHF.

==========

It all depends on what YOU mean by "effectiveness".

First ask yourself why, in your case, you think you need a balun.

If you are referring to common-mode current on the feedline then you have to state your requirements in numerical terms and find some means of measuring it as a fraction of the total line current, without disturbing the antennas normal environment.

But that's only half the job. Assuming you have some objections to common mode current you then have to numerically relate common mode current to the adverse effects it may have on ALL other aspects of antenna performance. And unless you have some idea of the MAGNITUDE of side effects you don't want, you can't sensibly talk about it.

Just a caution, nobody ever talks sensibly about power being radiated specifically from feedlines. There's no such stuff. ;o)

The best way I can think of of discovering what a balun is actually doing is to entirely remove it from the antenna and see what happens to antenna performance in terms of the all-important radiation pattern and gain. If within your limited means of measurement you can detect very little or no difference then, of course, don't bother to replace it. The usefulness of baluns is often overated.

Similarly with your ferrite coil and tube experiments. If by doing something, nothing happens, then don't do it.

Praps you could make a very simple current detector (a current transformer) which will fit around the feedline. A pair of suitably-shaped ferrite blocks plus a few turns of wire plus a diode plus a 500pF capacitor plus a 100-ohm resistor plus a DC microammeter are all that's needed.

But making measurements at 137 MHz is fraught with error even by experts.

If your antenna is for receiving purposes only, then its 99.9 percent certain you don't need a balun anyway. And a few turns of a few inches of small diameter coax on a small ferrite ring can't possibly do any harm even if you decide to use one. It is sure to work as intended even if you've no idea how well it's supposed to work.

Reg.

4277. Re: Hardline useage, pro's and cons

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 17:22:14 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <aJjBc.46781$wH4.2837800@twister.southeast.rr.com>
Source record: 93134

"aunwin" <aunwin@insightbb.com> wrote in message
news:mAlAc.58535$eu.29601@attbi_s02...
> Yes, I was wondering if would affect the inductance per unit length or
maybe
> adding distributed loading for the new historic design that is in the
works.
> I think it would take somebody well versed in 'Fields and Waves' to obtain
> an authoritive answer on whether the field generation vectors would cancel
> in the valleys
> or bend and add to the generated field. I suppose the same question could
be
> applied to the use of a spring design that was then wound in a inductive
> form possibly to obtain constant current flow over the physycal length as
> opposed to the actual electrical length hich may well be more than 4 times
> as long!
> Regards
> Art
>
> "Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
> news:58jAc.52984$tH1.2381444@twister.southeast.rr.com...
> >
> > "aunwin" <aunwin@insightbb.com> wrote in message
> > news:et%zc.115105$Ly.34531@attbi_s01...
> > > I have a lot of hardline coax that I use for many things. I have some
> in
> > > present use as a large value inductance because of its flexibility in
> > > winding. I have now read that a wound inductance should have a smooth
> > > surface ! Why is this? Does the corrugations of the outer surface
> > introduce
> > > facters that overide
> > > the mechanical advantages of flexibility?
> > > Regards
> > > Art
> > >
> > >
> >
> > The corrugations may add length and inductance that is difficult to
> > account.. Otherwise it is something I have never given much thought to
as
> I
> > have always used smooth materials to wind coils. I have noticed that
when
> > using a threaded rod for a radiator on 2 M the antenna worked out to be
a

> > little shorter than expected.
> >
> >
>
>
Also tried using threaded rod near 30Mhz, Their seemed to be no effect at
all on this trial. Chalk it up to skin effect 2m and near lack of it on 10M.

4278. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 17:29:31 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <%PjBc.46782$wH4.2838641@twister.southeast.rr.com>
Source record: 93132

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:mc34d0dm05si88gkpc4cc109sgb0nea0ga@4ax.com...
> On Thu, 17 Jun 2004 22:25:36 +0100, "jason" <jas@kto.net> wrote:
> >maybe just similar to what is known as a
> >"nest of dipoles" that scanner enthusiasts have. They use different
> >radiating elements in parallel.
>
> Hi Jason,
>
> Not that at all, otherwise all of the elements would be driven, and
> simple observation negates that. I've reported a similar design to
> this group years ago that uses the SO-239 bulkhead connector wired up
> in similar fashion: One wire extending directly from the center pin
> solder tail, and another wire, parallel, soldered to any of the four
> holes normally used for mounting. No need whatever for the usual
> JPole tuning cap.
>
> 73's
> Richard Clark, KB7QHC
Yep this has been around a long time. Got one in my junk bin made of
coathangers and N connector for two meters> It worked so much better than my
rubber duckie antenna I thought it was the greatest antena in the world..

4279. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 17:38:26 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <mYjBc.46786$wH4.2839859@twister.southeast.rr.com>
Source record: 93133

<nospam@nouce.bellatlantic.net> wrote in message
news:mtn4d05toavmvj939362pqhtko6dit7cc8@4ax.com...
> On 17 Jun 2004 16:43:05 GMT, arrow146@aol.com (Arrow146) wrote:
>
> >Remember back when some said my Open Stub J-pole (OSJ) design
> >Would not work very well.
> >Just take a look at 25 reviews at
>
> Hi Al,
>
> I have two. They do work and their performance is no different than
> and other end fed halfwave, as expected and as modeled. Also side by
> side with monoband plumber specials(1/2 cu pipe designs) it is a
> match, as in no difference. One I use for semiportable ops as it's
> dual band and easy to mount up on a portable tripod and 15ft of
> masting.
>
> It is as it claims and does as claims. Though it does real well in
> the "survived a month banging around loose in the back of a pickup
> test". I wanted more gain I'd do a 6db colinear but they are 3x
> longer and the cheap ones are fragile and the good ones really cost.
>
>
> Allison
> KB1gmx
My only problem with J antennas is WHY. I can more easily build a 5/8.

4280. Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 18:26:50 UTC
From: Kees <PA8540@home.removeee-thisss.nl>
Message-ID: <aelbd0pvdvu6rv64t5s2idbu19c7t1cc29@4ax.com>
Source record: 93135
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Hello fellow shortwave listeners !

More info to make a T2FD yourself, like I did mine, please have a look at:

http://members.home.nl/rita.kees/t2fdmake.html

I hope you can appreciate it and use it for your practice.

I will be glad to answer your questions.

73/cheers

Kees

4281. Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 19:13:09 UTC
From: Shadow 998 <hrd998cc@nospam.yahoo.com>
Message-ID: <9llBc.2590$7i7.1795@newssvr25.news.prodigy.com>
Source record: 93136

I am tuning up my homebrew 6-meter yagi and find that the rod inserted into the capacitor tube of the gamma match is only inserted by about 1-1/2" to obtain 1:1 SWR. I guesstimated and cut the spacer and shorting bar for the match to provide about 1-1/2" parallel space between the gamma match and the driven element. I did this because the text of the article did not specify the space. Is this dimension critical? Is it normal for a 13" gamma match to only need 1-1/2" of rod insertion to obtain the proper capacitance?

Thanks.
Russ KG6TDX

4282. Re: Last Weekend To File FCC Comment

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 19:44:13 UTC
From: Shadow 998 <hrd998cc@nospam.yahoo.com>
Message-ID: <hOlBc.2599$UF7.626@newssvr25.news.prodigy.com>
Source record: 93137
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur,rec.radio.amateur.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx

OK, I did.
KG6TDX

"yea right" <spam@spam.spam> wrote in message
news:pan.2004.06.20.02.17.24.921719@spam.spam...
> "The limit for an unintentional emitter on HF is 30 uV/m at 30 meters from
> the source," he said. "If you take a dipole cut for 3.5 MHz and put it in
> a 30 uV/m field, you'll have a noise reading of S9 plus 16 dB at your
> transceiver."
>
> The FCC has extended the comment period for BPL. If you value radio, this
> may be the last and only chance to have your voice heard to stop BPL from
> destroying your hobby. The FCC has extended the comment period for BPL.
>
> It is VERY simple to file a FCC comment. Click the link below and enter
>
> 04-37
>
> in box #1 (proceeding number) and fill in the blanks. The simplest way to
> comment is to type your comment into the box on the bottom of the form.
> Sample comment below.
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
>
> If you see fit, please post this to as many groups as possible
> because numbers count! Please mention this in your nets!
>
> More info at http://www.arrl.org/news/stories/2004/02/12/5/?nc=1
>
> If you can't think of any thing to type or wish to make this as painless
> as possible, you can cut-n-paste the comment I typed below.
>
> /******************************/
>
> In Writing, I wish to persuade the FCC from allowing BPL to be
> implemented. The destruction or at the least, deterioration of the
> shortwave bands is not only a violation of ITU laws that protect
> international broadcasters from interference and jamming, it will be
> destroying many people's life hobby. Amateur radio will be reduced to
> users with high-power amplifiers and large antennas. Emergency
> communications will be hindered to levels directly responsible for the
> loss of life. Also, this will hinder military HF comms reducing national
> security

>
> There are many technologies that make BPL unnecessary. BPL will never be
> able to carry the high bandwidth demands for mass distribution of video
> much less the up-and-coming HDTV.
>
> Thank You!

4283. Re: Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 19:50:15 UTC
From: Dave <noone@nowhere.com>
Message-ID: <-vudnW-iKrTmd0jdRVn_iw@crocker.com>
Source record: 93138

if its working then thats where it should be.

gamma match design and tuning includes:
1. distance of shorting bar from center of element
2. space between gamma rod and element
3. diameters of gamma rod and element
4. capacitance added at feed point
5. length of the whole driven element

all 5 factors go into the final match. some are easily changed, like the capacitance, shorting bar location, and element length. the others are harder and are usually selected to get in the ballpark and then the easy ones are adjusted to get the desired match.

"Shadow 998" <hrd998cc@nospam.yahoo.com> wrote in message news:9llBc.2590$7i7.1795@newssvr25.news.prodigy.com...
> I am tuning up my homebrew 6-meter yagi and find that the rod inserted into
> the capacitor tube of the gamma match is only inserted by about 1-1/2" to
> obtain 1:1 SWR. I guesstimated and cut the spacer and shorting bar for the
> match to provide about 1-1/2" parallel space between the gamma match and the
> driven element. I did this because the text of the article did not specify
> the space. Is this dimension critical? Is it normal for a 13" gamma match
> to only need 1-1/2" of rod insertion to obtain the proper capacitance?
>
> Thanks.
> Russ KG6TDX
>
>

4284. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 20:01:04 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <42mBc.6432$mG4.3298@nwrddc03.gnilink.net>
Source record: 93139

Reg

The only thing I have been concerned about is the radiation pattern. I have been trying to "disassociate" the coax's outer conductor with a dipole so the radiation pattern will be essentially that of the dipole.

I have been trying to think of ways to make impedance measurements so I might be able to estimate the reactance to currents cunducted along the outside of the coax.

I really appreciate your comments on the practicallity of winding a few turns of small coax in a small ferite.. That seems to have provided the best insertion loss I've been able to acheive.

I've been trying to make a simple antenna for receiving NOAA satellites. I have been learning that my antenna concept is of limited value for producing clear pictures from weather satellites. But, I still want to get more data on antennas so I might be able to get better pictures from a "simple" antenna.
My principal problem right now is minimizing the nulls in the pattern. Each null will produce a black line in the picture of te Earth when that null falls below some threshold.

Thanks again
Jerry

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message
news:cb4ehgitd1@sparta.btinternet.com...
>
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> news:ATaBc.13124$Yb1.8268@nwrddc02.gnilink.net...
> >
> > How can I determine how effective a balun is?? I am working at 137
MHz
> > and cant consider a radiation pattern range of any kind.
> > I have been trying a coil of small coax in a relatively low loss
ferrite
> > toroid and then slipping a high permeability tube of more lossy ferrite
on
> > the coax to the receiver. I thought the higher reactance with a
> reasonable
> > Q might minimize the current conducted along the feed line. Then, any
> > currents that do get by the reactive coil might get disipated in the
lossy
> > and high permeability ferrite tube section.
> >

> > Since I'm working without much knowledge and almost no test equipment,
> I'd
> > sure appreciate any information about how to evaluate baluns at VHF.
>
> ==========
>
> It all depends on what YOU mean by "effectiveness".
>
> First ask yourself why, in your case, you think you need a balun.
>
> If you are referring to common-mode current on the feedline then you have
to
> state your requirements in numerical terms and find some means of
measuring
> it as a fraction of the total line current, without disturbing the
antennas
> normal environment.
>
> But that's only half the job. Assuming you have some objections to common
> mode current you then have to numerically relate common mode current to
the
> adverse effects it may have on ALL other aspects of antenna performance.
And
> unless you have some idea of the MAGNITUDE of side effects you don't want,
> you can't sensibly talk about it.
>
> Just a caution, nobody ever talks sensibly about power being radiated
> specifically from feedlines. There's no such stuff. ;o)
>
> The best way I can think of of discovering what a balun is actually doing
is
> to entirely remove it from the antenna and see what happens to antenna
> performance in terms of the all-important radiation pattern and gain. If
> within your limited means of measurement you can detect very little or no
> difference then, of course, don't bother to replace it. The usefulness of
> baluns is often overated.
>
> Similarly with your ferrite coil and tube experiments. If by doing
> something, nothing happens, then don't do it.
>
>
> Praps you could make a very simple current detector (a current
transformer)
> which will fit around the feedline. A pair of suitably-shaped ferrite
blocks
> plus a few turns of wire plus a diode plus a 500pF capacitor plus a
100-ohm
> resistor plus a DC microammeter are all that's needed.
>
> But making measurements at 137 MHz is fraught with error even by experts.

>
> If your antenna is for receiving purposes only, then its 99.9 percent
> certain you don't need a balun anyway. And a few turns of a few inches of
> small diameter coax on a small ferrite ring can't possibly do any harm
even
> if you decide to use one. It is sure to work as intended even if you've no
> idea how well it's supposed to work.
> ----
> Reg.
>
>

4285. Re: Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 20:41:28 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <l7tbd018ce3uhe2r04me4agqrao0jbsmqh@4ax.com>
Source record: 93140

On Sun, 20 Jun 2004 19:13:09 GMT, "Shadow 998"
<hrd998cc@nospam.yahoo.com> wrote:
>Is it normal for a 13" gamma match
>to only need 1-1/2" of rod insertion to obtain the proper capacitance?

Hi Russ,

It seems I ran across a short hand for the required capacitance for
the common gamma match that offered somewhere between 2pF and 5pf
times the wavelength of the band. That is, 12pF to 30pF - not much
especially if the rod is a close fit with a small dielectric layer.

73's,
Richard Clark, KB7QHC

4286. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 21:09:03 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb4ude$sf7$1@sparta.btinternet.com>
Source record: 93141

"Bill Turner" wrote -
> Performance will be best if it's up in the air, away from ground. RF
> does best when flowing through metal, not dirt. Earth is lossy and
> should be avoided for transmitting. If you were receiving only, the
> loss could be made up by more gain in the receiver, but when power is
> lost during transmitting, it's gone forever.
>
> If for some reason you 'had' to mount the vertical at ground level, you
> should install enough radials that the antenna does not 'see' the earth
> at all, only the radials. To do this, the generally accepted number of
> radials is about 120, 1/4 wave long.
>
==========

Fine on your comments Bill except for the oft-repeated number of 120 which must have been originated by Marzipan the Magician. It is far too extravagant.

For amateur purposes 32 radials are 'enough'. And that only because it's twice 16, which is twice 8 - - - - down to 2 which is twice 1.

Over a wide range of soil resistivities and radial lengths, the electrode-to-ground resistance of 32 radials is only about 1.3 times that of a solid copper disk of the same radius laid flat on the ground.

The electrode-to-ground resistance of 1 radial is about 6 or 7 times that of 32 radials so unless immersed in salt water it may be well worth while increasing to 4, 8, 16 or even 32.

In average soils and with radial lengths of around 20 metres, the electrode resistance of 32 radials will already be as low as 3 ohms which is perfectly good enough for less than a 1/4-wave or 5/8-wave vertical and far better than necessary for a 1/2-wave vertical. To increase to 120 or more radials is just a waste of good copper plus a lot of hard labour.

The following table is for a typical ground resistivity = 200 ohm-meters (conductivity = 5 milli-Siemens), radial length = 66 feet, wire diameter = 14 awg, buried depth = 1 inch.

Radials	ohms
1	24.6
2	13.6
4	8.0
8	5.3
16	4.2

32 3.3
64 2.8
128 2.7
Disk 2.5

For a 1/4-wave vertical I wouldn't bother with more than 16 radials with which efficiency is of the order of 90 percent. Or an undetectable 1/12 of an S-unit less than perfection.

If ground resistivity is not known, as it nearly always isn't, then a logical way to proceed is to keep doubling up the number of radials until the received signal strength of not too distant stable transmissions stops increasing. Then add 2 or 3 more for luck. But I doubt whether the new magic number of 32 will be exceeded.

Regarding length of radials. The propagation velocity along wires buried in the ground is very much smaller than in free space. When lying on the surface of the ground it about half the free space value. So surface radials need never be longer than 1/8 wavelengths.

Furthermore, the loss along buried wires is very high. Of the order of 8 dB per 1/4-wavelength at their own velocity. So there's little point in having buried wires much longer than 10 meters or 33 feet on the 160m band, and progressively shorter lengths at higher frequencies. At distances where there's no current flowing in the wires there's no point in them being there. Nobody uses ground radials for 15 and 10 meters anyway.

Do I hear anybody shouting "Heretic" ? ;o)

Reg, G4FGQ.

4287. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 21:27:53 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <a4tbd0h45j0pdrp15ocmsfcmslb7o2r19d@4ax.com>
Source record: 93142

On Sun, 20 Jun 2004 20:01:04 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:
> I really appreciate your comments on the practicallity of winding a few
>turns of small coax in a small ferite.. That seems to have provided the
>best insertion loss I've been able to acheive.

Hi Jerry,

I noted the dearth of numbers that necessarily informs the
discussion....

Achieving those numbers is a relatively simple task one can perform
from the safety of an arm chair. You simply observe that the
prospective antenna exhibits some Z. This is usually known to within
ï¿½100%. As it is often designed for coaxial feed, a valuation of 50
Ohms is easily within any variation of actual value.

Now, the exterior, offending radiator of the coaxial shield is an
unknown. However, there are a range of possibilities that are hardly
tasking of the mind to anticipate. Certainly that alternate path will
represent no load less than 50 Ohms impedance for your band (the
antenna isn't fractions of a wavelength away from your transceiver is
it?). However, let's give that the benefit of the doubt as that would
be very disruptive.

To snub that second 50 Ohm radiator (or less), you should add at least
3 times the antenna Z, preferably 5 times, and conservatively 10 times
to the common mode path. One bead (that will snuggly fit RG-58)
suitably chosen would offer 20 of those Ohms, if not more to that
common mode path when the coax is slipped through it. I will leave it
as a simple task to compute how many beads (no unzipped software
required, no download, no immediate running to wait for).

If on the other hand that exterior braid offered some multiple of
halfwave, it would exhibit an exceedingly high Z such that no snubbing
at all is required as that value would presumably eclipse the
requirement. Those that doubt may now retire to the bench to confirm
or deny. To be blunt, this is simply a fork in the road situation
(parallel loads for those who demand a technical discussion), you are
adding barriers to the less preferred path.

However, from the comfort of that same arm chair, it may be simply
argued that this exterior dimension offers every prospect of being
either unknown, or variable over the life of the installation (unknown
in some futurity). The resolution of that argument is to build the
choke and get on with life by getting out of the arm chair only once

to install it, and thus anticipate and resolve all unknowns.

Not all solutions require software, nor incantations of the mystery of the flux density. ;-)

73's
Richard Clark, KB7QHC

4288. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 21:40:38 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <qvnBc.66450$Hg2.43822@attbi_s04>
Source record: 93143

I've been away from Yagis for many years. But, maximum gain requires maximum radiation which requires maximum current which requires lowest radiation resistance. Twenty years ago, or so, Ro of 15 to 20 ohms was common in high gain Yagis wher Gamma matching was used to raise the impedance to approximately 50 ohms. A slight reduction in gain allows Ro of close to 50 ohms.

Kraus, Antennas, McGraw-Hill 1950, Chapter 11 provides the analysis for a simple 2 element 'Yagi' type array. In written terms, the driving point, feed point, resistance, ignoring losses, is the radiation resistance of the driven element minus the ratio of the mutual impedance to the self impedance of the parasitic elements. Far field gain is maximized by a term where the input power is divided by the net impedance of the driven element minus the net impedance contributed by the parasitic elements.

Conclusion, maximum gain, in any configuration [3 element, 4 element, etc.], requires lowest Rr produced by highest mutual coupling.

I'm not arguing that more gain is produced by the longest boom or the most elements. What I am stating is that for any configuration the gain for that configuration is MAXIMIZED when the Rr is minimized.

Ian White, G3SEK wrote:
> Dave Shrader wrote:
>
>> If the Yagi is to be tuned for MAXIMUM gain, and that is the
>> objective, then Ro will be the lowest value at resonance.
>
>
> That's an interesting assertion. Do you have further evidence for it?
>
>

4289. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 21:48:41 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <ZCnBc.6633$mG4.4856@nwrddc03.gnilink.net>
Source record: 93144

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:a4tbd0h45j0pdrp15ocmsfcmslb7o2r19d@4ax.com...
> On Sun, 20 Jun 2004 20:01:04 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
> > I really appreciate your comments on the practicallity of winding a few
> >turns of small coax in a small ferite.. That seems to have provided the
> >best insertion loss I've been able to acheive.
>
> Hi Jerry,
>
> I noted the dearth of numbers that necessarily informs the
> discussion....
>
> Achieving those numbers is a relatively simple task one can perform
> from the safety of an arm chair. You simply observe that the
> prospective antenna exhibits some Z. This is usually known to within
> ±100%. As it is often designed for coaxial feed, a valuation of 50
> Ohms is easily within any variation of actual value.
>
> Now, the exterior, offending radiator of the coaxial shield is an
> unknown. However, there are a range of possibilities that are hardly
> tasking of the mind to anticipate. Certainly that alternate path will
> represent no load less than 50 Ohms impedance for your band (the
> antenna isn't fractions of a wavelength away from your transceiver is
> it?). However, let's give that the benefit of the doubt as that would
> be very disruptive.
>
> To snub that second 50 Ohm radiator (or less), you should add at least
> 3 times the antenna Z, preferably 5 times, and conservatively 10 times
> to the common mode path. One bead (that will snuggly fit RG-58)
> suitably chosen would offer 20 of those Ohms, if not more to that
> common mode path when the coax is slipped through it. I will leave it
> as a simple task to compute how many beads (no unzipped software
> required, no download, no immediate running to wait for).
>
> If on the other hand that exterior braid offered some multiple of
> halfwave, it would exhibit an exceedingly high Z such that no snubbing
> at all is required as that value would presumably eclipse the
> requirement. Those that doubt may now retire to the bench to confirm
> or deny. To be blunt, this is simply a fork in the road situation
> (parallel loads for those who demand a technical discussion), you are
> adding barriers to the less preferred path.
>

> However, from the comfort of that same arm chair, it may be simply
> argued that this exterior dimension offers every prospect of being
> either unknown, or variable over the life of the installation (unknown
> in some futurity). The resolution of that argument is to build the
> choke and get on with life by getting out of the arm chair only once
> to install it, and thus anticipate and resolve all unknowns.
>
> Not all solutions require software, nor incantations of the mystery of
> the flux density. ;-)
>
> 73's
> Richard Clark, KB7QHC

Richard

I had never even cnsidered that there is a practical amount of impedance
that the balun neds to provide. Thats a good thought for me to use.

I have been picking up parts to build a slotted line. And now I see that
I might be able to build an impedance measuring device per VK2KU and VK2ZAB
information. I plan to go to some nearby surplus stores tomorrow to look
for parts for an impedance meter. It is likely that I'll learn more about
building test equipment than I learn about the antennas I trying to
understand.

Even if this effort to try to build a simple antenna fails, I am enjoying
learning about stuff I like to be informed about.

Thanks
Jerry

4290. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 21:57:51 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <sn1cd05kqtp0dnea30l2uj0fqu7qpgec52@4ax.com>
Source record: 93145

On Sun, 20 Jun 2004 21:48:41 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:
> I have been picking up parts to build a slotted line. And now I see that
>I might be able to build an impedance measuring device per VK2KU and VK2ZAB
>information. I plan to go to some nearby surplus stores tomorrow to look
>for parts for an impedance meter. It is likely that I'll learn more about
>building test equipment than I learn about the antennas I trying to
>understand.

Hi Jerry,

The road less traveled here in this group (to the bench) will confirm
your anticipated stages of the cross. ;-)

I have constructed a binary variable length transmission line from
precision coaxial components (Cecil once tried to argue its
characteristic Z was 40 Ohms to deflect a thread) found at this
source:
http://www.microcoax.com/semirigid/intro.htm

I don't know how deep your pockets are for this effort, but it will
let you know that precision and accuracy are available.

73's
Richard Clark, KB7QHC

4291. Re: Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 22:15:26 UTC
From: Shadow 998 <hrd998cc@nospam.yahoo.com>
Message-ID: <10oBc.2625$wy1.2185@newssvr25.news.prodigy.com>
Source record: 93146

Richard and Dave, Thanks for the quick responses. It sounds like it is OK as-is. Using a borrowed MFJ analyzer, I was able to get the SWR literally flat at 51.9Mhz. The bandwidth is pretty good too: 1.2 @ 50Mhz and maxes out at 1.7 @ 54Mhz. All in all, I'm quite happy so far.

This is my first attempt at 6 meters and have not made a single contact on the band since getting my license last year. This year will also be my first field day which is why I built this beam. Now to figure out if it has a F/B ratio, forward gain, etc.

Again, Thanks for the help.
Russ (Back to the backyard) ;-)
73 KG6TDX

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:l7tbd018ce3uhe2r04me4agqrao0jbsmqh@4ax.com...
> On Sun, 20 Jun 2004 19:13:09 GMT, "Shadow 998"
> <hrd998cc@nospam.yahoo.com> wrote:
> >Is it normal for a 13" gamma match
> >to only need 1-1/2" of rod insertion to obtain the proper capacitance?
>
> Hi Russ,
>
> It seems I ran across a short hand for the required capacitance for
> the common gamma match that offered somewhere between 2pF and 5pf
> times the wavelength of the band. That is, 12pF to 30pF - not much
> especially if the rod is a close fit with a small dielectric layer.
>
> 73's,
> Richard Clark, KB7QHC

4292. Re: Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-20 22:38:33 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <f74cd0dnsn1mcv9f5qpffr99vflonl0qmt@4ax.com>
Source record: 93147

On Sun, 20 Jun 2004 22:15:26 GMT, "Shadow 998"
<hrd998cc@nospam.yahoo.com> wrote:
>This is my first attempt at 6 meters and have not made a single contact on
>the band since getting my license last year.

Hi Russ,

You might want to consider if your lack of contacts is due to being
cross polarized with those who you wish to work (or be heard by) - or
using the wrong mode.

73's
Richard Clark, KB7QHC

4293. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 00:07:02 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb58r6$f9g$1@titan.btinternet.com>
Source record: 93148

"Jerry Martes" wrote -
>
> The only thing I have been concerned about is the radiation pattern. I
> have been trying to "disassociate" the coax's outer conductor with a
dipole
> so the radiation pattern will be essentially that of the dipole.
>
> I have been trying to think of ways to make impedance measurements so I
> might be able to estimate the reactance to currents cunducted along the
> outside of the coax.
>
> I really appreciate your comments on the practicallity of winding a few
> turns of small coax in a small ferite.. That seems to have provided the
> best insertion loss I've been able to acheive.
>
> I've been trying to make a simple antenna for receiving NOAA satellites.
> I have been learning that my antenna concept is of limited value for
> producing clear pictures from weather satellites. But, I still want to
get
> more data on antennas so I might be able to get better pictures from a
> "simple" antenna.
> My principal problem right now is minimizing the nulls in the pattern.
> Each null will produce a black line in the picture of te Earth when that
> null falls below some threshold.
>

Jerry,

Let me say at the outset, whether you use a balun or not, there will be no detectable effect on the radiation/receiving pattern of the antenna. For practical purposes it will remain the same as the usual radiation pattern for a half wave dipole.

You appear to have a 137 MHz 1/2-wave dipole fed via a coaxial line. Ideally it should be a 75 ohm line and to prevent reflections from the receiver end it should be terminated at the receiver with 75 ohms. But if reflections don't matter with whatever type of signals you wish to receive then a 50-ohm line can be used. But neither impedance will have any effect on the antenna's radiation pattern.

I can talk in terms of radiation pattern because the receiving and radiation patterns are always identical for either transmitting or receiving purposes. This results from the effect known as "Reciprocity".

When transmitted or received currents appear on the outer coaxial conductor of the feedline they are known as "common-mode" currents which cause the antenna and feedline to behave as one single, differently shaped antenna. The radiation pattern of the differently-shaped antenna results in distortion of the original dipole's pattern.

BUT WHAT MATTERS IS THE MAGNITUDE OF THE CURRENT WHICH FLOWS ON THE OUTSIDE OF THE COAX COMPARED WITH THE MAGNITUDE OF THE CURRENT IN THE DIPOLE.

The common mode current in the coax flows along the whole of its uncertain length and so affects the radiation pattern in an uncertain manner. Furthermore the unknown impedance to ground at the receiver end of the coax obviously has an effect. The whole business is indeterminate and can be treated only in a statistical worst and best case manner.

Available from my website is program FEEDPOWR program which deals with the transmitting case and attempts to estimate the power radiated from the feedline relative to the power from the dipole antenna proper, versus dipole length, feedline length and frequency, taking the resistance of the ground connection at the end of the coax into account. It does not take into account that the lower part of the feedline, perhaps inside a building, does not radiate at all well and so the program very nicely over-estimates the unwanted effects.

If we examine your particular case by entering in the program a dipole length of 1.09 metres, a frequency of 137 MHz, a feedline length of whatever you've got, and a ground resistance of 50 ohms for the want of a better value, we find that that the worst case value of power radiated from the feedline is about 6 percent of the total transmitter power as line length is varied. The best case value is about 1 percent as line length is varied.

The change in shape of the radiation pattern is at worst of the order of 0.4 dB which I suggest is negligible and undetectable. It is less than that due to not bringing the feedline away from the dipole at an angle of 90 degrees for the whole of its length which can also affect the radiation pattern. Nearby buildings, phone and power lines, can also affect the radiation pattern of an ordinary dipole and almost certainly will.

Due to reciprocity the effect on the receiving pattern will be identical.

As I said earlier you don't need a balun. But if you are a perfectionist no harm will be done by fitting one. You will obtain no useful information by attempting to make measurements of any sort. A ferrite choke balun is so simple there's nothing to go wrong with it. Keep the length of small-bore coax wound on the balun to less than 1/15 wavelengths. Just a few turns on a 1" diameter ring.

4294. Re: Polarization conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 00:32:55 UTC
From: dariolq@yahoo.com
Message-ID: <c92ca4d3.0406201632.ae7d6da@posting.google.com>
Source record: 93149

Thanks Roy,
But for those equations to be valid circular represenations,
don't Eh & Ev need to be equal? As they stand, substituting "random"
values for Eh & Ev will yield elliptically polarized waves.

Dario

Roy Lewallen <w7el@eznec.com> wrote in message
news:<10bbf105d7ulje7@corp.supernews.com>...
> Left Circ E = 0.5 * (Eh + j Ev)
> Right Circ E = 0.5 * (Eh - j Ev)
>
> where Eh and Ev are complex horizontal (phi) and vertical (theta)
> linearly polarized E field components respectively. Left Circ E and
> Right Circ E are of course also complex.
>
> You can find this in just about any antenna text. A text would probably
> be a good investment if you're going to be digging into theory at this
> level.
>
> Roy Lewallen, W7EL
>
> Dario Lopez wrote:
>
> > Hi everyone,
> > I've seen some very informative posts here and I'm hoping this
> > question will generate some more.
> >
> > Does anyone out there know how to convert antenna field measurements
> > to linearly polarized components as well as circularly polarized
> > components?
> >
> > I have a file with complex field data (E theta & E phi : real and
> > imaginary) and have been searching for a method to do the conversions
> > barring using poincare sphere concepts (they are non-intuitive as far
> > as I'm concerned. The linear conversion is pretty straight forward:
> >
> > E_theta = sqrt(Re_E_theta^2 + Im_E_Theta^2)
> > E_theta_phase = atan(Im_E_Theta/Re_E_Theta)ï¿½correction factor for
> > quadrant placement
> >
> > Same goes for E_Phi.
> >
> > Does anyone know how to do it for circluar polarization?
> >

> > Regards
> >
> > Dario

4295. Re: Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 00:39:02 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <Mt2dnQCdX6mAs0vdRVn-jg@comcast.com>
Source record: 93150

"Shadow 998" <hrd998cc@nospam.yahoo.com> wrote in message
news:10oBc.2625$wy1.2185@newssvr25.news.prodigy.com...
>
> This is my first attempt at 6 meters and have not made a single contact on
> the band since getting my license last year. This year will also be my
> first field day which is why I built this beam. Now to figure out if it
> has a F/B ratio, forward gain, etc.

Your best bet is to listen from about 50.100 to 50.200 on SSB. Calling
frequency is 50.125. East cost was working the West coast earlier today. I
assume the beam is horizontally polarized. Good luck on 6.

Tam/WB2TT FN20

4296. Re: Modification to antenna ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 01:18:19 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40D6375B.7F3D6B09@cwis.net>
Source record: 93151

jason,
Was the thermos empty?
'Doc

4297. Link web site for ham radio

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 01:23:24 UTC
From: Bill Clarke <billclarke@w2blc.com>
Message-ID: <gMqBc.367081$M3.340020@twister.nyroc.rr.com>
Source record: 93152
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.scanner

www.w2blc.com for links to manufacturers, dealers, nets, rig photos and specs, and a lot more. No slow graphics - just good links!

4298. Re: Identify beam

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 01:51:47 UTC
From: t_ashland@yahoo.com
Message-ID: <6e6aeba9.0406201751.6d7d97b9@posting.google.com>
Source record: 93153

I think I have identified the beam. It appears to be a Mosley CL
33-M-WARC. I was wondering if someone might have the manual of this
antenna. I would love a scanned copy, but I would be willing to pay
for a photo copy. Thanks for your help!
It has an interesting feed design. It has two small aluminum tubes to
each driven element and is fed at the center of each small tube in the
center. I'm wondering if one driven element is for the conventional
10-15-20 beam and the other is 12 and 17 dipole? Any help would be
appreciated!
73,
Terry, WK0F
t_ashland@yahoo.com (Terry Ashland) wrote in message
news:<6e6aeba9.0406091800.3b5cdcd9@posting.google.com>...
> Hi,
> I may be acquiring a tower and beam from an SK. I am having problems
> trying to figure out what kind of beam it is. I think its been up
> there awhile. It is a 4 element beam with two driven elements spaced
> about 1 to 2' apart. Its probably a 10-15-20 beam. Any help would be
> appreciated.
> 73,
> Terry, WK0F

4299. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 01:52:58 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40d63f85$0$437$5cbedd26@news.real-time.com>
Source record: 93154

Ian White, G3SEK wrote:

> Dave Shrader wrote:
>
>> If the Yagi is to be tuned for MAXIMUM gain, and that is the
>> objective, then Ro will be the lowest value at resonance.
>
>
> That's an interesting assertion. Do you have further evidence for it?
>
>

Yes, quite interesting, since a yagi is _not_ resonant in the design
frequency range, otherwise it couldn't work.

Tom
K0TAR

4300. what kind of coax do i need for 800mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 02:30:09 UTC
From: wildboy74@webtv.net
Message-ID: <27628-40D64831-236@storefull-3272.bay.webtv.net>
Source record: 93156

i need to know witch brand is best. i no beldon is one of them. also i would like to build a small 800mhz.yagi or quad ant for the trunked system 73s

4301. Re: Mast Identification

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 02:34:51 UTC
From: Bob <nowhere@nospam.org>
Message-ID: <hPrBc.3163$Nz.269788@news20.bellglobal.com>
Source record: 93157

The airport card in an iBook is not going to have the power required to access a WAP several hundred metres away let alone several thousand.

4302. Re: Polarization conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 02:40:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10dcik648bpjc80@corp.supernews.com>
Source record: 93155

No.

All waves are elliptically polarized. Linear and circular are two special cases of eliptically polarized waves. For analytical and computational convenience, you can split any (elliptically polarized, TEM) waves into two orthogonal components. One choice of two components is vertical and horizontal linear. Another, equally valid, choice is left and right circular. You can convert between one and the other with the equations I provided.

To be purely linearly polarized, Eh and Ev have to be in phase or 180 degrees out of phase. To be purely circular, Eh and Ev have to be equal in magnitude, AND in phase quadrature. There is no combination of Eh and Ev except both zero which result in the left or right circular components to be zero. That is, a purely linearly polarized wave can still be split into left and right circular components, and neither of those components will be zero unless the field itself is zero. Likewise, a purely circularly polarized field can be split into non-zero vertical and horizontal linear components.

Roy Lewallen, W7EL

Dario Lopez wrote:
> Thanks Roy,
> But for those equations to be valid circular represenations,
> don't Eh & Ev need to be equal? As they stand, substituting "random"
> values for Eh & Ev will yield elliptically polarized waves.
>
> Dario
>
> Roy Lewallen <w7el@eznec.com> wrote in message
news:<10bbf105d7ulje7@corp.supernews.com>...
>
>>Left Circ E = 0.5 * (Eh + j Ev)
>>Right Circ E = 0.5 * (Eh - j Ev)
>>
>>where Eh and Ev are complex horizontal (phi) and vertical (theta)
>>linearly polarized E field components respectively. Left Circ E and
>>Right Circ E are of course also complex.
>>
>>You can find this in just about any antenna text. A text would probably
>>be a good investment if you're going to be digging into theory at this
>>level.
>>
>>Roy Lewallen, W7EL

4303. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 03:01:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10dcjs8pkpshd60@corp.supernews.com>
Source record: 93158

My, we can sure learn a lot of new things about Yagis from this newsgroup. Unfortunately, they're not true.

I have a very high confidence in the ability of EZNEC to accurately model Yagi antennas. This is due to feedback from several professional customers who have analyzed Yagis with EZNEC and tested the actual antennas on test ranges.

Let's take the EZNEC example file NBSYagi.EZ.

If you change the driven element (wire 2) length from 2 * 54.875" to 2 * 54.56", you'll find that the feedpoint impedance is 11.53 - j0.0752 ohms -- it's resonant, and it's certainly functioning as a Yagi. The pattern and gain are nearly identical to the original NBS design.

Now, change the director (wire 3) length from 2 * 54.313" to 2 * 56". This drops the gain from 9.68 dBi to 8.66 dBi, and lowers the feedpoint resistance from 11.53 ohms to 7.849 ohms. The point of maximum gain is obviously not the point of minimum feedpoint resistance.

Anyone having an explanation for why the gain should be greatest when the feedpoint resistance is minimum and why a Yagi can't work when resonant should examine their explanations carefully in order to uncover the flaws that are obviously present in the explanations.

Roy Lewallen, W7EL

Tom Ring wrote:
> Ian White, G3SEK wrote:
>
>> Dave Shrader wrote:
>>
>>> If the Yagi is to be tuned for MAXIMUM gain, and that is the
>>> objective, then Ro will be the lowest value at resonance.
>>
>>
>>
>> That's an interesting assertion. Do you have further evidence for it?
>>
>>
>
> Yes, quite interesting, since a yagi is _not_ resonant in the design
> frequency range, otherwise it couldn't work.
>
> Tom
> K0TAR

4304. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 03:25:46 UTC
From: m II <ohmworkLEOPARD@spots.ca>
Message-ID: <_ysBc.16634$T_1.2765@clgrps12>
Source record: 93159
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Kees wrote:
> Hello fellow shortwave listeners !
>
> More info to make a T2FD yourself, like I did mine, please have a
> look at:
>
> http://members.home.nl/rita.kees/t2fdmake.html
>
>
> I hope you can appreciate it and use it for your practice.
>
>
> I will be glad to answer your questions.
>
> 73/cheers
>
> Kees
>
>

http://members.home.nl/rita.kees/t2fd1.gif

I found that my garage is WAY to far away to use this setup.

Following the formula, I took an average frequency of 10 Megahertz. I divided into 100, as per the formula. I got an antenna length of (100ft/10,000,000) = 1 X 10^-5 feet, or 0.00012 inches.

I then thought that this just couldn't be right. I redid it using Meters instead of feet and arrived at 0.00001 meters length. MUCH BETTER! The problem now is that the store only sells full length rolls of wire. Where can I mail order a smaller chunk? Can they just wrap the postage stamp around it to save shipping costs?

Being ever on the watch for cheap alternatives, what is a cheap way of relocating the far end antenna support?

I don't want to pay to have the garage moved.

Any insights appreciated.

mike

--

-- -- -- -- -- -- -- --
/ /\ / /\ / /\ / /\ / /\ / /\ / /\ / /

/ /\ \/ /\ ohmworkLEOPARD@spots.ca \/ /\ \/ /
/_/ \/_/ \/_/ \/_/ \/_/ \/_/ \/_/ \/_/

..let the cat out to reply..

ï¿½Densa International
'Think tanks cleaned cheap'

4305. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 04:02:59 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406202002.655e092f@posting.google.com>
Source record: 93160

"mike sebring" <msebring@kpunet.net> wrote in message
news:<aIidnaHhosl2AUzdRVn-iQ@scnresearch.com>...
> I live in S.E. Alaska on an island that is about 99% solid rock and i am
> wondering what would be a good way to get an effective ground for my rig and
> my antennas.
> I have tried to drive a 4' ground rod in the ground and it will only go down
> about a foot and a half till it hits solid rock.
> I have considered just burying several strands of heavy bare copper wire and
> using that for my ground.
> Any sugjestions????
> Thanks for any help any of you can give me.

Center-fed dipole-based antennas don't need station or installation
site RF grounds. Horizontally or vertically oriented. All end (base)
fed verticals need RF gounds so don't use 'em in your situation.
Safety gounding which is not RF grounding involves, in the limit,
tossing the feedlines out the window and ducking when boomers pass
thru the neighboorhood.

> EX WB8RSH soon to be KL7???
>
> Mike

w3rv

4306. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 04:11:32 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <UdtBc.152030$Ly.30888@attbi_s01>
Source record: 93161
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

"Kees" <PA8540@home.removeee-thisss.nl> wrote in message
news:aelbd0pvdvu6rv64t5s2idbu19c7t1cc29@4ax.com...
> Hello fellow shortwave listeners !
>
> More info to make a T2FD yourself, like I did mine, please have a
> look at:
>
> http://members.home.nl/rita.kees/t2fdmake.html
>
> I hope you can appreciate it and use it for your practice.
>
> I will be glad to answer your questions.
>
> 73/cheers
>
> Kees
>

The Tilted Terminated Folded Dipole ("T2FD") is a broadband folded dipole
antenna design that provides a relatively
stable feed point impedance over about a five to one frequency range. The
antenna
length in meters is approximately 100 divided by the lowest desired
operating
frequency in megahertz. The upper element of the folded dipole is opened in
the
center and a non-inductive terminating resistor of around 350-400 ohms is
inserted.
The bottom element is fed in the center through a 6-to-1 balun for a good
match to
50 ohm feed line.

The antenna is not as efficient as a matched half wave dipole at any
specific
frequency, but it also does not require an antenna tuner for operation,
making it
easy to use. The loss of receiving efficiency is not generally noticeable
in the high frequency range (2-30 MHz), amounting to less than 6 db (one
standard
S-unit) during extensive on-the-air testing.

Here is additional information on the T2FD antenna.

Barker & Williamson actually applied for a US patent (US Patent #4423423)
for their specific T2FD antenna design.
http://www.fact-index.com/t/t2/t2fd_antenna.html

While this may be acceptable for SWL operation, the resistor does not have
sufficient wattage for
any station attempting to use this for a transmitting antenna.
http://www.tuberadio.com/tfd.html

http://www.universal-radio.com/catalog/sw_ant/0562.html

w9gb

4307. Re: Dr. Vincent's DLM antenna...

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 04:13:37 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <4sOdnbVK2JLz_Uvd4p2dnA@adelphia.com>
Source record: 93162

'Doc wrote:

>
> Mike,
> 1. All those 'little' things sort of fall through the
> bottom of that 'open mind'.
>
> 2. The technician was promoted due/do to his accomplishments.
>
> 3. Cream ain't the only thing that 'floats to the top'.

hehe, Love that last one, Doc!

- Mike KB3EIA -

4308. Coaxial sleeve antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 04:18:07 UTC
From: antennas@yahoo.com
Message-ID: <e8be44e3.0406202018.2d9c2aa@posting.google.com>
Source record: 93163

I want to build a nice small antenna for my boat. I had a J pole in a PVC tube, but I thought about a vertical dipole of the sleeve type. Can you make such a beast with the coax and just remove outer insulation and then pull braid back over the coax until they are both the same length? I want it for 156.8 MHz so it should be around 1.5 ft per side. But I have seen an article that says the top portion should be smaller than the lower braid portion to balance things out electrically. Can anyone shed some light on this for me? I have tried it and my analyzer doesn't show it resonant anywhere near that freq. Hmmmm.
Help please.
Any other good marine antennas that are easy to build would be great if you have plans or ideas. Thanks folks.
Andrew VE8AE

4309. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 05:09:30 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <e4uBc.12694$a61.9154@nwrddc01.gnilink.net>
Source record: 93164

Reg

I see there's something wrong with the way I'm looking at radiators. I have been thinking that the currents conducted on the outside of the coax feeding a dipole would noticable effect the dipole's radiation pattern. I've been thinking that when coax is used to feed a balanced dipole, half of the dipole thats connected to the center conductor will see a V shaped dipole half thats composed oof the other half of the balanced dipole *and* the outside of the coax. Maybe this above sentance is not conveying the message. But, do you see where I'm making my mistake??

Jerry

"Reg Edwards" <g4fgq.regp@ZZZbtinternet.com> wrote in message news:cb58r6$f9g$1@titan.btinternet.com...
>
> "Jerry Martes" wrote -
> >
> > The only thing I have been concerned about is the radiation pattern. I
> > have been trying to "disassociate" the coax's outer conductor with a
> dipole
> > so the radiation pattern will be essentially that of the dipole.
> >
> > I have been trying to think of ways to make impedance measurements so I
> > might be able to estimate the reactance to currents cunducted along the
> > outside of the coax.
> >
> > I really appreciate your comments on the practicallity of winding a few
> > turns of small coax in a small ferite.. That seems to have provided the
> > best insertion loss I've been able to acheive.
> >
> > I've been trying to make a simple antenna for receiving NOAA satellites.
> > I have been learning that my antenna concept is of limited value for
> > producing clear pictures from weather satellites. But, I still want to
> get
> > more data on antennas so I might be able to get better pictures from a
> > "simple" antenna.
> > My principal problem right now is minimizing the nulls in the pattern.
> > Each null will produce a black line in the picture of te Earth when that
> > null falls below some threshold.

> >
> ---
>
> Jerry,
>
> Let me say at the outset, whether you use a balun or not, there will be no
> detectable effect on the radiation/receiving pattern of the antenna. For
> practical purposes it will remain the same as the usual radiation pattern
> for a half wave dipole.
>
> You appear to have a 137 MHz 1/2-wave dipole fed via a coaxial line.
Ideally
> it should be a 75 ohm line and to prevent reflections from the receiver
end
> it should be terminated at the receiver with 75 ohms. But if reflections
> don't matter with whatever type of signals you wish to receive then a
50-ohm
> line can be used. But neither impedance will have any effect on the
> antenna's radiation pattern.
>
> I can talk in terms of radiation pattern because the receiving and
radiation
> patterns are always identical for either transmitting or receiving
purposes.
> This results from the effect known as "Reciprocity".
>
> When transmitted or received currents appear on the outer coaxial
conductor
> of the feedline they are known as "common-mode" currents which cause the
> antenna and feedline to behave as one single, differently shaped antenna.
> The radiation pattern of the differently-shaped antenna results in
> distortion of the original dipole's pattern.
>
> BUT WHAT MATTERS IS THE MAGNITUDE OF THE CURRENT WHICH FLOWS ON THE
OUTSIDE
> OF THE COAX COMPARED WITH THE MAGNITUDE OF THE CURRENT IN THE DIPOLE.
>
> The common mode current in the coax flows along the whole of its uncertain
> length and so affects the radiation pattern in an uncertain manner.
> Furthermore the unknown impedance to ground at the receiver end of the
coax
> obviously has an effect. The whole business is indeterminate and can be
> treated only in a statistical worst and best case manner.
>
> Available from my website is program FEEDPOWR program which deals with the
> transmitting case and attempts to estimate the power radiated from the
> feedline relative to the power from the dipole antenna proper, versus
dipole
> length, feedline length and frequency, taking the resistance of the ground
> connection at the end of the coax into account. It does not take into

> account that the lower part of the feedline, perhaps inside a building,
does
> not radiate at all well and so the program very nicely over-estimates the
> unwanted effects.
>
> If we examine your particular case by entering in the program a dipole
> length of 1.09 metres, a frequency of 137 MHz, a feedline length of
whatever
> you've got, and a ground resistance of 50 ohms for the want of a better
> value, we find that that the worst case value of power radiated from the
> feedline is about 6 percent of the total transmitter power as line length
is
> varied. The best case value is about 1 percent as line length is varied.
>
> The change in shape of the radiation pattern is at worst of the order of
0.4
> dB which I suggest is negligible and undetectable. It is less than that
due
> to not bringing the feedline away from the dipole at an angle of 90
degrees
> for the whole of its length which can also affect the radiation pattern.
> Nearby buildings, phone and power lines, can also affect the radiation
> pattern of an ordinary dipole and almost certainly will.
>
> Due to reciprocity the effect on the receiving pattern will be identical.
>
> As I said earlier you don't need a balun. But if you are a perfectionist
no
> harm will be done by fitting one. You will obtain no useful information by
> attempting to make measurements of any sort. A ferrite choke balun is so
> simple there's nothing to go wrong with it. Keep the length of small-bore
> coax wound on the balun to less than 1/15 wavelengths. Just a few turns on
a
> 1" diameter ring.
>
>
>
>
>
>
>
>

4310. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 05:39:45 UTC
From: Rick Frazier <rick@rickfrazier.com>
Message-ID: <40D6749E.E29A101B@rickfrazier.com>
Source record: 93165

If I interpreted the manual correctly, it indicates one should insulate the antenna base from a pole or tower that is nearing 1/4 wavelength. It didn't seem to caution against conventional mounting if the tower or support pole was a different length....

The manual seems to provide reasonable information regarding the use of radials at 45 degree droop, recommending their use if possible. Ground mounting is generally noted as being less desirable than roof or elevated mount with 45 degree radials...

I have a 5BTV and the antenna on the higher bands (10, 15, 20, 40) has reasonable bandwidth, but on 75 meters the bandwidth is extremely narrow, do much so it is nearly useless unless you have a single frequency you normally use... Sitting on the ground, using two radials per band provides acceptable performance on 10-40m, but on 80, it took 4 radials to get the swr down to 1.5:1, and even then, the bandwidth between the 2.0 swr points is only about 60 khz at best. You really need to pick your operating frequency for 80m. In a few weeks I'm going to try to roof mount it to see if I can get a wider bandwidth on 80m.

Good Luck!

--Rick AH7H

AA5QT wrote:

> I have a 6BTV that I'm about to install. It will primarily be used for
> 80/40/30 meters. Some questions:
>
> I could elevate it, if it would improve performance. The manual says not to
> ground the radials or the antenna base, so I could mount the unit on an
> insulated mast, and string the radials at a 45 degree angle....
>
> Or I could place it near the ground, or try a metal mast, or....
>
> Any experience/suggestions?
>
> Gary K5QT

4311. surely must be someone??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 05:46:23 UTC
From: Dilligaf <tuskyone@yahoo.com.au>
Message-ID: <40d67636$0$19420$61c65585@uq-127creek-reader-01.brisbane.pipenetworks.com.au>
Source record: 93166

Surely there must be a Ham somewhere using a Commerical Triband/Quad band HT SMA terminated antenna ?
I was after one, but would like to know first hand which model has been thru the Ham test sequence

Rgds

4312. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 06:20:38 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <hctcd0hj4v6d76pidg0lsj9hafl4poiq3f@4ax.com>
Source record: 93167

Let's first consider:
On Sun, 20 Jun 2004 20:01:04 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:

> My principal problem right now is minimizing the nulls in the pattern.
>Each null will produce a black line in the picture of te Earth when that
>null falls below some threshold.

and then:

On Mon, 21 Jun 2004 05:09:30 GMT, "Jerry Martes"
<j.jmartes@verizon.net> wrote:
> Reg
>
> I see there's something wrong with the way I'm looking at radiators. I
>have been thinking that the currents conducted on the outside of the coax
>feeding a dipole would noticable effect the dipole's radiation pattern.
> I've been thinking that when coax is used to feed a balanced dipole, half
>of the dipole thats connected to the center conductor will see a V shaped
>dipole half thats composed oof the other half of the balanced dipole *and*
>the outside of the coax. Maybe this above sentance is not conveying the
>message. But, do you see where I'm making my mistake??
>
> Jerry

Hi Jerry,

I presume we are proceeding from your design toward its validation of characteristics specific to the purpose of monitoring satellite signals. I further presume chief among these characteristics is near omnidirectionality with an even gain distribution. Of course these presumptions may be wrong or incomplete (I may have neglected issues of circular polarization). Anyway, as an example I have offered:
http://www.qsl.net/kb7qhc/antenna/Inverted%20F/index.htm

If this example suggests some similar quality, then your design (if it exhibits less than uniform characteristics) would stand to gain by any additional sensitivity that comes by way of an excited common mode which fills a null. Problem is, this means the total absence of choking, which returns us to the vagaries of luck which will not always offer such generosity.

Thus the virtue of choking is to guarantee an independence from caprice doing your designing for you. You are then responsible for doing it your self at the antenna and the choke makes it independent of the feed line. The alternative is to find the perfect combination

of line length and antenna (observing only those beneficial orientations between the two) and imposing that upon your user to meet the design requirements.

73's
Richard Clark, KB7QHC

4313. Re: what kind of coax do i need for 800mhz

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 08:16:35 UTC
From: Bob Bob <bcnntp@optusnet.com.au>
Message-ID: <34iiq1-6o.ln1@p400bob.lse.com.au>
Source record: 93168

A very loaded question..

Best in what way?

Loss is usually a function of diameter, frequency and dialectric.. and
of course the loss is a linear function with cable length... If that is
what you are after then you have to work out how much you can afford to
lose vs the cost of getting more expensive cable and connectors. Between
"good" brands you will find that there isnt much difference in loss...
The "bad" ones (often cheap) will have a centre conductor that wanders
and imperfect shield weaving.

Quality as in how long it will last in the sun?

In our commercial installs we use Andrew and Belden. Note that I am
talking about coax that is rarely less than 1/2" in diameter. Beyond
water ingress from badly terminated connectors and direct lightening
strikes we are more than happy with them.

Mr Cebik has a goodly array of antenna designs.
(http://www.cebik.com/radio.html) No doubt you could scale a 900Mhz one
or make something a little wide band like an LPDA or corner reflector.
Google also returns a plethora of make yourself 900MHz antennas.

Cheers Bob VK2YQA

g g wrote:
> i need to know witch brand is best. i no beldon is one of them. also i
> would like to build a small 800mhz.yagi or quad ant for the trunked
> system 73s
>

4314. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 09:57:17 UTC
From: Hans <pa3cny@thuis.org>
Message-ID: <2jnpnuF13iv72U1@uni-berlin.de>
Source record: 93169
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

m II wrote:
> Kees wrote:
>
>> Hello fellow shortwave listeners !
>>
>> More info to make a T2FD yourself, like I did mine, please have a
>> look at:
>>
>> http://members.home.nl/rita.kees/t2fdmake.html
>>
>>
>> I hope you can appreciate it and use it for your practice.
>>
>>
>> I will be glad to answer your questions.
>>
>> 73/cheers
>>
>> Kees
>>
>>
>
>
> http://members.home.nl/rita.kees/t2fd1.gif
>
> I found that my garage is WAY to far away to use this setup.
>
> Following the formula, I took an average frequency of 10 Megahertz. I
> divided into 100, as per the formula. I got an antenna length of
> (100ft/10,000,000) = 1 X 10^-5 feet, or 0.00012 inches.
>
> I then thought that this just couldn't be right. I redid it using Meters
> instead of feet and arrived at 0.00001 meters length. MUCH BETTER! The
> problem now is that the store only sells full length rolls of wire.
> Where can I mail order a smaller chunk? Can they just wrap the postage
> stamp around it to save shipping costs?
>
> Being ever on the watch for cheap alternatives, what is a cheap way of
> relocating the far end antenna support?
>
> I don't want to pay to have the garage moved.
>
> Any insights appreciated.

>
>
>
> mike
>
>
In physics always use meters, kilograms, joules and not inches, pounds
or horsepower

Hans

4315. cancel <40D6B241.48E3FD99@optonline.net>

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 10:01:03 UTC
From: Steve <LafayetteRadio1@optonline.net>
Message-ID: <zlyBc.84733$V57.12103310@news4.srv.hcvlny.cv.net>
Source record: 93170

This message was cancelled from within Mozilla.

4316. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 10:01:35 UTC
From: Steve <LafayetteRadio1@optonline.net>
Message-ID: <40D6B281.3D207D6B@optonline.net>
Source record: 93071

Damn!!
I thought I was reading a paper from K2RIW!!!!
Lots of good stuff here!!
73

Reg Edwards wrote:

> "Bill Turner" wrote -
> > Performance will be best if it's up in the air, away from ground. RF
> > does best when flowing through metal, not dirt. Earth is lossy and
> > should be avoided for transmitting. If you were receiving only, the
> > loss could be made up by more gain in the receiver, but when power is
> > lost during transmitting, it's gone forever.
> >
> > If for some reason you 'had' to mount the vertical at ground level, you
> > should install enough radials that the antenna does not 'see' the earth
> > at all, only the radials. To do this, the generally accepted number of
> > radials is about 120, 1/4 wave long.
> >
> ==========
>
> Fine on your comments Bill except for the oft-repeated number of 120 which
> must have been originated by Marzipan the Magician. It is far too
> extravagant.
>
> For amateur purposes 32 radials are 'enough'. And that only because it's
> twice 16, which is twice 8 - - - - down to 2 which is twice 1.
>
> Over a wide range of soil resistivities and radial lengths, the
> electrode-to-ground resistance of 32 radials is only about 1.3 times that of
> a solid copper disk of the same radius laid flat on the ground.
>
> The electrode-to-ground resistance of 1 radial is about 6 or 7 times that of
> 32 radials so unless immersed in salt water it may be well worth while
> increasing to 4, 8, 16 or even 32.
>
> In average soils and with radial lengths of around 20 metres, the electrode
> resistance of 32 radials will already be as low as 3 ohms which is perfectly
> good enough for less than a 1/4-wave or 5/8-wave vertical and far better
> than necessary for a 1/2-wave vertical. To increase to 120 or more radials
> is just a waste of good copper plus a lot of hard labour.
>
> The following table is for a typical ground resistivity = 200 ohm-meters
> (conductivity = 5 milli-Siemens), radial length = 66 feet, wire diameter =
> 14 awg, buried depth = 1 inch.

>
> Radials ohms
> --------- -------
> 1 24.6
> 2 13.6
> 4 8.0
> 8 5.3
> 16 4.2
> 32 3.3
> 64 2.8
> 128 2.7
> Disk 2.5
>
> For a 1/4-wave vertical I wouldn't bother with more than 16 radials with
> which efficiency is of the order of 90 percent. Or an undetectable 1/12 of
> an S-unit less than perfection.
>
> If ground resistivity is not known, as it nearly always isn't, then a
> logical way to proceed is to keep doubling up the number of radials until
> the received signal strength of not too distant stable transmissions stops
> increasing. Then add 2 or 3 more for luck. But I doubt whether the new magic
> number of 32 will be exceeded.
>
> Regarding length of radials. The propagation velocity along wires buried in
> the ground is very much smaller than in free space. When lying on the
> surface of the ground it about half the free space value. So surface
> radials need never be longer than 1/8 wavelengths.
>
> Furthermore, the loss along buried wires is very high. Of the order of 8 dB
> per 1/4-wavelength at their own velocity. So there's little point in having
> buried wires much longer than 10 meters or 33 feet on the 160m band, and
> progressively shorter lengths at higher frequencies. At distances where
> there's no current flowing in the wires there's no point in them being
> there. Nobody uses ground radials for 15 and 10 meters anyway.
>
> Do I hear anybody shouting "Heretic" ? ;o)
> ----
> Reg, G4FGQ.

4317. AEA Analyzer, where to buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 11:00:44 UTC
From: Hamradio <radioamateur@no.spam.org>
Message-ID: <cb6f4sclk2@ngspool-d02.news.aol.com>
Source record: 93072

Hi.
I'd like to order an AEA VIA HF analyzer from France. Could you please
tell me where can I order AEA products online ?
Thanks, 73

4318. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 11:36:53 UTC
From: "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET>
Message-ID: <10ddhv61b5o8ifd@corp.supernews.com>
Source record: 93073

My local "Do It Center" hardware store has started carrying 6 foot lengths of T6061 aluminum tubing in 1/16 inch diameter increments up to about 3/4". For general experimentation and short elements, those might work out for you. For more serious work you should probably order from a place like Texas Towers.

--
-larry
K8UT
"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20040619133823.05775.00000246@mb-m05.aol.com...
> Hi Group,
>
> Where can I get some good grade material for a 6 meter beam elements?
>
> Does a hardware store such as Lowes carry anything that would work for the
> elements?
>
> Beam size is 4 to 6 elements.
>
> de KJ4UO

4319. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 12:21:09 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cb6jrlani1@titan.btinternet.com>
Source record: 93074

"Steve" wrote
> Damn!!
> I thought I was reading a paper from K2RIW!!!!
> Lots of good stuff here!!
> 73
>
==========

I am not familiar with what K2RIW has to say about ground systems, sets of ground radials, etc. You must be familiar yourself. I would like to learn more about what he has to say. Could you please direct me into the right K2RIW channels?

and oblige Reg, G4FGQ

4320. Re: AEA Analyzer, where to buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 12:33:45 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <JAABc.8410$mG4.7390@nwrddc03.gnilink.net>
Source record: 93075

"Hamradio" <radioamateur@no.spam.org> wrote in message
news:cb6f4sclk2@ngspool-d02.news.aol.com...
>
> Hi.
> I'd like to order an AEA VIA HF analyzer from France. Could you please
> tell me where can I order AEA products online ?
> Thanks, 73
>
I can't tell you where to buy, but can tell you my experience with their
VHf/UHF model.
When I received it I found out that the software does not control this model
as it does the HF- it simply allowed plotting. Nowhere was this revealed in
their literature. I used my set of Hewlett Packard precision terminations to
check the AEA calibration. On VHF, best return loss (VSWR) was at 62.5 Ohms.
On UHF it was 75 OHms. When I called AEA to ask about this, I was told "that
is about what you should expect from a $500 instrument. I sold it at the
next hamfest and bought an Autek unit.

Dale W4OP

4321. Re: surely must be someone??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 12:39:22 UTC
From: Vito <vito@crosslink.net>
Message-ID: <40d6d6ff$0$10756@dingus.crosslink.net>
Source record: 93076

"Dilligaf" <tuskyone(remove)@yahoo.com.au> wrote
> Surely there must be a Ham somewhere using a Commerical Triband/Quad band
HT
> SMA terminated antenna ?....

I tried a couple on my Yaesu VX-5. Didn't do any really definitive testing
but subjective ability to access repeaters or other Hams in this rural area
wasn't noticably improved - at least not enough to warrant the bother, so
I'm back to the stock antenna. Naturally, others may find the opposite, but
I'd say "Save your money".

73, K3DWW

4322. Re: High SWR on scout 555

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 12:48:31 UTC
From: derswede@aol.comspam.com
Message-ID: <20040621084831.23018.00000353@mb-m07.aol.com>
Source record: 93077

<< On the rs
meter I am reading infinity for swr at roughly 30 watts on cw (really only mode I use) on 40 meters. On the scout meter, I am reading at most, 2:0. Now the scout has an adjustment on the bottom for power. With the radio on, into a dummy load, as I increase wattage, swr goes up and the ALC light goes out. >>

Hmmm...using the old "50% efficient" rule of thumb gives around a 5 amp draw at 30W out. Think the first thing I'd do is read the manual to see what the current needs are...replace the RS meter with a decent one (the RS meter will work, but not a "good" meter) and get a decent (Astron, etc) power supply in the 12A and up range (I recommend the RS20 or RS35...good units).

Greg, one thing you may be able to do immediately is to get a gelcell of some sort and trickle charge it...I use a 17aH cell to run my FT857 at 50W (w/solar charger). What you are seeing, in part, is current limiting and loss of regulation on the power supply. The antenna matcher probably is fine, the RS meter will give a fair indication of what's going on. On the power supply side, you may want to review some of the ARRL handbooks which cover P/S information. This will give you a good start in understanding the amount of current needed for a particular application. The fine folks at Ten Tec can provide the manual (which may also be online somewhere for download).

Watch out as regards Polarity....tough to get the smoke back in those little black cases.....

Hope this helps!
A

4323. Re: AEA Analyzer, where to buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 12:51:17 UTC
From: Hamradio <radioamateur@no.spam.org>
Message-ID: <cb6lk5jgb1@ngspool-d02.news.aol.com>
Source record: 93078

Huh ?!
And what about the HF model ?
I read lot of good feedbacks on eham.net.

Dale Parfitt wrote:
>
> I can't tell you where to buy, but can tell you my experience with their
> VHf/UHF model.
> When I received it I found out that the software does not control this model
> as it does the HF- it simply allowed plotting. Nowhere was this revealed in
> their literature. I used my set of Hewlett Packard precision terminations to
> check the AEA calibration. On VHF, best return loss (VSWR) was at 62.5 Ohms.
> On UHF it was 75 OHms. When I called AEA to ask about this, I was told "that
> is about what you should expect from a $500 instrument. I sold it at the
> next hamfest and bought an Autek unit.
>
> Dale W4OP
>
>

4324. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 12:54:53 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40D6DA9D.B7E301F0@cwis.net>
Source record: 93079

Rick,
I suspect that '60 Khz' was a slip of the typing
fingers, 'cuz that ain't bad for a 5btv on 80 meters.
Most commercial vertical antennas that cover 80 meters
(and some on 40 meters) have a very narrow range. The
5BTV is no exception...
'Doc

4325. Circular (slanted, dual) polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 14:03:52 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040621100352.25491.00000396@mb-m29.aol.com>
Source record: 93080

>Likewise,
>a purely circularly polarized field can be split into non-zero vertical
>and horizontal linear components.
>
>Roy Lewallen, W7EL

Sooo,
we can say that "slanted" 45 deg (circular) polarization as produced with full wave square shaped quad loop fed in a corner has vertical and horizontal components that are (typically) 3 dB down from the maximum in 45 deg plane?
According to modeling software, which shows vertical and horizontal components of slanted polarization, the radiation pattern is a composite of both, with antenna responding to either V or H polarized waves (with 3 dB down from slanted) and according to pattern "belonging" to each (V or H) polarization. Is anything wrong with this statement?
Can we then say that "slanted" polarization antenna has practically "dual" (V and H) polarization properties with 3 dB down from slanted orientation?
Advantage being fuller radiation pattern (minimized nulls) and polarization "diversity" at a cost of 3 dB from the "ideal" slanted orientation.
One "Guru" on his web page claims that there is no such thing as dual polarization.
The "problem" seems to be in semantics. I see nothing wrong calling it "dual" polarization, because it produces combination patterns "belonging" to either V or H polarized antennas, (with 3 dB down from ideal slanted) and fuller pattern than either of V or H alone.
It ain't so, am I wrong?

Yuri Blanarovich
www.K3BU.us
www.computeradio.us - home of "Dream Radio One"

4326. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 14:49:27 UTC
From: m II <ohmworkLEOPARD@spots.ca>
Message-ID: <XzCBc.16732$T_1.16432@clgrps12>
Source record: 93081
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Hans wrote:

> In physics always use meters, kilograms, joules and not inches, pounds
> or horsepower

Of course. Sorry about my retrograde calculations, however, the numbers provided on the site need to be clarified, as they don't work either in either method.

An example at the bottom of the page using the proper units would be in order. The confusion is what caused me to post to begin with.

100 anything divided by millions of other units is bound to cause very small numbers and in this case very small numbers give birds no place to perch.

mike

4327. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 15:27:32 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <E7DBc.69813$Hg2.63146@attbi_s04>
Source record: 93082

I stand corrected Roy

Roy Lewallen wrote:

> My, we can sure learn a lot of new things about Yagis from this
> newsgroup. Unfortunately, they're not true.
>
> I have a very high confidence in the ability of EZNEC to accurately
> model Yagi antennas. This is due to feedback from several professional
> customers who have analyzed Yagis with EZNEC and tested the actual
> antennas on test ranges.
>
> Let's take the EZNEC example file NBSYagi.EZ.
>
> If you change the driven element (wire 2) length from 2 * 54.875" to 2 *
> 54.56", you'll find that the feedpoint impedance is 11.53 - j0.0752 ohms
> -- it's resonant, and it's certainly functioning as a Yagi. The pattern
> and gain are nearly identical to the original NBS design.
>
> Now, change the director (wire 3) length from 2 * 54.313" to 2 * 56".
> This drops the gain from 9.68 dBi to 8.66 dBi, and lowers the feedpoint
> resistance from 11.53 ohms to 7.849 ohms. The point of maximum gain is
> obviously not the point of minimum feedpoint resistance.
>
> Anyone having an explanation for why the gain should be greatest when
> the feedpoint resistance is minimum and why a Yagi can't work when
> resonant should examine their explanations carefully in order to uncover
> the flaws that are obviously present in the explanations.
>
> Roy Lewallen, W7EL
>
> Tom Ring wrote:
>
>> Ian White, G3SEK wrote:
>>
>>> Dave Shrader wrote:
>>>
>>>> If the Yagi is to be tuned for MAXIMUM gain, and that is the
>>>> objective, then Ro will be the lowest value at resonance.
>>>
>>>
>>>
>>>
>>> That's an interesting assertion. Do you have further evidence for it?
>>>

>>>
>>
>> Yes, quite interesting, since a yagi is _not_ resonant in the design
>> frequency range, otherwise it couldn't work.
>>
>> Tom
>> K0TAR

4328. Re: Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 15:32:00 UTC
From: Shadow 998 <hrd998cc@nospam.yahoo.com>
Message-ID: <QbDBc.75900$Ht.66397@newssvr29.news.prodigy.com>
Source record: 93083

Tam,

Yes, the beam is horizontal, and I finally made two contacts on 50.155 USB shortly after my last post. I hooked up with two stations; one was about 40 miles away feet on a mountain (he came in @+20 over), the other roughly 80 miles (right in with the noise). Since my antenna is only 8-9 feet above the ground, it's encouraging.

The F/B ratio seems ok.

Thanks for the response.
Russ
KG6TDX

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:Mt2dnQCdX6mAs0vdRVn-jg@comcast.com...
>
> "Shadow 998" <hrd998cc@nospam.yahoo.com> wrote in message
> news:10oBc.2625$wy1.2185@newssvr25.news.prodigy.com...
> >
> > This is my first attempt at 6 meters and have not made a single contact
on
> > the band since getting my license last year. This year will also be my
> > first field day which is why I built this beam. Now to figure out if
it
> > has a F/B ratio, forward gain, etc.
>
> Your best bet is to listen from about 50.100 to 50.200 on SSB. Calling
> frequency is 50.125. East cost was working the West coast earlier today. I
> assume the beam is horizontally polarized. Good luck on 6.
>
> Tam/WB2TT FN20
>
>

4329. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 16:25:47 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <f_DBc.19865$Yb1.11499@nwrddc02.gnilink.net>
Source record: 93084

Richard

Obviously, you have the right idea about what I'm trying to do. And I
realize that I'm trying to build something that I am not actually able to
analyze.
I'm top posting because I have nothing valuable to add to the information
you have offered below. But, I do have to admit that I've become such a
poor learner that I havent yet been able to visualize what that antenna
looks like. It sure has the right kind of pattern.
I may be wrong about what kind of pattern is preferable for polar orbiting
satellites. But, it seems that good right hand circular polarization is
desireable toward the horizon, and can be linear when the satellite is at
higher angles.

Jerry

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:hctcd0hj4v6d76pidg0lsj9hafl4poiq3f@4ax.com...
> Let's first consider:
> On Sun, 20 Jun 2004 20:01:04 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
>
> > My principal problem right now is minimizing the nulls in the pattern.
> >Each null will produce a black line in the picture of te Earth when that
> >null falls below some threshold.
>
> and then:
>
> On Mon, 21 Jun 2004 05:09:30 GMT, "Jerry Martes"
> <j.jmartes@verizon.net> wrote:
> > Reg
> >
> > I see there's something wrong with the way I'm looking at radiators. I
> >have been thinking that the currents conducted on the outside of the coax
> >feeding a dipole would noticable effect the dipole's radiation pattern.
> > I've been thinking that when coax is used to feed a balanced dipole,
half
> >of the dipole thats connected to the center conductor will see a V shaped
> >dipole half thats composed oof the other half of the balanced dipole
and
> >the outside of the coax. Maybe this above sentance is not conveying the
> >message. But, do you see where I'm making my mistake??
> >
> > Jerry
>

> Hi Jerry,
>
> I presume we are proceeding from your design toward its validation of
> characteristics specific to the purpose of monitoring satellite
> signals. I further presume chief among these characteristics is near
> omnidirectionality with an even gain distribution. Of course these
> presumptions may be wrong or incomplete (I may have neglected issues
> of circular polarization). Anyway, as an example I have offered:
> http://www.qsl.net/kb7qhc/antenna/Inverted%20F/index.htm
>
> If this example suggests some similar quality, then your design (if it
> exhibits less than uniform characteristics) would stand to gain by any
> additional sensitivity that comes by way of an excited common mode
> which fills a null. Problem is, this means the total absence of
> choking, which returns us to the vagaries of luck which will not
> always offer such generosity.
>
> Thus the virtue of choking is to guarantee an independence from
> caprice doing your designing for you. You are then responsible for
> doing it your self at the antenna and the choke makes it independent
> of the feed line. The alternative is to find the perfect combination
> of line length and antenna (observing only those beneficial
> orientations between the two) and imposing that upon your user to meet
> the design requirements.
>
> 73's
> Richard Clark, KB7QHC
>

4330. Re: Circular (slanted, dual) polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 16:29:13 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10de36usmfcd31d@corp.supernews.com>
Source record: 93085

Yuri Blanarovich wrote:

>>Likewise,
>>a purely circularly polarized field can be split into non-zero vertical
>>and horizontal linear components.
>>
>>Roy Lewallen, W7EL
>
>
> Sooo,
> we can say that "slanted" 45 deg (circular) polarization as produced with full
> wave square shaped quad loop fed in a corner has vertical and horizontal
> components that are (typically) 3 dB down from the maximum in 45 deg plane?

You're confusing 45 degree linear polarization with circular polarization. Even though both have equal horizontal and vertical components, they're not the same. The difference is that in a linearly polarized wave, Eh and Ev are in phase. In a circularly polarized wave, they're in phase quadrature (90 degrees out of phase with each other). That makes a large difference. Other relative phase angles result in elliptical polarization with differing axial ratios. In a purely linearly polarized wave, the amplitude of the field goes from zero to maximum, back to zero and maximum again, and back to zero each cycle, and its physical direction of polarization stays constant. In a circularly polarized wave, the magnitude of the field stays constant, but its physical direction of polarization rotates through a full circle each cycle.

> According to modeling software, which shows vertical and horizontal components
> of slanted polarization, the radiation pattern is a composite of both, with
> antenna responding to either V or H polarized waves (with 3 dB down from
> slanted) and according to pattern "belonging" to each (V or H) polarization. Is
> anything wrong with this statement?

No.

> Can we then say that "slanted" polarization antenna has practically "dual" (V
> and H) polarization properties with 3 dB down from slanted orientation?

Yes.

> Advantage being fuller radiation pattern (minimized nulls) and polarization
> "diversity" at a cost of 3 dB from the "ideal" slanted orientation.

The "fuller" radiation pattern doesn't necessarily follow. And it still suffers the disadvantage that a linearly polarized antenna whose polarization is slanted the opposite way (at right angles to the wave

polarization slant) will encounter much more than 3 dB attenuation.
That's why circular, rather than slanted linear, polarization is often
used for FM broadcasting.

> One "Guru" on his web page claims that there is no such thing as dual
> polarization.

Please re-read what I said in my original posting. We're describing a
single wave by mathematically dividing the field into two orthogonal
components, which we can call "polarizations". We can choose horizontal
and vertical linear, left and right circular, or an infinite number of
other combinations, including right-slant, left-slant. A wave has only
one E field; our description of polarizations is one of convenience. If
I choose left-slant and right-slant, I can declare with complete
accuracy that your wave has a single polarization component. If I choose
instead vertical and horizontal, I find that it has two equal
components. If I choose some other combination, I find it has two
unequal components. All are equally valid descriptions of the single field.

> The "problem" seems to be in semantics. I see nothing wrong calling it "dual"
> polarization, because it produces combination patterns "belonging" to either V
> or H polarized antennas, (with 3 dB down from ideal slanted) and fuller pattern
> than either of V or H alone.

Suit yourself. Arguing about it would surely be good for at least a
couple of hundred postings, providing an extended diversion for the
entertainment challenged.

> It ain't so, am I wrong?

No, you're right. It's dual polarization. And you're also wrong, since
it's also single polarization (left-slant or right-slant linear).

People with a deep interest in this topic might benefit from the new
EZNEC+ program type, which can display the field strength from any
antenna in terms of left and right circular as well as vertical and
horizontal linear components.

Roy Lewallen, W7EL

4331. Re: Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 16:42:30 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <n7CdnT3il5dxkkrdRVn-hg@comcast.com>
Source record: 93086

"Shadow 998" <hrd998cc@nospam.yahoo.com> wrote in message
news:QbDBc.75900$Ht.66397@newssvr29.news.prodigy.com...
> Tam,
>
> Yes, the beam is horizontal, and I finally made two contacts on 50.155 USB
> shortly after my last post. I hooked up with two stations; one was about
> 40 miles away feet on a mountain (he came in @+20 over), the other roughly
> 80 miles (right in with the noise). Since my antenna is only 8-9 feet
above
> the ground, it's encouraging.
>
> The F/B ratio seems ok.
>
> Thanks for the response.
> Russ
> KG6TDX

You did the hard part. Since the antenna is about 1/2 wavelength up, it
should work like gangbuster on 1000 - 1500 mile paths when the band is open.
Oddly, I have worked at least two W0s from here in NJ whose antennas were
strapped to the side of a pickup truck. The 80 mile path will work a lot
better if you can get it about 30 feet up.

Tam/WB2TT

4332. Re: Coaxial sleeve antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 16:45:16 UTC
From: KA9CAR <ka9car@a_r_r_l_.net>
Message-ID: <cb73b0$354$1@news1.tribune.com>
Source record: 93087

http://user.mc.net/~jdewey/Ham_radio/sleeve_dipole/

KA9CAR

"VE8AE Andrew" <antennas@yahoo.com> wrote in message
news:e8be44e3.0406202018.2d9c2aa@posting.google.com...
> I want to build a nice small antenna for my boat. I had a J pole in a
> PVC tube, but I thought about a vertical dipole of the sleeve type.
> Can you make such a beast with the coax and just remove outer
> insulation and then pull braid back over the coax until they are both
> the same length? I want it for 156.8 MHz so it should be around 1.5 ft
> per side. But I have seen an article that says the top portion should
> be smaller than the lower braid portion to balance things out
> electrically. Can anyone shed some light on this for me? I have tried
> it and my analyzer doesn't show it resonant anywhere near that freq.
> Hmmmm.
> Help please.
> Any other good marine antennas that are easy to build would be great
> if you have plans or ideas. Thanks folks.
> Andrew VE8AE

4333. Re: AEA Analyzer, where to buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 17:02:21 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <xwEBc.16523$a61.13202@nwrddc01.gnilink.net>
Source record: 93088

"Hamradio" <radioamateur@no.spam.org> wrote in message
news:cb6lk5jgb1@ngspool-d02.news.aol.com...
> Huh ?!
> And what about the HF model ?
> I read lot of good feedbacks on eham.net.
>
>As I stated before, I never owned that one- but given their attitude, I
never will.
W4OP

4334. Re: Coaxial sleeve antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 17:07:50 UTC
From: k7itm@aol.com
Message-ID: <3200347.0406210907.2522ed48@posting.google.com>
Source record: 93089

Think of the coaxial line formed by the pulled-back braid (outer conductor), the vinyl jacket (the dielectric), and the braid of the feedline going up (the inner conductor). It's shorted at the top end, and you want it to be 1/4 wave long so it reflects an open circuit at the bottom where the feedline emerges. But that's 1/4 wave considering the velocity factor of that line. And the vinyl jacket has a fairly high dielectric constant, so the VF in that section may be about 0.5. If you cut it for 1/4 wave in freespace, that makes it close to 1/2 wave considering the VF. That's really bad: it reflects a short instead of an open, and there's no decoupling between the antenna and the feedline. If you want to do it right, use a tube for that sleeve whose ID is a few times the diameter of the coax feedline, and it would be ideal if you remove the jacket and just have a very few thin dielectric "washers" to keep the feedline centered in the sleeve tube. Then it's tough to mount! So another way is to make a rigid feedline (like from copper pipe), maybe 40 inches long, with a rigid sleeve (which of course is the lower half of the dipole, too) over it and then you can mount it by the rigid section of feedline. At about this point, isn't it easier and more reliable (potential serious safety issue here for a boat, eh?) to just buy a commercial antenna?

Cheers,
Tom

antennas@yahoo.com (VE8AE Andrew) wrote in message news:<e8be44e3.0406202018.2d9c2aa@posting.google.com>...
> I want to build a nice small antenna for my boat. I had a J pole in a
> PVC tube, but I thought about a vertical dipole of the sleeve type.
> Can you make such a beast with the coax and just remove outer
> insulation and then pull braid back over the coax until they are both
> the same length? I want it for 156.8 MHz so it should be around 1.5 ft
> per side. But I have seen an article that says the top portion should
> be smaller than the lower braid portion to balance things out
> electrically. Can anyone shed some light on this for me? I have tried
> it and my analyzer doesn't show it resonant anywhere near that freq.
> Hmmmm.
> Help please.
> Any other good marine antennas that are easy to build would be great
> if you have plans or ideas. Thanks folks.
> Andrew VE8AE

4335. Re: AEA Analyzer, where to buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 17:33:46 UTC
From: Da Shadow <DAS@cat.net>
Message-ID: <_ZEBc.6018$5t2.3247@fed1read01>
Source record: 93090

TRY URL:
http://www.aea-wireless.com/

--
Lamont Cranston

The Shadow Knows
"Dale Parfitt" <par@parelectronics.com> wrote in message
news:xwEBc.16523$a61.13202@nwrddc01.gnilink.net...
>
> "Hamradio" <radioamateur@no.spam.org> wrote in message
> news:cb6lk5jgb1@ngspool-d02.news.aol.com...
> > Huh ?!
> > And what about the HF model ?
> > I read lot of good feedbacks on eham.net.
> >
> >As I stated before, I never owned that one- but given their attitude, I
> never will.
> W4OP
>
>

4336. Re: Coaxial sleeve antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 18:07:31 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <D-ydnZCj4-9EvkrdRVn-gw@comcast.com>
Source record: 93091

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0406210907.2522ed48@posting.google.com...
> Think of the coaxial line formed by the pulled-back braid (outer
> conductor), the vinyl jacket (the dielectric), and the braid of the
> feedline going up (the inner conductor). It's shorted at the top end,
> and you want it to be 1/4 wave long so it reflects an open circuit at
> the bottom where the feedline emerges. But that's 1/4 wave
> considering the velocity factor of that line. And the vinyl jacket
> has a fairly high dielectric constant, so the VF in that section may
> be about 0.5. If you cut it for 1/4 wave in freespace, that makes it
> close to 1/2 wave considering the VF. That's really bad: it reflects
> a short instead of an open, and there's no decoupling between the
> antenna and the feedline. If you want to do it right, use a tube for
> that sleeve whose ID is a few times the diameter of the coax feedline,
> and it would be ideal if you remove the jacket and just have a very
> few thin dielectric "washers" to keep the feedline centered in the
> sleeve tube. Then it's tough to mount! So another way is to make a
> rigid feedline (like from copper pipe), maybe 40 inches long, with a
> rigid sleeve (which of course is the lower half of the dipole, too)
> over it and then you can mount it by the rigid section of feedline.
> At about this point, isn't it easier and more reliable (potential
> serious safety issue here for a boat, eh?) to just buy a commercial
> antenna?
>
> Cheers,
> Tom

Tom,
I never tried this, but always wondered about using a 1/4 wave section of
triaxial transmission line, Should be able to get the length right with an
MFJ 259/269. Another idea would be a piece of 1/2 inch ID copper braid.

Tam/WB2TT

4337. Re: AEA Analyzer, where to buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 18:10:42 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <10de959a8lps197@corp.supernews.com>
Source record: 93092

I have their CIA-HF and their TDR. I have found them to be very good value.

I have made no attempt to use their computer interfaces.

As far as I am concerned, they are the cat's meow. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Da Shadow" <DAS@cat.net> wrote in message news:_ZEBc.6018$5t2.3247@fed1read01...
> TRY URL:
> http://www.aea-wireless.com/
>
> --
> Lamont Cranston
>
> The Shadow Knows

4338. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 18:26:48 UTC
From: rhf-newsgroups@pacbell.net
Message-ID: <ff3145e8.0406211026.7bc61174@posting.google.com>
Source record: 93093
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

= = = "G.Beat" <now9spamgb@no.comcast.spam.net> wrote in message
= = = news:<UdtBc.152030$Ly.30888@attbi_s01>...
> "Kees" <PA8540@home.removeee-thisss.nl> wrote in message
> news:aelbd0pvdvu6rv64t5s2idbu19c7t1cc29@4ax.com...
> > Hello fellow shortwave listeners !
> >
> > More info to make a T2FD yourself, like I did mine, please have a
> > look at:
> >
> > http://members.home.nl/rita.kees/t2fdmake.html
> >
> > I hope you can appreciate it and use it for your practice.
> >
> > I will be glad to answer your questions.
> >
> > 73/cheers
> >
> > Kees
> >
>
> The Tilted Terminated Folded Dipole ("T2FD") is a broadband folded dipole
> antenna design that provides a relatively
> stable feed point impedance over about a five to one frequency range. The
> antenna
> length in meters is approximately 100 divided by the lowest desired
> operating
> frequency in megahertz. The upper element of the folded dipole is opened in
> the
> center and a non-inductive terminating resistor of around 350-400 ohms is
> inserted.
> The bottom element is fed in the center through a 6-to-1 balun for a good
> match to
> 50 ohm feed line.
>
> The antenna is not as efficient as a matched half wave dipole at any
> specific
> frequency, but it also does not require an antenna tuner for operation,
> making it
> easy to use. The loss of receiving efficiency is not generally noticeable
> in the high frequency range (2-30 MHz), amounting to less than 6 db (one
> standard
> S-unit) during extensive on-the-air testing.
>

> Here is additional information on the T2FD antenna.
>
> Barker & Williamson actually applied for a US patent (US Patent #4423423)
> for their specific T2FD antenna design.
> http://www.fact-index.com/t/t2/t2fd_antenna.html

W9GB,

B&W makes two general statements about the T2FD:

* For example, an {T2FD} Antenna for the lower portion of
Shortwave (3 - 18 MHz) will be roughly 33m (110 feet) long,
with conductors spaced 1m (3.3 feet).
[With a Top End mounted about 60 Feet High at 30 Degrees.]

* In order to cover the higher portion of Shortwave (5 - 30 MHz),
this {T2FD} Antenna will be roughly 20m (66 feet) long,
with a spacing of 60 cm (24 inches).
[With a Top End mounted about 40 Feet High at 30 Degrees.]

Build one size or the other = No Formula Required.

Read: T2FD Antenna - WOW ! ! ! {One SWL's Experiance}
http://groups.yahoo.com/group/Shortwave-SWL-Antenna/message/293

iane ~ RHF
.
.
>
> While this may be acceptable for SWL operation, the resistor does not have
> sufficient wattage for
> any station attempting to use this for a transmitting antenna.
> http://www.tuberadio.com/tfd.html
>
> http://www.universal-radio.com/catalog/sw_ant/0562.html
>
>
> w9gb
.

4339. Today (Monday) Isn't Too Late... but tomorrow might be!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 20:00:12 UTC
From: Old Ed <eXseniorsDeleteThisAndTheX@earthlink.net>
Message-ID: <g7HBc.9359$w07.2802@newsread2.news.pas.earthlink.net>
Source record: 93094
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur,rec.radio.amateur.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx

I just submitted the FCC comment below (in case it provides
any useful ideas to other potential comment submitters).
I'm planning to follow up with letters or emails to my
congressional and senate representatives, per the ARRL
pages.

"This comment addresses the proposed deployment of BPL
(Broadband over Power Line) systems.

As a career radio frequency design engineer, it is obvious
to me that widespread BPL deployment would cause massive
degradation of most licensed radio services now operating in
the HF (High Frequency) spectrum-and some services would
be completely destroyed in the U.S.A.

This expectation follows directly from the fact that power
lines at HF frequencies are poor transmission lines, but are
quite efficient antennas. BPL lines will therefore radiate mas-
sive interference levels (by HF standards), and will themselves
be vulnerable to interference from licensed HF transmitters.
I am confident that my expectation in this matter is basically
the same as any other qualified engineer who considers BPL
objectively.

There is abundant evidence of the expected interference
problems in BPL field trials around the world. And there
are no examples that I know of where BPL is successfully
coexisting with licensed, co-located HF radio services.
For these reasons, BPL has already been rejected by a number
of "HF aware" countries.

The HF radio spectrum is an extremely valuable natural resource
with the unique ability to provide direct, world-wide wireless
communication. It would be highly irresponsible to allow the
destruction of this unique resource simply to provide a redundant
and probably unreliable option for internet connections.

I urge the FCC to do the following:

(1) Provide rigorous protection for the licensed radio
services now operating in the HF radio spectrum
from unlicensed emitters like BPL-both through
appropriate rules and through vigorous enforcement.

(2) Insist on thorough, objective, and successful field
trials-designed to scrutinize interference potential-
BEFORE allowing the widespread deployment of any BPL
system.

Sincerely,

<signed>"

GO FOR IT, and good luck!!!

"yea right" <spam@spam.spam> wrote in message
news:pan.2004.06.20.02.17.24.921719@spam.spam...
> "The limit for an unintentional emitter on HF is 30 uV/m at 30 meters from
> the source," he said. "If you take a dipole cut for 3.5 MHz and put it in
> a 30 uV/m field, you'll have a noise reading of S9 plus 16 dB at your
> transceiver."
>
> The FCC has extended the comment period for BPL. If you value radio, this
> may be the last and only chance to have your voice heard to stop BPL from
> destroying your hobby. The FCC has extended the comment period for BPL.
>
> It is VERY simple to file a FCC comment. Click the link below and enter
>
> 04-37
>
> in box #1 (proceeding number) and fill in the blanks. The simplest way to
> comment is to type your comment into the box on the bottom of the form.
> Sample comment below.
>
> http://gullfoss2.fcc.gov/prod/ecfs/upload_v2.cgi
>
> If you see fit, please post this to as many groups as possible
> because numbers count! Please mention this in your nets!
>
> More info at http://www.arrl.org/news/stories/2004/02/12/5/?nc=1
>
> If you can't think of any thing to type or wish to make this as painless
> as possible, you can cut-n-paste the comment I typed below.
>
> /******************************/
>
> In Writing, I wish to persuade the FCC from allowing BPL to be
> implemented. The destruction or at the least, deterioration of the
> shortwave bands is not only a violation of ITU laws that protect
> international broadcasters from interference and jamming, it will be
> destroying many people's life hobby. Amateur radio will be reduced to
> users with high-power amplifiers and large antennas. Emergency
> communications will be hindered to levels directly responsible for the
> loss of life. Also, this will hinder military HF comms reducing national
> security
>

> There are many technologies that make BPL unnecessary. BPL will never be
> able to carry the high bandwidth demands for mass distribution of video
> much less the up-and-coming HDTV.
>
> Thank You!

4340. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 20:26:23 UTC
From: Sylvan Butler <Znospam+noZs_0406@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrncdeh3f.p08.Znospam+noZs_0406@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 93095

On Sat, 19 Jun 2004 20:27:42 +0000 (UTC), Geoffrey S. Mendelson <gsm@mendelson.com> wrote:
> You don't need to worry about wetting it or adding conductive agents to the
> soil unless you have lightening storms when the ground is dry. Although I
> live in the desert, I don't. When there is a lightening risk, the ground is
> damp.

Not in Idaho. That last several thunderstorms by me have all been dry.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
It may be better to live under robber barons than under omnipotent moral
busybodies. The robber baron's cruelty may sometimes sleep, his
cupidity may at some point be satiated; but those who torment us for our
own good will torment us without end, for they do so with the approval
of their consciences. -- C. S. Lewis

4341. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 20:38:22 UTC
From: haynes@alumni.uark.edu
Message-ID: <2HHBc.21668$Y3.9405@newsread2.news.atl.earthlink.net>
Source record: 93096
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

The fact that we get widely varying reports about the performance of the T2FD antenna suggests that an equally-long dipole would give good results across the frequency spectrum if used with an antenna tuner. What the T2FD really buys you is the ability to avoid an antenna tuner.

There is an amateur antenna out there consisting of an 80-meter dipole (I mean one that is a half wave at 80 meters, not one physically 80 meters long) fed with about 100 feet of 450 ohm ladder line. It turns out that 100 feet of line is within about 10% of the idea length to match the antenna to 50 ohms on all amateur bands. One design of this antenna uses a tuner to correct for the mismatch, while another uses various lengths of 450 ohm line added to the feedline to achieve a match.
--

jhhaynes at earthlink dot net

4342. Re: surely must be someone??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 21:06:34 UTC
From: Dilligaf <tuskyone@yahoo.com.au>
Message-ID: <40d74de6$0$15065$61c65585@uq-127creek-reader-02.brisbane.pipenetworks.com.au>
Source record: 93097

Tnxs Vito, it's hard, if you just run off and spend the cash on a dud ,
without asking first you have no one to blame haahha,
yes well I had a Comet dualband HT antenna i used on my vx-5r some years
back and it was magic, but has since been discontinued... it is confusing
and reviews arn't always the best way to go, talking to the USER is the only
way to get a decent idea on the gadget,
I appreciate the reply, not many bother now days

73
de Dennis vk4sx
"Vito" <vito@crosslink.net> wrote in message
news:40d6d6ff$0$10756@dingus.crosslink.net...
> "Dilligaf" <tuskyone(remove)@yahoo.com.au> wrote
> > Surely there must be a Ham somewhere using a Commerical Triband/Quad
band
> HT
> > SMA terminated antenna ?....
>
> I tried a couple on my Yaesu VX-5. Didn't do any really definitive testing
> but subjective ability to access repeaters or other Hams in this rural
area
> wasn't noticably improved - at least not enough to warrant the bother, so
> I'm back to the stock antenna. Naturally, others may find the opposite,
but
> I'd say "Save your money".
>
> 73, K3DWW
>
>

4343. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 21:28:38 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <Ke2dnTic5aZmz0rdRVn-ig@comcast.com>
Source record: 93098
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

"Kees" <PA8540@home.removeee-thisss.nl> wrote in message
news:aelbd0pvdvu6rv64t5s2idbu19c7t1cc29@4ax.com...
> Hello fellow shortwave listeners !
>
> More info to make a T2FD yourself, like I did mine, please have a
> look at:
>
> http://members.home.nl/rita.kees/t2fdmake.html
>
>
> I hope you can appreciate it and use it for your practice.
>
>
> I will be glad to answer your questions.
>
> 73/cheers
>
> Kees
>
>
I have no idea how well the antenna works, but the method of connecting the
reisistor is very complicated. May I suggest:

Connect the two wires to a normal dog-bone insulator, and solder the
resistor across the insulator to the two wires. Insulate if you wish. For
receive only, a 1/2 W resistor is as good, or better.

Tam/WB2TT

4344. Re: Circular (slanted, dual) polarization

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 21:31:20 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040621173120.04657.00000309@mb-m10.aol.com>
Source record: 93099

>You're confusing 45 degree linear polarization with circular
>polarization. Even though both have equal horizontal and vertical
>components, they're not the same. The difference is that in a linearly
>polarized wave, Eh and Ev are in phase. In a circularly polarized wave,
>they're in phase quadrature (90 degrees out of phase with each other).
>That makes a large difference.

QSL, I plead guilty to confusion and oversimplification, I really meant
"slanted linear" polarization.

>No, you're right. It's dual polarization. And you're also wrong, since
>it's also single polarization (left-slant or right-slant linear).

Well (as belowed Ronnie would say), I feel more right in the quest for design
of antennas that minimize the polarization fading and cover wider vertical
angle range. I have used slanted polarization quads with good results and I am
willing to pay small 3 dB pealty for the better coverage and fewer nulls in the
pattern (in order of 10 - 20 dB). Plays well in the ocean front locations.
After waves go through the ionosphere, who knows what polarization they are.

>People with a deep interest in this topic might benefit from the new
>EZNEC+ program type, which can display the field strength from any
>antenna in terms of left and right circular as well as vertical and
>horizontal linear components.
>
>Roy Lewallen, W7EL

Thanks for the new + one, I have not explored it yet, but looking forward to
use it and play with 2m (hard) models to verify few things, including insulated
wires in the Quad elements.

Yuri, K3BU.us

4345. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 22:29:50 UTC
From: "NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net>
Message-ID: <yjJBc.3169$pC3.2103@newssvr25.news.prodigy.com>
Source record: 93100

2 other considerations - 1) copper tubeing is quite soft-- got birds? a
pigeon, or even lighter birds
will tend to bend the elements. But, - 2) even with 6061 T, /6063 T
(which is relatively hard drawn
tubeing), at the lenghts required for 6 meter yagis (aprox 55 inch on EACH
side of the boom),
in wind even light by nevada standards (like in Portland, Oregon),
"whistle" (resonate at audio frequencies), and because they VIBRATE at an
audible rate even in slight winds (have friend
he and me bought 1/2 each of a 6 meter 4 el X 8 yagi moonbounce array- I
used mine for makeing
2 meter antenas, the other guy put 4 stacked up on a 30 foot pole-- this
number of years ago.
Almost immediately, the elements started BREAKING from Metal Fatigue!!
Perhaps, as M2, and
several others have discouvered , elements that are SOLID 1/4 inch, inserted
into 3/8 inch alumium
tubeing seem to hold up, while these (1/4, or 3/16) elements thru the boom
Break off right where they
pass thru the boom, or are anchored by a screw! There are other
considerations for antennas than Gain
Like Weight, Metal Fatigue, oxydation , dissimilar metals (electrolysis).
That it works for a day is one thing
good for a LIFETIME-- thats another story altogether!! Jim NN7K

"Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET> wrote in message
news:10ddhv61b5o8ifd@corp.supernews.com...
> My local "Do It Center" hardware store has started carrying 6 foot lengths
> of T6061 aluminum tubing in 1/16 inch diameter increments up to about
3/4".
> For general experimentation and short elements, those might work out for
> you. For more serious work you should probably order from a place like
Texas
> Towers.
>
> --
> -larry
> K8UT
> "PDRUNEN" <pdrunen@aol.com> wrote in message
> news:20040619133823.05775.00000246@mb-m05.aol.com...
> > Hi Group,
> >
> > Where can I get some good grade material for a 6 meter beam elements?
> >

> > Does a hardware store such as Lowes carry anything that would work for
the
> > elements?
> >
> > Beam size is 4 to 6 elements.
> >
> > de KJ4UO
>
>

4346. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 22:32:46 UTC
From: jgboyles@aol.com
Message-ID: <20040621183246.23846.00000446@mb-m28.aol.com>
Source record: 93101

>I have no idea how well the antenna works, but the method of connecting the
>reisistor is very complicated. May I suggest:

Hi Tam, For receive only, a doublet antenna, as high as possible, with 50 ohm,or 75, or 300 ohm feedline will work well. I have no idea why people want to complicate receive antennas with resistors. Do you?
73 Gary N4AST

4347. Indoor antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 22:41:56 UTC
From: Bob P <nospam@nospam.end>
Message-ID: <UuJBc.27072$eH1.12631746@newssvr28.news.prodigy.com>
Source record: 93102

Anyone familiar with these full length roof vents on newer houses and
re-roofs?
Are they metal or plastic?
Looking to buy a house (in Michigan) and it has such a vent. An outside
antenna seems unlikely as it is a newer subdivision so I'll probably have to
go camouflaged vertical or a peak of the roof, indoor dipole.
73, thanks
Bob
kb8tl at Yahoo dot com

(spam disguised, replying directly to this note won't work)

4348. Re: Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 22:58:39 UTC
From: "NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net>
Message-ID: <zKJBc.3177$u_3.821@newssvr25.news.prodigy.com>
Source record: 93103

And also, tune between 50.060 and 50.080-- EVEN IF you cant copy cw (this
is the beacon area of 6)
Note frequencies of ANY heard when band NOT open-- IF you hear anything on a
frequency NOT noted,
(unless someone locally has placed a new one on air) Odds are that it is DX
!! that what they there for
to let you know when 6 is open! tho helps is can copy cw, gives you idea
WHERE band open to!
Jim NN7K

--
No trees were killed in the sending of this message. However, a large number
of electrons were terribly inconvenienced !

" People who never get carried away, should be! " --- Malcom Forbes

"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:Mt2dnQCdX6mAs0vdRVn-jg@comcast.com...
>
> "Shadow 998" <hrd998cc@nospam.yahoo.com> wrote in message
> news:10oBc.2625$wy1.2185@newssvr25.news.prodigy.com...
> >
> > This is my first attempt at 6 meters and have not made a single contact
on
> > the band since getting my license last year. This year will also be my
> > first field day which is why I built this beam. Now to figure out if
it
> > has a F/B ratio, forward gain, etc.
>
> Your best bet is to listen from about 50.100 to 50.200 on SSB. Calling
> frequency is 50.125. East cost was working the West coast earlier today. I
> assume the beam is horizontally polarized. Good luck on 6.
>
> Tam/WB2TT FN20
>
>

4349. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 23:31:17 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <guKdnZOj2K8n8krdRVn-uw@comcast.com>
Source record: 93104

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20040621183246.23846.00000446@mb-m28.aol.com...
> >I have no idea how well the antenna works, but the method of connecting
the
> >reisistor is very complicated. May I suggest:
>
> Hi Tam, For receive only, a doublet antenna, as high as possible, with 50
> ohm,or 75, or 300 ohm feedline will work well. I have no idea why people
want
> to complicate receive antennas with resistors. Do you?
> 73 Gary N4AST

Hi Gary,
I use my 75 m antenna, which tops out at 70 feet for SWL listening. For 99%
of SWL listeners the limiting things are the poor IF filtering and overload
prone front ends. Also, I dont think you see a noise blanker in a sub $300
radio.

Tam

4350. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-21 23:51:37 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <otydnWvRMfrj6Urd4p2dnA@comcast.com>
Source record: 93105

"NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net> wrote in
message news:yjJBc.3169$pC3.2103@newssvr25.news.prodigy.com...
> 2 other considerations - 1) copper tubeing is quite soft-- got birds? a
> pigeon, or even lighter birds
> will tend to bend the elements. But, - 2) even with 6061 T, /6063 T
> (which is relatively hard drawn
> tubeing), at the lenghts required for 6 meter yagis (aprox 55 inch on
EACH
> side of the boom),
> in wind even light by nevada standards (like in Portland, Oregon),
> "whistle" (resonate at audio frequencies), and because they VIBRATE at an
> audible rate even in slight winds (have friend
> he and me bought 1/2 each of a 6 meter 4 el X 8 yagi moonbounce array- I
> used mine for makeing
> 2 meter antenas, the other guy put 4 stacked up on a 30 foot pole-- this
> number of years ago.
> Almost immediately, the elements started BREAKING from Metal Fatigue!!
> Perhaps, as M2, and
> several others have discouvered , elements that are SOLID 1/4 inch,
inserted
> into 3/8 inch alumium
> tubeing seem to hold up, while these (1/4, or 3/16) elements thru the boom
> Break off right where they
> pass thru the boom, or are anchored by a screw! There are other
> considerations for antennas than Gain
> Like Weight, Metal Fatigue, oxydation , dissimilar metals (electrolysis).
> That it works for a day is one thing
> good for a LIFETIME-- thats another story altogether!! Jim NN7K

I have had a light duty KLM 7 el 6m beam up for 20 years. During this time
it survived a 96 mph storm that felled trees all around it. Never heard any
vibration from it, but that may be because I braced the boom to the mast
with two 5 foot lengths of 3/8 Al. Had it been copper, and it was still up,
it would look like hell. I don't think hardware store Al would be a problem
on 6m elements. What you don't want to do is to make a big hole in it for
the mounting screw.

Tam/WB2TT

4351. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 00:06:21 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40d77808$0$439$5cbedd26@news.real-time.com>
Source record: 93106

I should have stated that more clearly. What I meant was, none of the elements of a yagi are resonant, except perhaps the driven element. My point was that the elements except the driven one(s) must be above or below resonance, or the yagi isn't a yagi.

I have also seen a commercial yagi with the driven element longer than the reflector, so it likely wasn't remotely near resonance. It was also a very poorly performing commercial yagi, but that's a different matter.

tom
K0TAR

Roy Lewallen wrote:

> My, we can sure learn a lot of new things about Yagis from this
> newsgroup. Unfortunately, they're not true.
>
> I have a very high confidence in the ability of EZNEC to accurately
> model Yagi antennas. This is due to feedback from several professional
> customers who have analyzed Yagis with EZNEC and tested the actual
> antennas on test ranges.
>
> Let's take the EZNEC example file NBSYagi.EZ.
>
> If you change the driven element (wire 2) length from 2 * 54.875" to 2 *
> 54.56", you'll find that the feedpoint impedance is 11.53 - j0.0752 ohms
> -- it's resonant, and it's certainly functioning as a Yagi. The pattern
> and gain are nearly identical to the original NBS design.
>
> Now, change the director (wire 3) length from 2 * 54.313" to 2 * 56".
> This drops the gain from 9.68 dBi to 8.66 dBi, and lowers the feedpoint
> resistance from 11.53 ohms to 7.849 ohms. The point of maximum gain is
> obviously not the point of minimum feedpoint resistance.
>
> Anyone having an explanation for why the gain should be greatest when
> the feedpoint resistance is minimum and why a Yagi can't work when
> resonant should examine their explanations carefully in order to uncover
> the flaws that are obviously present in the explanations.
>
> Roy Lewallen, W7EL
>
> Tom Ring wrote:
>
>> Ian White, G3SEK wrote:
>>

>>> Dave Shrader wrote:
>>>
>>>> If the Yagi is to be tuned for MAXIMUM gain, and that is the
>>>> objective, then Ro will be the lowest value at resonance.
>>>
>>>
>>>
>>>
>>> That's an interesting assertion. Do you have further evidence for it?
>>>
>>>
>>
>> Yes, quite interesting, since a yagi is _not_ resonant in the design
>> frequency range, otherwise it couldn't work.
>>
>> Tom
>> K0TAR

4352. Kenwood AT-130 Antenna Tuner For Sale on ebay...starting price $19.95

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 00:15:42 UTC
From: rfpexec@yahoo.com
Message-ID: <676011a0.0406211615.3e001672@posting.google.com>
Source record: 93107

I have listed a Kenwood AT-130 Antenna tuner for sale on ebay. The
starting price is $19.95.

Please click on ,this link to see the picture and the auction.:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=5705294841&sspagename=STRK%3AMESE%3AIT&
rd=1

I will ship anywhere in the world.

73's

Bill

4353. Re: Indoor antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 00:37:09 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <kdved01bj0kvv03phmhgsdkig898s2qghg@4ax.com>
Source record: 93108

On Mon, 21 Jun 2004 22:41:56 GMT, "Bob P" <nospam@nospam.end> wrote:

>Anyone familiar with these full length roof vents on newer houses and
>re-roofs?
>Are they metal or plastic?
>Looking to buy a house (in Michigan) and it has such a vent. An outside
>antenna seems unlikely as it is a newer subdivision so I'll probably have to
>go camouflaged vertical or a peak of the roof, indoor dipole.
>73, thanks
>Bob
>kb8tl at Yahoo dot com
>
>(spam disguised, replying directly to this note won't work)
>

If you're talking about "ridge vents" I think they're typically
plastic -- it's cheaper -- but you should be able to figure that out
by looking at them up close. Or check a roofing supplier.

A piece of wire would probably be more predictable and measurable.

Bob
k5qwg

4354. Re: Antenna tuner is nessasry for TWO-TURN coax loop??

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 00:40:18 UTC
From: "H. Adam Stevens" <hstevens@totalaccessNOSPAM.net>
Message-ID: <10df0f8mdc86g26@corp.supernews.com>
Source record: 93110

"WonYong,Lee" <lwy0417@hanafos.com> wrote in message
news:carssk$1od$1@news.hananet.net...
> I made a pixie2, QRP rig.
>
> and so, I need a simple antenna...7Mhz!
>
> and double loop coax antenna is attractive very much...
>
> http://www.greertech.com/hfloop/mymagloop.html
>
>
> but...Antenna tuner is nessasry??
>
> I can't make a tuner because, air variable capacitor is few in
> korea....
>
> only loop antenna works well??
>
>
>
>
Hi OM
Many antenna designs work well.
What they often have in common (besides location) are resonance and matched impedances.
You can make a resonant antenna in many forms. It's impedance will vary but will always be resistive by definition.
Impedance matching transformers work. I like toroids; Low radiation, wide bandwidth.

Reactive components are not necessary and contribute to losses anyway;
I learned that fact the hard way while sorting out the last of the bazookas on this very newsgroup.

Do you have 66 feet? Then a simple dipole is the best choice. If you've only ~50 feet, droop the ends.
Feed it with 50 ohm coax, spin 8-10 turns about your hand and tie it together at the feedpoint.
(Choke balun.)
Be preared to walk back-and-forth as long as it takes to trim the lengths correctly.
Resonance is everything.
73
H.
NQ5H

4355. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 00:42:34 UTC
From: Old Ed <eXseniorsDeleteThisAndTheX@earthlink.net>
Message-ID: <_fLBc.9563$w07.6510@newsread2.news.pas.earthlink.net>
Source record: 93109

Hi Al -

Your antenna is excellent in every way. I have two of them
that I'm thrilled with. And after our local ARES/RACES group
saw mine, they ordered ten more for other members of the group.

I confess to smiling a bit when I found out that my J146/440 at
20 feet is about 6 dB stronger into the local repeater than our
EOC station's Comet "gain" antenna at 50 feet. (Obviously, this
cannot be a direct A/B comparison; but both stations have a clear
shot to the repeater, and they are closer to it than I am.)

Don't let the nattering nabobs of negativism in this NG get you down.
Many of them are so stuck in their ways, I'm surprised they haven't
reprised their stock answer of "use ladder line and a tuner to feed
a 135 foot dipole" as the hot ticket for 146/440 coverage. ;-)

73, Ed

"Arrow146" <arrow146@aol.com> wrote in message
news:20040617124305.16791.00000078@mb-m20.aol.com...
> Remember back when some said my Open Stub J-pole (OSJ) design
> Would not work very well.
> Just take a look at 25 reviews at
> <A HREF="http://www.eham.net/reviews/detail/1613">eHam.net Reviews - OSJ
Model
> J146/440</A>
> or
> http://www.eham.net/reviews/detail/1613
>
> See if you can find the ONE review that did not give it a
> 5 out of 5 rating.
>
> Changing the way J-Poles are made, "Simply the Best"
>
> 73 Al Lowe N0IMW
> ArrowAntenna.com

4356. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 00:56:48 UTC
From: M1LCR <rees.a@btopenworld.com>
Message-ID: <cb804g$9gr$1@hercules.btinternet.com>
Source record: 93111
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

The T2FD (Terminated Tilted Folded Dipole) was developed by the US Navy after carrying out experiments using terminating resistors. Numerous variations have appeared over the years, usually accompanied by warnings that as a transmitting aperiodic multiband antenna, its performance may leave something to be desired. This is because the transmitting power may be wasted in the terminating resistor.

As mentioned previously the antenna developed from US Naval experiments to broaden the bandwidth of a folded dipole to a reasonable degree. The was first described publicly in 1949, after Navy Captain C.L. Countryman tested it for long periods in California during WWII. The T2FD (also known as a tilted, centre fed, terminated, folded dipole) can offer claimed gains of 4-6dB over a dipole, depending on the frequency, although 1-3dB is nearer the mark with some frequencies exhibiting 1dB, as the resistor absorbs the RF power in transmission. The main attraction of the T2FD is not its gain however; it's its broadbandedness. It was, and still is, being publicized in journals as a broadband aerial suitable for use between 3.5 and 28 Mhz. In addition the T2FD has some attractive properties in terms of noise reduction, which some long wires / dipoles and ATU combinations are susceptible too.

In addition the T2FD can be used at higher frequencies than its design frequency. Some sources claim that it can be used over a range of 5 or even 6:1, although my own observations indicate 4:1. None the less a 40-meter version will cover 7Mhz to 25 Mhz, with some useful performance up into the 27 Mhz CB band.

See http://www.gb4iom.co.uk/new_page_4.htm for more information.

73

Adrian

M1LCR

"Kees" <PA8540@home.removeee-thisss.nl> wrote in message
news:aelbd0pvdvu6rv64t5s2idbu19c7t1cc29@4ax.com...
> Hello fellow shortwave listeners !
>
> More info to make a T2FD yourself, like I did mine, please have a
> look at:
>
> http://members.home.nl/rita.kees/t2fdmake.html
>
>

> I hope you can appreciate it and use it for your practice.
>
>
> I will be glad to answer your questions.
>
> 73/cheers
>
> Kees
>
>

4357. Re: Gamma match question 6-meter yagi

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 01:05:18 UTC
From: Shadow 998 <hrd998cc@nospam.yahoo.com>
Message-ID: <iBLBc.3195$AN5.2221@newssvr25.news.prodigy.com>
Source record: 93112

I'm working on CW and can copy a little if it is sloowww. Anyway, the band opened up this afternoon, and I made my very first DX contact with a QSO with K7BTZ. He was QRP at 2 watts! I was running in the 50-watt range.

Thanks.

73,
Russ KG6TDX

"NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net> wrote in message news:zKJBc.3177$u_3.821@newssvr25.news.prodigy.com...
> And also, tune between 50.060 and 50.080-- EVEN IF you cant copy cw (this
> is the beacon area of 6)
> Note frequencies of ANY heard when band NOT open-- IF you hear anything on a
> frequency NOT noted,
> (unless someone locally has placed a new one on air) Odds are that it is DX
> !! that what they there for
> to let you know when 6 is open! tho helps is can copy cw, gives you idea
> WHERE band open to!
> Jim NN7K
>
> --
> No trees were killed in the sending of this message. However, a large number
> of electrons were terribly inconvenienced !
>
> " People who never get carried away, should be! " --- Malcom Forbes
>
> "Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
> news:Mt2dnQCdX6mAs0vdRVn-jg@comcast.com...
> >
> > "Shadow 998" <hrd998cc@nospam.yahoo.com> wrote in message
> > news:10oBc.2625$wy1.2185@newssvr25.news.prodigy.com...
> > >
> > > This is my first attempt at 6 meters and have not made a single contact
> on
> > > the band since getting my license last year. This year will also be my
> > > first field day which is why I built this beam. Now to figure out if
> it
> > > has a F/B ratio, forward gain, etc.
> >

> > Your best bet is to listen from about 50.100 to 50.200 on SSB. Calling
> > frequency is 50.125. East cost was working the West coast earlier today.
I
> > assume the beam is horizontally polarized. Good luck on 6.
> >
> > Tam/WB2TT FN20
> >
> >
>
>

4358. Re: Iron Horse SMA

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 03:52:15 UTC
From: Dustin <fordman@btc-bci.com>
Message-ID: <R1OBc.598$o11.126294@news.uswest.net>
Source record: 93113

I bought one of these antenna's and I love it.. the range is incredible.. I would highly recommend it.

KC8ZEM
"Dilligaf" <tuskyone(remove)@yahoo.com.au> wrote in message news:40d4d4c3$0$19419$61c65585@uq-127creek-reader-01.brisbane.pipenetworks.com.au...
> Hi does the IRON HORSE range of SMA terminated HT Antennas work OK with the
> VX-5R/7R Range of HT's ?/ some have short centre pin any comments or
> thoughts from user's
>
> Rgds
>
>

4359. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 04:10:53 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <ijOBc.4379$rf7.584@lakeread02>
Source record: 93115

"Sylvan Butler" wrote in message

> Geoffrey S. Mendelson wrote:
> > You don't need to worry about wetting it or adding conductive agents to
the
> > soil unless you have lightening storms when the ground is dry. Although
I
> > live in the desert, I don't. When there is a lightening risk, the ground
is
> > damp.
>
> Not in Idaho. That last several thunderstorms by me have all been dry.
>
> sdb

In all but the sandiest soils, it could takes hours and hours of steady rainfall to soak the ground more than a few inches. While good bonding is arguably much more important than chasing a few ohms of earth ground resistance, a dry hole is not much use as a ground point. I chose three of my four (main) station ground points where it is always wet in the thunderstorm season: the electric service ground and a bonding rod near it are next to the HVAC condensate drain. A third one is next to a fish pond in a naturally low and wet area. And the fourth main ground point has to be watered and salted. To our poster in Alaska, I would suggest asking the Electric company how they obtain good grounding in your particular area. And then make sure you bond whatever system you sink in the ground to theirs as well.

Best regards,

Jack Painter
Virginia Beach, VA

4360. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 04:11:19 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40D7B167.6459@wt.net>
Source record: 93114

Brian Kelly wrote:

>
> Center-fed dipole-based antennas don't need station or installation
> site RF grounds. Horizontally or vertically oriented. All end (base)
> fed verticals need RF gounds so don't use 'em in your situation.

I've never needed an rf ground for a base fed half wave. A decoupling section with radials is an option to reduce feedline radiation..Not required to work though. MK

--
http://web.wt.net/~nm5k

4361. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 04:41:49 UTC
From: rhf-newsgroups@pacbell.net
Message-ID: <ff3145e8.0406212041.53572eaf@posting.google.com>
Source record: 93116
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

```
= = = "Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
= = = news:<Ke2dnTic5aZmz0rdRVn-ig@comcast.com>...
> "Kees" <PA8540@home.removeee-thisss.nl> wrote in message
> news:aelbd0pvdvu6rv64t5s2idbu19c7t1cc29@4ax.com...
> > Hello fellow shortwave listeners !
> >
> > More info to make a T2FD yourself, like I did mine, please have a
> > look at:
> >
> > http://members.home.nl/rita.kees/t2fdmake.html
> >
> >
> > I hope you can appreciate it and use it for your practice.
> >
> >
> > I will be glad to answer your questions.
> >
> > 73/cheers
> >
> > Kees
> >
> >
> I have no idea how well the antenna works, but the method of connecting the
> reisistor is very complicated. May I suggest:
>
> Connect the two wires to a normal dog-bone insulator, and solder the
> resistor across the insulator to the two wires. Insulate if you wish. For
> receive only, a 1/2 W resistor is as good, or better.
>
> Tam/WB2TT

WB2TT - Simplier is better ~ RHF

.
```

4362. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 05:45:27 UTC
From: yea right <spam@spam.spam>
Message-ID: <pan.2004.06.22.05.46.52.594037@spam.spam>
Source record: 93117
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

On Tue, 22 Jun 2004 00:56:48 +0000, M1LCR wrote:

> between 3.5 and 28 Mhz. In addition the T2FD has some attractive
> properties in terms of noise reduction, which some long wires / dipoles
> and ATU combinations are susceptible too.
>

I live in a suburb. My dipoles and long wires had so much noise that I hardly ever would listen to HF. Once I read about the noise immunity provided by a T2FD antenna, I constructed one to try. It was the best thing I could have done! It made HF livable in my high noise urban environment. I almost don't notice the noise I had before. I am able to pick up signals that my neighbor with a tri-band 3 element yagi is unable to hear due to his noise.

I would recommend this design to anyone combating local QRM.

4363. Kenwood TS 480 online?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 06:17:31 UTC
From: g3zhi@hotmail.com
Message-ID: <40e4ced0.1777912@news.btinternet.com>
Source record: 93118

Kenwood TS 480 online?

Anyone using a Kenwood TS 480 on line?

If so could I have the details to try it out remote.

73 Ian G3ZHI

http://www.qsl.net/g3zhi - many ham radio links
http://www.ukirlp.co.uk

G4NJI IRLP 5200 Echolink 135909
Rotherham simplex 145.2875mhz

GB3XN IRLP 5708 Echolink 153126
Langold 430.925 Mhz

Ian Abel G3ZHI
52 Hollytree Ave
Maltby
Rotherham
Yorkshire
S66 8DY

Tel: 01709 799911
Mobile 0783 338 0578

4364. Re: AEA Analyzer, where to buy ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 07:51:58 UTC
From: Hamradio <radioamateur@no.spam.org>
Message-ID: <cb8oeupfd1@ngspool-d02.news.aol.com>
Source record: 93119

Thank you for your answer.
I emailed AEA Technology (the new name for AEA Wireless) and they sell
directly to customers.
73

4365. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 10:45:21 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0406220245.65f45c7a@posting.google.com>
Source record: 93120

"Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
news:<mYjBc.46786$wH4.2839859@twister.southeast.rr.com>...
> >
> My only problem with J antennas is WHY. I can more easily build a 5/8.

This is an interesting question, and i'd like to see you folks discuss
this one a bit.

The reason being that regular J-poles (not the super J) are supposed
to be good for urban areas, where there are lot's of buildings in the way
and such. But this implies that J-poles have a lower angle of radiation
than say, a regular dipole.

But then, so do 5/8ths. So i think the question is really:

Which antenna has the lower angle of radiation? OR:

Which antenna has the higher horizontal gain in dB? or the
higher effective radiated power for a given test transmitter?

Slick

4366. Re: Antenna Material

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 11:08:05 UTC
From: Phil <phil.bradway@verizon.net>
Message-ID: <pqUBc.21400$U.13235@nwrdny02.gnilink.net>
Source record: 93021

Gluing a piece of clothes line inside the elements on the 6 meter beam will dampen the vibrations. End caps solve the "whistling in the dark" syndrome.

Phil, KB2HQ

"NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net> wrote in message news:yjJBc.3169$pC3.2103@newssvr25.news.prodigy.com...
> 2 other considerations - 1) copper tubeing is quite soft-- got birds? a
> pigeon, or even lighter birds
> will tend to bend the elements. But, - 2) even with 6061 T, /6063 T
> (which is relatively hard drawn
> tubeing), at the lenghts required for 6 meter yagis (aprox 55 inch on
EACH
> side of the boom),
> in wind even light by nevada standards (like in Portland, Oregon),
> "whistle" (resonate at audio frequencies), and because they VIBRATE at an
> audible rate even in slight winds (have friend
> he and me bought 1/2 each of a 6 meter 4 el X 8 yagi moonbounce array- I
> used mine for makeing
> 2 meter antenas, the other guy put 4 stacked up on a 30 foot pole-- this
> number of years ago.
> Almost immediately, the elements started BREAKING from Metal Fatigue!!
> Perhaps, as M2, and
> several others have discouvered , elements that are SOLID 1/4 inch,
inserted
> into 3/8 inch alumium
> tubeing seem to hold up, while these (1/4, or 3/16) elements thru the boom
> Break off right where they
> pass thru the boom, or are anchored by a screw! There are other
> considerations for antennas than Gain
> Like Weight, Metal Fatigue, oxydation , dissimilar metals (electrolysis).
> That it works for a day is one thing
> good for a LIFETIME-- thats another story altogether!! Jim NN7K
>
>
>
>
> "Larry Gauthier (K8UT)" <MyCallsign@ARRL.NET> wrote in message
> news:10ddhv61b5o8ifd@corp.supernews.com...
> > My local "Do It Center" hardware store has started carrying 6 foot
lengths
> > of T6061 aluminum tubing in 1/16 inch diameter increments up to about
> 3/4".
> > For general experimentation and short elements, those might work out for
> > you. For more serious work you should probably order from a place like

> Texas
> > Towers.
> >
> > --
> > -larry
> > K8UT
> > "PDRUNEN" <pdrunen@aol.com> wrote in message
> > news:20040619133823.05775.00000246@mb-m05.aol.com...
> > > Hi Group,
> > >
> > > Where can I get some good grade material for a 6 meter beam elements?
> > >
> > > Does a hardware store such as Lowes carry anything that would work for
> the
> > > elements?
> > >
> > > Beam size is 4 to 6 elements.
> > >
> > > de KJ4UO
> >
> >
>
>

4367. Home Brew Resistive Return Loss/Reflection Coeff/SWR Bridge?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 11:35:08 UTC
From: Paul VK3DIP <pmcmahon@telstra.com>
Message-ID: <MPUBc.49613$sj4.22869@news-server.bigpond.net.au>
Source record: 93022

Hi,
I have been trying out a couple of home made resistive bridges to measure Return Loss/Reflection Coeff/VSWR and have noted that there seems to be a few basic types and would be interested in collecting a few comments from others who have more experience with them than I. I should mention that I am mainly interested in using these at VHF and up so have tended to discount toroid/current types, and am interested in as wide a usable frequency range as possible so also have not looked a lot at transmission line style directional coupler ones either. If anyone has any comments on those assumptions I would also be interested.

The first and simplest type I have seen in places like the ARRL Antenna Handbook and places on the web like
http://www.g4wif.fsnet.co.uk/q_tech15.htm
and
http://www.pollak.sulinet.hu/electro/hidak/hidak.htm

These are a basic resistive bridge usually all nominal 50 ohm resistors with a built in diode detector. The theory/maths behind these is straight forward and seems pretty obvious by just treating the impedance of the detector as much higher than the 50 ohms of the rest of the system and just ignoring any effects from it.

Then there is a variation, the best example of which I have found seems to be a circuit given be Joe Reisert in his VHF/UHF techniques column in the old Ham Radio Mag (June or July 1996 I believe) which is basically the same as those above but has an additional 50 ohm resistor across the centre of the bridge setting the impedance of the in built diode detector. In the versions I have built (using surface mount components etc.) this does seem to work better, or at least be more well behaved, than the more simple ones, but while I can readily see how this works for detecting balance, the maths for unbalanced (ie non 50 ohm load) cases gets quite a bit more difficult.

The final variation is as found in versions such as that of Jim Ford in September 1997 QST, or as a v/uhf version at
http://www.webx.dk/oz2cpu/radios/swr-bridge.htm
This variation seems to remove the built in diode detector and replace it with a 1:1 balun either of the transformer or choke type and then use a separate external (50 ohm) detector. So mathematically I would think it is equivalent to the Reisert version, but perhaps there is some advantage to the explicit balance of the detector.

Any pointers to a theoretical treatment of these last two types, or other comments would be appreciated.

Sorry for the long post and thanks in advance.

Paul VK3DIP

4368. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 13:37:17 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406220537.58e7d13e@posting.google.com>
Source record: 93023

Mark Keith <nm5k@wt.net> wrote in message news:<40D7B167.6459@wt.net>...
> Brian Kelly wrote:
>
> >
> > Center-fed dipole-based antennas don't need station or installation
> > site RF grounds. Horizontally or vertically oriented. All end (base)
> > fed verticals need RF gounds so don't use 'em in your situation.
>
> I've never needed an rf ground for a base fed half wave. A decoupling
> section with radials is an option to reduce feedline radiation..Not
> required to work though. MK

You lost me Mark. You have a vertical half-wave wire fed at it's base.
You have an unbalanced L/C network which matches the very high
feedpoint impedance to, say, a random length of 50 ohm coax. What do
you do with the coax braid and the ground side of the tuner?

Brian w3rv

4369. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 15:27:38 UTC
From: arrow146@aol.com
Message-ID: <20040622112738.05846.00000463@mb-m05.aol.com>
Source record: 93024

<< >My only problem with J antennas is WHY. I can more easily build a 5/8.

What your really asking is why a half wave vs a 5/8ths?

The best answer I can give is a 5/8ths REQUIRES a groundplane to
work at all correctly and that makes it more metal and complication.
Yes the 5/8ths offers _some_ additional gain but for simplicity the
end fed dipoles (all the J varients) do not require a ground plane and
are more compact in general shape making them a better candiate
for steath or portable ops.

Seriously if I were going for more gain than the OSJ the antenna would
be a 4 bay dipole for the same reasons. Rugged, simple, excellent
gain and good radiation pattern. The 5/8ths does not offer enough
gain increase to make it worth the effort when a 5.6db colinear or 4
bay dipole offers significantly more.

Allison
KB!GMX >>

Wow, Good Answer, I totally agree.

I tested several different 5/8 wave antenna, I even made a
prototype that worked as well or better than any of them, and
looked better. But comparing them to the OSJ it was hard to
tell the difference, maybe a 1/2 "S" Unit in favor of the 5/8 wave.
With the difference in cost to make, (Labor & Material)
it just did not see worth the effort to me.
73 Al Lowe N0IMW
<A HREF="http://ArrowAntennas.com">ArrowAntenna.com</A>

4370. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 15:34:31 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40D85187.1070406@psu.edu>
Source record: 93025

Fractenna wrote:
> Some care must be exercised to see that causality has not been violated: the
> 'July 9' date is a typo. The right date is, of course, 9 June.
>
> I continue to get many e-mails asking for info about DLM designs. You will,
> perhaps note, that the 7 June EE times article was AGAIN run--with
> additions--on 14 June:
>
> http://www.eet.com/showArticle.jhtml?articleID=21600147.
>
> Mr. Vincent describes a design that, apparently, is well within the
> description I discussed below on 11 June--at least that is my opinion.
>
> As I have not seen Mr. Vincent's design, it would appear that said design is
> either 'obvious to those skilled in the art', or not novel in some basic way,
> again, an opinion. I will be most interested to see what true novelty is
> ascribed and approved as the 'revolution' moves forward.
>
> Incidentally, Mr. Vincent again ascribes his design as "wide in bandwidth" yet
> describes substantial harmonic suppression. 'Wideband' designs are almost
> always big enough in passband to cover the lowest end and its harmonics.
>
> 73,
> Chip N1IR
> ----------
>
> <<Temat: DLM Antenna
> Od: fractenna@aol.com (Fractenna)
> Grupa: rec.radio.amateur.antenna
> Organizacja: AOL http://www.aol.com
> Data: Jun 11 2004 12:29:42
>
>
> ------
>
>
> Hello--
>
> I've received about 2 dozen e-mails on this subject. Prior to this, I
> communicated with Mr. Vincent early on 9 July(SIC) and offered him the
> opportunity
> for scientific and objective independent testing. He declined due to a test
> already ongoing at a facility that I feel is also capable of such testing (you

> may ask Mr. Vincent if you wish).
>
> My scientific interest in this topic is exhausted. I pose the following for
> those interested in what is possible, and what has been done, along the lines
> of distributed loading of helix monopoles. I invite you to investigate the
> prior art for yourself.
>
> I have not seen Mr. Vincent's design, but based upon his PR statements, it
> appears to be a loaded helix monopole with a CCD-like arrangement for
> neutralization. The design, of course, may be different and novel, although I
> am not of that opinion, based upon the 3 reports published in the popular
> press. In the absence of knowledge, it is impossible to fully assess. Still,
> there is value in knowing what has been done and what is possible.
>
> ---------------------------------------
>
> The prior art is rife with distributed loading of monopoles to extensively
> shorten them.
>
> Here is a prior art method that will gives a few percent bandwidth and about -2
> dBd for less than 1/15 wave height. I invite you to experiment for values and
> placements:
>
> * Take a half wave of wire (approximately);
> * Wind it into a helix of about 10^-3 waves diameter (or less);
> * Place an inductive load half way up;
> * Add at least 2 and up to 6 capacitors at distributed points along the helix
> length;
> * If you wish to truncate the current at the top, then add a small end cap hat;
>
> Essentially this is a shrunken 1 wave dipole manifest as a 1/2 wave monopole,
> using CCD (distributed capacitors) to neutralize the inductance. (remember:
> not all cacapcitors need be discrete components). Helical designs originated
> with Harold Wheeler more than 50 years ago. CCD articles have predominantly
> appeared in ham magazines in the 70's and 80's, although the original invention
> is (I believe) British and over 40 years old. There are many relevant patents,
> all expired to my knowledge.
>
> This design approach will 'linearize' the current (slow he wave) and do a
> pretty good job. A shrunken 1/2 wave monopole does better than a shrunken 1/4
> monopole. When you compare it to a full-sized 1/4 wave monopole it will do well
> at a specific frequency.
>
> It is an interesting question whether the relevant comparison should be to a
> 1/4 wave monopole or a 1/2 wave monopole. Such shrunken designs are 1/2 wave
> equivalents, not 1/4 wave equivalents. They will look much worse in performance
> compared to full sized counterparts. A 1/4 wave monopole is not a counterpart,
> although in a practical sense it is a much used antenna which one might seek to
> replace and thus compare to.
>

> HOWEVER for such a shrunken design--
>
> * It will be moderate to narrow band;
> * It will trade gain for efficiency and is NOT efficient;
> * It will run hot in continuous-on applications with moderate to high power.
>
> Gain is not efficiency. Sometimes efficiency doesn't matter, but gain does.
> Other times the heating from inefficiency will kill an otherwise elegant design
> option.
>
> Mr. Vincent's original PR claims, to my recollection: high efficiency; good
> (broad) bandwidth; very low height.
>
> These are not mutually, physically, attainable. I, and many others, have spent
> enough time to know. There is no reason to believe that Mr. Vincent has
> attained these. What he has appeared to have attained, to my limited knowledge
> based on published PR, is: moderate to low efficiency; modest bandwidth, and
> very low height. To my knowledge, Mr. Vincent has neither done an efficiency
> test nor a heating test.
>
> In terms of applications, there are very few, besides some 'ham' and CB needs,
> where a single band, somewhat inefficient whip is desired. Midland has a nice
> compromise stick for CB'ers that's using some of these ideas and is two feet
> high. I like their design.
>
> --Using a heavily shortened CCD type helix monopole in a broadcast app will
> lead to a fire. It is not highly efficient and the wasted power will manifest
> as heat. As little as 30 watts of heat in a confined area will start a fire or
> melt components if not properly dissipated. About a 1 dB loss to heat for 1000
> watts power will produce well over 100 watts dissipated heat. Ergo, even a
> reasonably efficient antenna is potentially dangerous if high power is used
> and the heat is not properly dissipated. Mr. Vincent's design PR describes
> melted components in some of his design efforts. This indicates inefficiency in
> the design tested.
>
> --Much of the world wants 'ground independent' antennas--not monopoles
>
> -- Microwave applications are not single frequency, with few exceptions. Even
> PIFA (inverted F) solutions--which are extremely low height, lower than Mr
> Vincen'ts-- are multibanded.
>
> --Much of the world wants multiband antennas, or wideband antennas, not modest
> passbands.

What I have become stuck on is the claim of constant current along the
length of the antenna - or 80 percent as claimed. How does this work? I
don't profess to know much about these matters, but if the current stays
the same, then the voltage must too?

And i still can't figure out how such an efficient antenna "melts". 8^)

- Mike KB3EIA -

4371. Scanner sensitivity and path loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 15:44:16 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406220744.5ece04bc@posting.google.com>
Source record: 93026

I was wondering what's an accurate estimate for scanner sensitivity? I've got a Uniden BC180, and the owner's manual doesn't list that information. I was wondering what a good value would be to use in order to do some path loss calculations. I've heard 1.0 uv is a good conservative estimate. Is this too low?

As a second question, what's the approximate margin needed to make out audio? I've heard for data 20dB margin has a link reliability of 99.9%, and 30dB margin yields 99.99%. I imagine to make out audio without too much difficulty, it'd be much less.

Thanks in advance for any insight!
Dave

4372. Re: Phasing coil for 2M J-pole from 450 Ohm Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 16:22:03 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <cb9mfh$44h$1@newshost.mot.com>
Source record: 93027

"Kim & Steve Merrill" <buck0@comcast.net> wrote in message
news:8PKdnZoI-Y_thEXdRVn-uA@comcast.com...
> Passing on the info for others to enjoy.
>
> My Wife and I made up a few of these collinear 2-meter J-poles. The ones
we
> did incorporated an so-239 and decoupling loop close to the feed-point.
> Works slick!!

Looks pretty good. What do you think about using a bigger piece of PVC
and putting the whole choke _around_ the bottom of the ladder line instead
of off to the side (coaxially). Should make it lower profile - all most,
but not quite centered on the SO-239.
--
Steve N, K,9;d, c. i My email has no u's.

4373. Re: Phasing coil for 2M J-pole from 450 Ohm Ladder Line

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 17:26:15 UTC
From: Kim & Steve Merrill <buck0@comcast.net>
Message-ID: <G5-dnQ4XB6iO9kXdRVn-hA@comcast.com>
Source record: 93028

Hi Steve,

Thanks for checking it out.

Not sure how the mod you suggest for this will effect the SWR?? There was a slight change noticed just moving the choke to the position it is now. But it's something to think about, and thank you for the idea. Could become a new project too.

I built a j-pole kind-a like this, but was made of 300 ohm TV twin lead ribbon cable. Over 5 years ago now. Everything inside PVC. Choke just below the antenna. Still works great. We use it every day!
Ref: http://home.comcast.net/~buck0/Kb1dig2m.htm

73
Steve KB1DIG

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:cb9mfh$44h$1@newshost.mot.com...
>
> "Kim & Steve Merrill" <buck0@comcast.net> wrote in message
> news:8PKdnZoI-Y_thEXdRVn-uA@comcast.com...
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> Looks pretty good. What do you think about using a bigger piece of
PVC
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> of off to the side (coaxially). Should make it lower profile - all most,
> but not quite centered on the SO-239.
> --
> Steve N, K,9;d, c. i My email has no u's.
>
>
>
>

4374. Re: Home Brew Resistive Return Loss/Reflection Coeff/SWR Bridge?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 17:35:25 UTC
From: Ken Fowler <ko6no@yahoo.com>
Message-ID: <Ar6dnfUiiLhC8EXdRVn-vA@comcast.com>
Source record: 93029

On 22-Jun-2004, "Paul VK3DIP" <pmcmahon@telstra.com> wrote:

> Hi,
> I have been trying out a couple of home made resistive bridges to measure
> Return Loss/Reflection Coeff/VSWR and have noted that there seems to be a
> few basic types and would be interested in collecting a few comments from
> others who have more experience with them than I. I should mention that I am
> mainly interested in using these at VHF and up so have tended to discount
> toroid/current types, and am interested in as wide a usable frequency range
> as possible so also have not looked a lot at transmission line style
> directional coupler ones either. If anyone has any comments on those
> assumptions I would also be interested.
>
>

Take a look at:

http://users.adelphia.net/~n2pk/

for a description of the VNA - Virtual Network Analyzer.

4375. Re: Home Brew Resistive Return Loss/Reflection Coeff/SWR Bridge?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 18:00:52 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <ot_Bc.93601$Sw.26001@attbi_s51>
Source record: 93030

> Take a look at:
>
> http://users.adelphia.net/~n2pk/
>
> for a description of the VNA - Virtual Network Analyzer.

That's a VECTOR Network Analyzer, and it's not 2 meter compliant without narrow band up/down converters and accompanying filters.

W4ZCB

4376. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 18:28:33 UTC
From: tdonaly@aol.com
Message-ID: <20040622142833.10883.00000209@mb-m25.aol.com>
Source record: 93031

Mike wrote,
>
>
> What I have become stuck on is the claim of constant current along the
>length of the antenna - or 80 percent as claimed. How does this work? I
>don't profess to know much about these matters, but if the current stays
>the same, then the voltage must too?
>
> And i still can't figure out how such an efficient antenna "melts". 8^)
>
> - Mike KB3EIA -
>

Anyone can make a "constant current" dipole, just by making it small
enough in relation to the wavelength of the frequency it's to be used for.
Of course, as has been pointed out here many times, feeding such an antenna
would be difficult to impossible, and bandwidth would be small, but you can't
have
everything.
Some theorists in the late 1940's did some work on the fundamental limits of

small antennas. There are one or two papers available on the web if you search

for "small antennas" with google. People who think they can make a small (in
terms of
a wavelength) single radiator antenna, with good efficiency, and a large
bandwidth,
that doesn't have to resort to feedline radiation to achieve its aims,
would do well to read these papers before making themselves look silly by
claiming
the impossible.
73,
Tom Donaly, KA6RUH

4377. Re: Polarization conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 18:34:24 UTC
From: dariolq@yahoo.com
Message-ID: <c92ca4d3.0406221034.fb294e2@posting.google.com>
Source record: 93032

Sorry Roy but I disagree. Well,... I agree with everything you said
except for the "No" part and the conversion equations. You left out
one part too. The RCP and LCP components of an elliptical wave are
not equal otherwise they would collapse to a purely linear wave.

Here's an example I came up with.
Let E_elliptical = x + 2*j*y (left hand elliptical)
E_elliptical = RCP + LCP
= (a*x - j*a*y) + (b*x + j*b*y) = x + 2*j*y
equating coefficients...
a*x + b*x = x
-j*a*y + j*b*y = 2*j*y ==> -a*(j*y) + b*(j*y) = 2*(j*y)
or
a + b = 1
-a + b = 2
solving for a & b
a = -0.5
b = 1.5
so
RCP = -0.5*x + j*0.5*y
LCP = 1.5*x + j*1.5*y

which clearly isn't
Right Circ E = 0.5 * (Eh - j Ev)
Left Circ E = 0.5 * (Eh + j Ev)

Regards

Dario

Roy Lewallen <w7el@eznec.com> wrote in message
news:<10dcik648bpjc80@corp.supernews.com>...
> No.
>
> All waves are elliptically polarized. Linear and circular are two
> special cases of eliptically polarized waves. For analytical and
> computational convenience, you can split any (elliptically polarized,
> TEM) waves into two orthogonal components. One choice of two components
> is vertical and horizontal linear. Another, equally valid, choice is
> left and right circular. You can convert between one and the other with
> the equations I provided.
>
> To be purely linearly polarized, Eh and Ev have to be in phase or 180
> degrees out of phase. To be purely circular, Eh and Ev have to be equal
> in magnitude, AND in phase quadrature. There is no combination of Eh and
> Ev except both zero which result in the left or right circular

> components to be zero. That is, a purely linearly polarized wave can
> still be split into left and right circular components, and neither of
> those components will be zero unless the field itself is zero. Likewise,
> a purely circularly polarized field can be split into non-zero vertical
> and horizontal linear components.
>
> Roy Lewallen, W7EL
>
> Dario Lopez wrote:
> > Thanks Roy,
> > But for those equations to be valid circular represenations,
> > don't Eh & Ev need to be equal? As they stand, substituting "random"
> > values for Eh & Ev will yield elliptically polarized waves.
> >
> > Dario
> >
> > Roy Lewallen <w7el@eznec.com> wrote in message
news:<10bbf105d7ulje7@corp.supernews.com>...
> >
> >>Left Circ E = 0.5 * (Eh + j Ev)
> >>Right Circ E = 0.5 * (Eh - j Ev)
> >>
> >>where Eh and Ev are complex horizontal (phi) and vertical (theta)
> >>linearly polarized E field components respectively. Left Circ E and
> >>Right Circ E are of course also complex.
> >>
> >>You can find this in just about any antenna text. A text would probably
> >>be a good investment if you're going to be digging into theory at this
> >>level.
> >>
> >>Roy Lewallen, W7EL

4378. Glass mount antenna speaker interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 18:57:18 UTC
From: kbozek@yahoo.com
Message-ID: <506a3e3b.0406221057.5a83bf4d@posting.google.com>
Source record: 93033

I recently installed a RS glass mount antenna on my '96 dodge Intrepid. The area I chose was near the bottom of the rear window.

I get terrible feedback into my car radio. It is either coming in via the speaker or the cars antenna.

Any way to eliminate interference without removing antenna or if I have to remove it will any of the reinstall kits work with the R/S model?

I was looking at the double-sided tape and that seems to me that it might work ok?

Keith, N3HGN

4379. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 20:31:28 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040622163128.04915.00000392@mb-m24.aol.com>
Source record: 93034

> What I have become stuck on is the claim of constant current along the
>length of the antenna - or 80 percent as claimed. How does this work? I
>don't profess to know much about these matters, but if the current stays
>the same, then the voltage must too?
>
> And i still can't figure out how such an efficient antenna "melts". 8^)
>
> - Mike KB3EIA -
>
>
>

If they believe W8JI et al claim that current through the loading coil is constant, then they would claim that they made the current constant. More on the subject check
http://www.k3bu.us/loadingcoils.htm

Yuri, K3BU.us

4380. Re: Choke Baluns again. New program

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 21:16:40 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d8a28a$1_1@corp.newsgroups.com>
Source record: 93035

Richard Clark wrote:
> (Cecil once tried to argue its
> characteristic Z was 40 Ohms to deflect a thread)

Absolutely false! I said ***IF*** it's Z0 was 40 ohms, then the results
you gave were predictable. You continue to be ignorant of the implications
of a conditional statement. May I recommend, "Logic, an Introduction", by Ruby.

Here's a refresher: If the 'IF' part of a conditional statement is false,
then the 'THEN' part of that conditional statement is true, by definition.

My statement went something like this: If the Z0 of your transmission line
was 40 ohms, then those results are perfectly predictable.

That is a perfectly *TRUE* statement under any and all conditions.

If you don't understand that fact of logic, please study and learn it and stop
misquoting me. If you do already understand that fact of logic, please stop
lying about what I said. Misquoting and lying are *both* unethical.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4381. Re: Scanner sensitivity and path loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 22:12:56 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <I92Cc.10550$w07.4449@newsread2.news.pas.earthlink.net>
Source record: 93036

"David Harper" <achilles03@hotmail.com> wrote in message
news:fef44ceb.0406220744.5ece04bc@posting.google.com...
> I was wondering what's an accurate estimate for scanner sensitivity?
> I've got a Uniden BC180, and the owner's manual doesn't list that
> information. I was wondering what a good value would be to use in
> order to do some path loss calculations. I've heard 1.0 uv is a good
> conservative estimate. Is this too low?
>

The 1 uv is fine for the calculations. You may even be able to go as low as
.5 uv . The lower the number the more sensitive the receiver . Not sure
what you mean about the margin to make out audio. For FM singnals .5 uv
should give you good audio with a trace of noise and at 1 uv it should be
almost full quietning (for FM that is all the hissing noise should dissapear
out of the audio) .

4382. Re: Home Brew Resistive Return Loss/Reflection Coeff/SWR Bridge?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 23:42:19 UTC
From: 9A4QV Adam <aalicaj@pfri.hr>
Message-ID: <cbag0l$7a2$1@bagan.srce.hr>
Source record: 93040

Hello,

I think that I have solution for your question, exactly what you ask, Home brew Resistive Return Loss....SWR Bridge. The article was written by the S53MV in Slevenian and Croatian language, so some translation should be done for you (or you prefer to learn Slavic language HI). The bridge is capable to measure up to 2.5Ghz without any problem, cheap design and awailable material for building, can be done in one afternoon.

Well, I think that just shematic and most important the gama/swr/ar/a table is what you need and the rest you will figure out without any problem.
Ok, I will scan for you just one page and if you are intereste the rest can be done as well.

Meantime, check this page, almost the same design but with SMD components:
http://www.pollak.sulinet.hu/elektro/hidak/bridge/how_to.htm

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:ot_Bc.93601$Sw.26001@attbi_s51...
>
>
> > Take a look at:
> >
> > http://users.adelphia.net/~n2pk/
> >
> > for a description of the VNA - Virtual Network Analyzer.
>
> That's a VECTOR Network Analyzer, and it's not 2 meter compliant without
> narrow band up/down converters and accompanying filters.
>
> W4ZCB
>
>

4383. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 23:45:42 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406221545.57c4a487@posting.google.com>
Source record: 93037

Tom, I wouldn't be so quick in using the term " impossible" if I were
you until the facts come out. He has already stated that he has a
distributed load antenna which he referres to as a two dimensional
helix, which I see as a meander line on a circuit board. This
ofcourse, provides an antenna of very small size which has some
drawbacks. But the inventor states that the design is a combination of
known ideas which may well be a method of overcomming initial
drawbacks. After all a University have placed themselves behind the
inventor and most of us did not go to University on a platform of
disbelieving our professors . Even if it all turns out to be a
mistaken idea the majority of hams will learn from future interchange
rather than tagging along with those who believe all is already
known.Usually the best inventions are an amaqlgamation of all the good
observations noted in otherwise bad ideas/inventions made by somebody
who looks for every morsel that is new and is
resourceful enough to connect the dots before it becomes obvious to
the followers.It is rare that someting that comes along is totally new
in its entirety.
Regards
Art

tdonaly@aol.com (Tdonaly) wrote in message
news:<20040622142833.10883.00000209@mb-m25.aol.com>...
> Mike wrote,
> >
> >
> > What I have become stuck on is the claim of constant current along the
> >length of the antenna - or 80 percent as claimed. How does this work? I
> >don't profess to know much about these matters, but if the current stays
> >the same, then the voltage must too?
> >
> > And i still can't figure out how such an efficient antenna "melts". 8^)
> >
> > - Mike KB3EIA -
> >
>
> Anyone can make a "constant current" dipole, just by making it small
> enough in relation to the wavelength of the frequency it's to be used for.
> Of course, as has been pointed out here many times, feeding such an antenna
> would be difficult to impossible, and bandwidth would be small, but you can't
> have
> everything.
> Some theorists in the late 1940's did some work on the fundamental limits of
>

> small antennas. There are one or two papers available on the web if you search
>
> for "small antennas" with google. People who think they can make a small (in
> terms of
> a wavelength) single radiator antenna, with good efficiency, and a large
> bandwidth,
> that doesn't have to resort to feedline radiation to achieve its aims,
> would do well to read these papers before making themselves look silly by
> claiming
> the impossible.
> 73,
> Tom Donaly, KA6RUH

4384. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 23:45:46 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406221545.3e915709@posting.google.com>
Source record: 93038

Tom, I wouldn't be so quick in using the term " impossible" if I were
you until the facts come out. He has already stated that he has a
distributed load antenna which he referres to as a two dimensional
helix, which I see as a meander line on a circuit board. This
ofcourse, provides an antenna of very small size which has some
drawbacks. But the inventor states that the design is a combination of
known ideas which may well be a method of overcomming initial
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> for "small antennas" with google. People who think they can make a small (in
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> the impossible.
> 73,
> Tom Donaly, KA6RUH

4385. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-22 23:45:53 UTC
From: aunwin@insightbb.com
Message-ID: <85ed38d.0406221545.532ba34e@posting.google.com>
Source record: 93039

Tom, I wouldn't be so quick in using the term " impossible" if I were
you until the facts come out. He has already stated that he has a
distributed load antenna which he referres to as a two dimensional
helix, which I see as a meander line on a circuit board. This
ofcourse, provides an antenna of very small size which has some
drawbacks. But the inventor states that the design is a combination of
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Art

tdonaly@aol.com (Tdonaly) wrote in message
news:<20040622142833.10883.00000209@mb-m25.aol.com>...
> Mike wrote,
> >
> >
> > What I have become stuck on is the claim of constant current along the
> >length of the antenna - or 80 percent as claimed. How does this work? I
> >don't profess to know much about these matters, but if the current stays
> >the same, then the voltage must too?
> >
> > And i still can't figure out how such an efficient antenna "melts". 8^)
> >
> > - Mike KB3EIA -
> >
>
> Anyone can make a "constant current" dipole, just by making it small
> enough in relation to the wavelength of the frequency it's to be used for.
> Of course, as has been pointed out here many times, feeding such an antenna
> would be difficult to impossible, and bandwidth would be small, but you can't
> have
> everything.
> Some theorists in the late 1940's did some work on the fundamental limits of
>

> small antennas. There are one or two papers available on the web if you search
>
> for "small antennas" with google. People who think they can make a small (in
> terms of
> a wavelength) single radiator antenna, with good efficiency, and a large
> bandwidth,
> that doesn't have to resort to feedline radiation to achieve its aims,
> would do well to read these papers before making themselves look silly by
> claiming
> the impossible.
> 73,
> Tom Donaly, KA6RUH

4386. Re: Indoor antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 00:11:28 UTC
From: John DeGood <nu3e@arrl.net>
Message-ID: <cpmdndN04fMwV0XdRVn-jw@comcast.com>
Source record: 93041

Ridge vents can be constructed of a variety of materials, including roof shingle material. I use a homebrew attic trap dipole run under my nonmetallic ridge vent. I have a web page about the antenna at:

http://home.comcast.net/~jdegood/coaxtrap

73, John NU3E

Bob P wrote:

> Anyone familiar with these full length roof vents on newer houses and
> re-roofs?
> Are they metal or plastic?
> Looking to buy a house (in Michigan) and it has such a vent. An outside
> antenna seems unlikely as it is a newer subdivision so I'll probably have to
> go camouflaged vertical or a peak of the roof, indoor dipole.
> 73, thanks
> Bob
> kb8tl at Yahoo dot com

4387. 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 00:41:12 UTC
From: Bob Wood <bobw@zianet.com>
Message-ID: <10dhlq1m3vs6be7@corp.supernews.com>
Source record: 93042

V Beam antenna question

I want to put up a 40M V Beam antenna to enhance communication in one direction only. From the limited design information that I have found, I am thinking of 3/4 wavelength on each side with a horizontal separation angle of either 72 degrees or 120 degrees. I have seen both separation angles listed as optimum for maximum gain. I was wondering if anyone knew for sure which angle would produce the best result. Also, and actually most important, I need to have some idea of what the feed point impedance might be. I can feed it with ladder line or good coax and a balun but I am not sure what balun to use or would it be better to use ladder line? I sure would appreciate any guidance on this antenna project.

Bob
W5QCP

4388. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 01:36:03 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40d8de8d$0$430$5cbedd26@news.real-time.com>
Source record: 93043

About what I expected. If someone states something truthfull in this group, no one responds. And it as a group you are all, even Roy, obviously subject to this. No one bothered to even think about what I originally said, or try to see the tongue in cheek.

I guess if you can't argue, it's no fun. I don't blame you all for that, but it is interesting to observe. And sad.

tom
K0TAR

Tom Ring wrote:

> I should have stated that more clearly. What I meant was, none of the
> elements of a yagi are resonant, except perhaps the driven element. My
> point was that the elements except the driven one(s) must be above or
> below resonance, or the yagi isn't a yagi.
>
> I have also seen a commercial yagi with the driven element longer than
> the reflector, so it likely wasn't remotely near resonance. It was also
> a very poorly performing commercial yagi, but that's a different matter.
>
> tom
> K0TAR
>
> Roy Lewallen wrote:
>
>> My, we can sure learn a lot of new things about Yagis from this
>> newsgroup. Unfortunately, they're not true.
>>
>> I have a very high confidence in the ability of EZNEC to accurately
>> model Yagi antennas. This is due to feedback from several professional
>> customers who have analyzed Yagis with EZNEC and tested the actual
>> antennas on test ranges.
>>
>> Let's take the EZNEC example file NBSYagi.EZ.
>>
>> If you change the driven element (wire 2) length from 2 * 54.875" to 2
>> * 54.56", you'll find that the feedpoint impedance is 11.53 - j0.0752
>> ohms -- it's resonant, and it's certainly functioning as a Yagi. The
>> pattern and gain are nearly identical to the original NBS design.
>>
>> Now, change the director (wire 3) length from 2 * 54.313" to 2 * 56".
>> This drops the gain from 9.68 dBi to 8.66 dBi, and lowers the
>> feedpoint resistance from 11.53 ohms to 7.849 ohms. The point of

>> maximum gain is obviously not the point of minimum feedpoint resistance.
>>
>> Anyone having an explanation for why the gain should be greatest when
>> the feedpoint resistance is minimum and why a Yagi can't work when
>> resonant should examine their explanations carefully in order to
>> uncover the flaws that are obviously present in the explanations.
>>
>> Roy Lewallen, W7EL
>>
>> Tom Ring wrote:
>>
>>> Ian White, G3SEK wrote:
>>>
>>>> Dave Shrader wrote:
>>>>
>>>>> If the Yagi is to be tuned for MAXIMUM gain, and that is the
>>>>> objective, then Ro will be the lowest value at resonance.
>>>>
>>>>
>>>>
>>>>
>>>>
>>>> That's an interesting assertion. Do you have further evidence for it?
>>>>
>>>>
>>>
>>> Yes, quite interesting, since a yagi is _not_ resonant in the design
>>> frequency range, otherwise it couldn't work.
>>>
>>> Tom
>>> K0TAR

4389. Laptop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 02:26:55 UTC
From: aunwin <aunwin@insightbb.com>
Message-ID: <OT5Cc.91318$eu.25215@attbi_s02>
Source record: 93044

Per your request here is the E Mail The cost to be around $1000. I suppose
you should get it unless there is a tax advantage to send to me first since
I will want the AO Pro program put on and you have the disc.It may save some
money if I buy or you buy for an out of state person so we saqve on taxes.
Take your time
Dad

4390. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 02:43:35 UTC
From: richardharrison@webtv.net
Message-ID: <29285-40D8EE57-613@storefull-3253.bay.webtv.net>
Source record: 93045

Tom, K0TAR wrote:
"What I meant was, none of the elements of a yagi are resonant, except perhaps the driven element."

That`s usually right. The reflector is lengthened and directors are shortened to conveniently produce phase relations which determine reinforcement or repression in directions as desired.

However, this is not the only way. Commercial broadcast curtain antenna arrays use parasitic elements which have the same length as the driven elements in some instances. Short-circuit stubs repalace drive lines in the parasitic elements, and these are adjusted for the desired phasing instead of adjusting element lengths.

Best regards, Richard Harrison, KB5WZI

4391. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 03:25:07 UTC
From: richardharrison@webtv.net
Message-ID: <29286-40D8F813-216@storefull-3253.bay.webtv.net>
Source record: 93046

Paul, VK3DIP wrote:
"Is there a better way (which doesn`t involve large sums of money) to measure antenna impedance at say 146 MHz?"

Use a line of any number of 1/2-wavelengths to connect the antenna to a VHF admittance or impedance bridge complete with signal source and bridge detector (VHF receiver). Measure away and record your results.

I agree with most of G4FGQ`s response. You can expect the antenna`s environment to affect its performance and impedance. I suggest the transmission line which is a minimum integral number of 1/2-wavelengths as required to connect your bridge to the antenna as an alternative to Reg`s ladder. A 1/2-wave line repeats the impedance connected to its end.

Best regards, Richard Harrison, KB5WZI

4392. Re: Laptop

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 03:41:04 UTC
From: aunwin <aunwin@insightbb.com>
Message-ID: <kZ6Cc.97869$0y.68157@attbi_s03>
Source record: 93047

So that's where the E mail went!
Sorry about that
Art
"aunwin" <aunwin@insightbb.com> wrote in message
news:OT5Cc.91318$eu.25215@attbi_s02...
> Per your request here is the E Mail The cost to be around $1000. I suppose
> you should get it unless there is a tax advantage to send to me first
since
> I will want the AO Pro program put on and you have the disc.It may save
some
> money if I buy or you buy for an out of state person so we saqve on taxes.
> Take your time
> Dad
>
>

4393. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 06:26:41 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40D922A1.416B@wt.net>
Source record: 93048

Bob Wood wrote:
>
> V Beam antenna question
>
> I want to put up a 40M V Beam antenna to enhance communication in one
> direction only. From the limited design information that I have found, I am
> thinking of 3/4 wavelength on each side with a horizontal separation angle
> of either 72 degrees or 120 degrees. I have seen both separation angles
> listed as optimum for maximum gain. I was wondering if anyone knew for sure
> which angle would produce the best result. Also, and actually most
> important, I need to have some idea of what the feed point impedance might
> be. I can feed it with ladder line or good coax and a balun but I am not
> sure what balun to use or would it be better to use ladder line? I sure
> would appreciate any guidance on this antenna project.
>
> Bob
> W5QCP

A true V beam is a minimum of one wave per side. And that minimum is not
much of a V beam...I'd have to double check, but with 3/4 wave per leg,
IE: about the same as an extended double zepp, I think you would have
the most gain with it straight like a normal EDZ. appx 5.1 dbi
bidirectional. I bet your gain will drop off if you try to set it up
like a V beam. As far as the feed impedance, it will vary per band. Not
really a major issue. Just treat it like any other balanced antenna fed
with ladder line. If if tunes, fine. If not, you might need to vary tyhe
feedline length a bit. You could feed with coax for a 3/4 wave per leg
antenna, "also 1/4 wave per leg on whatever band.." , but it would be
better to use a ladder line for all band use. MK
--
http://web.wt.net/~nm5k

4394. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 06:49:27 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40D927F7.6A58@wt.net>
Source record: 93049

Brian Kelly wrote:
>
> Mark Keith <nm5k@wt.net> wrote in message news:<40D7B167.6459@wt.net>...
> > Brian Kelly wrote:
> >
> > >
> > > Center-fed dipole-based antennas don't need station or installation
> > > site RF grounds. Horizontally or vertically oriented. All end (base)
> > > fed verticals need RF gounds so don't use 'em in your situation.
> >
> > I've never needed an rf ground for a base fed half wave. A decoupling
> > section with radials is an option to reduce feedline radiation..Not
> > required to work though. MK
>
> You lost me Mark. You have a vertical half-wave wire fed at it's base.
> You have an unbalanced L/C network which matches the very high
> feedpoint impedance to, say, a random length of 50 ohm coax. What do
> you do with the coax braid and the ground side of the tuner?
>
> Brian w3rv

Using the usual "gamma loop" feed I generally prefer for those, the coax shield is connected to the "ground" side of the single turn coil. "appx 9-11 inches dia. for a 10m version" I usually make these from 3/8 tubing... That point is at ground potential as far as the mast, base support, etc..The other side of that coil is connected to the base of the radiator. The center conductor taps the single turn coil at the point for best match. A capacitor from ground to coil "hot" side is optional. In general you use about 50 pf for a 10m version. Double for 20m, double again for 40m, etc... I use a piece of coax for those. "open end, don't short" For 10m, it's only about a foot or so long...Look at a cushcraft 10m ringo. "model AR-10". They have PDF manuals on the web with pix..That is the same basic design I use. They also make 2m versions...BTW, I make these from tubing, and are self supporting. Rarely use wire...These antennas work quite well. Good 10m antenna...The higher, the better..Add decoupling, even better, but not required to work..MK
--
http://web.wt.net/~nm5k

4395. Re: Indoor antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 07:10:22 UTC
From: Aaron Jones <noemail@noemail.com>
Message-ID: <l79id091fatpb9842hjeol0p2ufnn0q5cl@4ax.com>
Source record: 93050

Bob P wrote:
>Anyone familiar with these full length roof vents on newer houses and
>re-roofs? Are they metal or plastic?

My roof vents are metal. But there are so many other things like electrical wiring, metal air ducts, cable TV lines, ect in the attic that wire vents are just one more thing in the hidden antenna pattern (what pattern)... ;)

>An outside antenna seems unlikely as it is a newer subdivision

Depends. Lots of ways to hide em. My roof peaks at about 30'. One of my antennas is made of enamel coated magnet wire that is virtually invisible when laying on top of my red tile roof.

>or a peak of the roof, indoor dipole.

They work too. I also use Hamstick dipoles in my garage attic. There is no reason why you shouldn't enjoy your hobby even in a HOA restricted area. I do. In fact my neighbors have yet to figure out I am a ham, which makes it nicer than my old place where I got blamed for everything...

4396. Re: Scanner sensitivity and path loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 11:07:47 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406230307.57b63a89@posting.google.com>
Source record: 93051

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:<I92Cc.10550$w07.4449@newsread2.news.pas.earthlink.net>...

> Not sure
> what you mean about the margin to make out audio. For FM singnals .5 uv
> should give you good audio with a trace of noise and at 1 uv it should be
> almost full quietning (for FM that is all the hissing noise should dissapear
> out of the audio) .

First of all, thanks for the info!

What I mean by margin is:

Transmit strength (dB) + Receiver sensitivity (dB) - path loss (dB) =
margin (dB)

If I understand what you're saying correctly, with a margin of 0 you
can still make out decent audio? I thought there'd still be too much
S/N ratio or not enough "signal" for the amp to work with in order to
get "hearable" audio at 0 margin?

Thanks again!
Dave

4397. Re: Glass mount antenna speaker interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 11:51:39 UTC
From: derswede@aol.comspam.com
Message-ID: <20040623075139.11581.00000392@mb-m11.aol.com>
Source record: 93052

<< I recently installed a RS glass mount antenna on my '96 dodge
Intrepid. The area I chose was near the bottom of the rear window. >>

First problem. Higher, higher, higher! I have one for APRS, it is installed as high as it can go on the side glass of the vehicle. It is also as far away from the car radio antenna as is possible. Antenna is thus in the clear to minimise interference.

The ONLY reason I used it is due to the dualband VHF/UHF on one side of the rear hatch, and the screwdriver on the other side (ran out of mount space!). The glass mount is a compromise antenna with lower efficiencies than a standard 1/4 or 5/8 wave deck mount.

That said, get a reinstall kit and mount it up as high as you can on the glass. It WILL work, just not that great.

A

4398. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 11:55:02 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40d96fa1$0$430$5cbedd26@news.real-time.com>
Source record: 93053

Richard Harrison wrote:

> That`s usually right. The reflector is lengthened and directors are
> shortened to conveniently produce phase relations which determine
> reinforcement or repression in directions as desired.
>
> However, this is not the only way. Commercial broadcast curtain antenna
> arrays use parasitic elements which have the same length as the driven
> elements in some instances. Short-circuit stubs repalace drive lines in
> the parasitic elements, and these are adjusted for the desired phasing
> instead of adjusting element lengths.
>

That's a nice trick. Of course that still means they aren't resonant since you just displaced the "center" of the element. Seems a good way for a broadcaster to be able to adjust the pattern if needed after construction.

I seem to remember an HF wire antenna project that used that method to go from driven plus reflector to driven plus director to get a reversible beam. I also remember a set of 5 slopers that were in the ARRL antenna book or handbook that could be steered.

Oh well, way off topic here now. cul

Tom
K0TAR

4399. Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 12:17:49 UTC
From: aa5qt@aol.com
Message-ID: <20040623081749.11581.00000395@mb-m11.aol.com>
Source record: 93054

For the first time in many years, I'm about to put up a 20 meter monobander on a tower. The XYL is asking questions I cannot answer, specifically relating to RF and birds. I wouldn't want to be a bird sitting on an element when a KW is supplied to it? Are my concerns valid?

Gary K5QT

4400. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 12:38:59 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <EReCc.6394$rf7.2908@lakeread02>
Source record: 93055

"AA5QT" <aa5qt@aol.com> wrote
> For the first time in many years, I'm about to put up a 20 meter
monobander on
> a tower. The XYL is asking questions I cannot answer, specifically
relating to
> RF and birds. I wouldn't want to be a bird sitting on an element when a
KW is
> supplied to it? Are my concerns valid?
>
> Gary K5QT

Your concerns, no. The birds, yes.

I push 1kw out of a 1/2 wave horizontal dipole and the birds never choose it as a resting place. Down near the ground, it hasn't impeded the population of several Finch, Cardinal, Northern Thrush and Robin families.

Jack
Virginia Beach, VA

4401. Re: Scanner sensitivity and path loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 12:42:55 UTC
From: achilles03@hotmail.com
Message-ID: <fef44ceb.0406230442.623cde19@posting.google.com>
Source record: 93056

"Ralph Mowery" <rmowery28146@earthlink.net> wrote in message
news:<I92Cc.10550$w07.4449@newsread2.news.pas.earthlink.net>...
> "David Harper" <achilles03@hotmail.com> wrote in message
> news:fef44ceb.0406220744.5ece04bc@posting.google.com...
> > I was wondering what's an accurate estimate for scanner sensitivity?
> > I've got a Uniden BC180, and the owner's manual doesn't list that
> > information. I was wondering what a good value would be to use in
> > order to do some path loss calculations. I've heard 1.0 uv is a good
> > conservative estimate. Is this too low?
> >
>
> The 1 uv is fine for the calculations. You may even be able to go as low as
> .5 uv . The lower the number the more sensitive the receiver . Not sure
> what you mean about the margin to make out audio. For FM singnals .5 uv
> should give you good audio with a trace of noise and at 1 uv it should be
> almost full quietning (for FM that is all the hissing noise should dissapear
> out of the audio) .

I just did some reading based on what you said. The sensitivity is
actually based on a minimum S/N ratio... and if I understand
correctly: if an audio signal comes in with a strength of 1.0uV and
the receiver sensitivity is 1.0uV, it will be understandable?

Thanks again!
Dave

4402. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 12:45:38 UTC
From: Jon Kåre Hellan <dev@null.com>
Message-ID: <tevfhizbm5.fsf@persaunet.uninett.no>
Source record: 93057

aa5qt@aol.com (AA5QT) writes:

> For the first time in many years, I'm about to put up a 20 meter monobander on
> a tower. The XYL is asking questions I cannot answer, specifically relating to
> RF and birds. I wouldn't want to be a bird sitting on an element when a KW is
> supplied to it? Are my concerns valid?
>
> Gary K5QT

I would expect them to get RF burns on their feet, and then stay away.

Jon Kï¿½re - LA4RT

4403. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 13:01:28 UTC
From: 'Doc <ltdoc@yahoo.com>
Message-ID: <LeydnTXTNMi04kTdRVn-ug@cwis.net>
Source record: 93058

Gary,
Given the number of beam antennas around and how long
they have been up, if it were really a valid consern, there
should be huge flocks of dead birds littering the yards of the
beam owners. The SPCA and the Audubon Society (sp)
SWAT teams would be breaking down doors, etc. It wouldn't
be pretty!
'Doc

4404. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 13:50:24 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d98b71_8@corp.newsgroups.com>
Source record: 93059

Richard Harrison wrote:
> Paul, VK3DIP wrote:
> "Is there a better way (which doesn`t involve large sums of money) to
> measure antenna impedance at say 146 MHz?"
>
> Use a line of any number of 1/2-wavelengths to connect the antenna to a
> VHF admittance or impedance bridge complete with signal source and
> bridge detector (VHF receiver). Measure away and record your results.

I've been out of town and not following this thread. Here's what I do
for HF - knowing the length, VF, and attenuation factor of ladder-line.
Trim the laddder-line until the impedance looking into the ladder-line
is purely resistive. Draw the corresponding SWR circle on a Smith Chart.
Using the line-attenuation factor, draw an SWR circle outside of that
one. The antenna feedpoint impedance lies on that outside SWR circle.
Calculate the exact electrical length of the length of ladder-line
being used and use the Smith Chart to track from the purely resistive
feedpoint impedance back to the antenna feedpoint impedance on the
largest SWR circle.

Of course, the accuracy of the final indirect measurement depends upon
the accuracy of all the parameters used in the calculation. My accuracy
has always been good enough for what I needed.

I've never done it with coax but I assume the same principles apply.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

4405. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 13:56:19 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40d98cd4_8@corp.newsgroups.com>
Source record: 93060

AA5QT wrote:
> For the first time in many years, I'm about to put up a 20 meter monobander on
> a tower. The XYL is asking questions I cannot answer, specifically relating to
> RF and birds. I wouldn't want to be a bird sitting on an element when a KW is
> supplied to it? Are my concerns valid?

I've tried to chase Starlings away by applying 100W to my 20m rotatable
dipole. Some fly away. Some just sit there and tingle, jumping around
and ruffling their feathers. On my antenna, the only place guaranteed to
chase away a bird is the feedpoint with one foot on each side.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4406. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 14:45:08 UTC
From: richardharrison@webtv.net
Message-ID: <17104-40D99774-56@storefull-3253.bay.webtv.net>
Source record: 93062

Tom, K0TAR wrote:
"Of course that still means thery aren`t resonant aince you just displaced the "center" of the element."

Kraus describes adjustment of the phase between driven and parasitic elements on page 320 of his 1950 edition of "Antennas":

"The parasitic element may have a fixed length of 1/2 wavelength, the tuning being accomplished by inserting a lumped reactance in series with the antenna at its center point."

In my case, the "lumped reactance" was a tuned stub adjusted to the desired phase difference between parasitic and driven elements as indicated by an RCA WM-30A phase monitor.

Best regards, Richard Harrison, KB5WZI

4407. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 14:54:55 UTC
From: Da Shadow <DAS@cat.net>
Message-ID: <3RgCc.1556$hX6.1427@fed1read01>
Source record: 93061

Maybe get a rent a hawk or the duty owl.

Seriously -- the Ham stores sell a good looking owl to put on towers --
don't if they scare away the other boids -- but they look good (;-)

--
Lamont Cranston

The Shadow Knows
"Cecil Moore" <w5dxp@hotmail.com> wrote in message
news:40d98cd4_8@corp.newsgroups.com...
> AA5QT wrote:
> > For the first time in many years, I'm about to put up a 20 meter
monobander on
> > a tower. The XYL is asking questions I cannot answer, specifically
relating to
> > RF and birds. I wouldn't want to be a bird sitting on an element when a
KW is
> > supplied to it? Are my concerns valid?
>
> I've tried to chase Starlings away by applying 100W to my 20m rotatable
> dipole. Some fly away. Some just sit there and tingle, jumping around
> and ruffling their feathers. On my antenna, the only place guaranteed to
> chase away a bird is the feedpoint with one foot on each side.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4408. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 15:20:57 UTC
From: Chuck <no.spam@no.spam.net>
Message-ID: <40d99efd_3@127.0.0.1>
Source record: 93063

Woudn't the bird consitute but a tiny capacitance to ground and thus not experience an RF burn of consequence?

"Cecil Moore" <w5dxp@hotmail.com> wrote in message news:40d98cd4_8@corp.newsgroups.com...
> AA5QT wrote:
> > For the first time in many years, I'm about to put up a 20 meter monobander on
> > a tower. The XYL is asking questions I cannot answer, specifically relating to
> > RF and birds. I wouldn't want to be a bird sitting on an element when a KW is
> > supplied to it? Are my concerns valid?
>
> I've tried to chase Starlings away by applying 100W to my 20m rotatable
> dipole. Some fly away. Some just sit there and tingle, jumping around
> and ruffling their feathers. On my antenna, the only place guaranteed to
> chase away a bird is the feedpoint with one foot on each side.
> --
> 73, Cecil http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4409. Re: Unity Gain?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 15:47:23 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <fChCc.128342$0X2.5672800@twister.tampabay.rr.com>
Source record: 93064

in my opnion unity gain is any antenna with ZERO gain such as a dipole
or a discone

Dan Richardson < wrote:
> From time to time an antenna manufactures will state that an antenna
> has "unity gain". It is my understanding that this term is used for
> describing antennas used in mobile applications and is referenced to
> the gain of a quarter-wave whip.
>
> Does anyone know of any instances where this term is used otherwise?

4410. FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 15:48:19 UTC
From: StrikitRich <strikitrich@nospam.net>
Message-ID: <strikitrich-3A08E7.11481923062004@comcast.dca.giganews.com>
Source record: 93065

Pardon me if this is the wrong place to ask this question, but hopefully I can get an answer here.

What would be the best type of antenna for receiving FM radio stations up 80 miles away(Tampa to the north, Fort Myers to the south)? The antenna would be mounted outside, up to 30' high. Would an omni-directional antenna work, or should I stick with a directional?

My TV antenna is up about 55', but the amplifier has the trap on and I can only get the strongest of the signals.

Thanks in advance, SR1

4411. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 15:59:07 UTC
From: richardharrison@webtv.net
Message-ID: <19023-40D9A8CB-15@storefull-3258.bay.webtv.net>
Source record: 93066

Cecil, W5DXP wrote:
"Trim the ladder-line until the impedance looking into the ladder-line is purely resistive."

Sure. The line is purely resistive at resonant lengths where the power factor is one. No reactance. A 1/2-wave is a resonant length.

Charlie Wright, an A.D. Ring and Accociates engineer used to drive our German engineers crazy, telling them that slopes on the autobahn used coble stones because they didn`t know how to pour concrete on an incline.

Charlie also got to a group using an RCA WM-30A phase monitor to tune parasiitic elements in a curtain array. Most medium-wave directional stations at the time used a WM-30A as a phase monitor, just as shortwave stations used them for tune-up.

Charlie had used the monitor for years and knew it had an underated resistor which sometimes failed. The group had upended the chassis and Charlie offered to help troubleshoot. The Germans acquiesced.

Charlie asked for voltage measurements from unrelated parts of the circuit, took out his slide rule and feigned a few calculations. Then, Charlie pointed to the defective resistor and said: "Change that one."

The crowd shook its collective heads but complied. The monitor miraculously sprang to life again. Charlie chuckled to himself as he left the incredulous crowd.

Best regards, Richard Harrison, KB5WZI

4412. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 16:06:00 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0406230806.54e7d40a@posting.google.com>
Source record: 93067

Mark Keith <nm5k@wt.net> wrote in message news:<40D927F7.6A58@wt.net>...
> Brian Kelly wrote:
> >
> > Mark Keith <nm5k@wt.net> wrote in message news:<40D7B167.6459@wt.net>...
> > > Brian Kelly wrote:
> > >
> > > >
> > > > Center-fed dipole-based antennas don't need station or installation
> > > > site RF grounds. Horizontally or vertically oriented. All end (base)
> > > > fed verticals need RF gounds so don't use 'em in your situation.
> > >
> > > I've never needed an rf ground for a base fed half wave. A decoupling
> > > section with radials is an option to reduce feedline radiation..Not
> > > required to work though. MK
> >
> > You lost me Mark. You have a vertical half-wave wire fed at it's base.
> > You have an unbalanced L/C network which matches the very high
> > feedpoint impedance to, say, a random length of 50 ohm coax. What do
> > you do with the coax braid and the ground side of the tuner?
> >
> > Brian w3rv
>
> Using the usual "gamma loop" feed I generally prefer for those, the coax
> shield is connected to the "ground" side of the single turn coil. "appx
> 9-11 inches dia. for a 10m version" I usually make these from 3/8
> tubing... That point is at ground potential as far as the mast, base
> support, etc..The other side of that coil is connected to the base of
> the radiator. The center conductor taps the single turn coil at the
> point for best match. A capacitor from ground to coil "hot" side is
> optional. In general you use about 50 pf for a 10m version. Double for
> 20m, double again for 40m, etc... I use a piece of coax for those. "open
> end, don't short" For 10m, it's only about a foot or so long...Look at a
> cushcraft 10m ringo. "model AR-10". They have PDF manuals on the web
> with pix..That is the same basic design I use. They also make 2m
> versions...BTW, I make these from tubing, and are self supporting.
> Rarely use wire...These antennas work quite well. Good 10m antenna...The
> higher, the better..Add decoupling, even better, but not required to
> work..MK

OK, I see what you're up to. Over the years I've had a plain Ringo and
two Ranger versions for 2m and yes they work well. They do tend to
induce a lot of RF in the feedline though.

Tnx,

w3rv

4413. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 16:23:59 UTC
From: DJboutit <Recordking@Hotmail.com>
Message-ID: <z8iCc.2554$A44.2501@newssvr23.news.prodigy.com>
Source record: 93068

Get a APS-13 antenna best fm receive antenna kinda price though
http://www.starkelectronic.com/aps13.htm. I have read a few user reviews on
it before and everone says it is the best fm receiveing antenna they have
ever used.
For info on reviews check out this link.
http://ecoustics.audioreview.com/pscAudioReview/Other/Tuners/APS-13,FM/PRD_1
21215_1596crx.aspx

4414. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 16:32:49 UTC
From: * <*@*.com>
Message-ID: <2jtpkmF15s351U1@uni-berlin.de>
Source record: 93069

directional,
a low cost Radio Shack TV at least antenna medium gain,
80 miles is over the horizon, and can be tough anyway.

"StrikitRich" <strikitrich@nospam.net> wrote in message
news:strikitrich-3A08E7.11481923062004@comcast.dca.giganews.com...
> Pardon me if this is the wrong place to ask this question, but hopefully
> I can get an answer here.
>
> What would be the best type of antenna for receiving FM radio stations
> up 80 miles away(Tampa to the north, Fort Myers to the south)? The
> antenna would be mounted outside, up to 30' high. Would an
> omni-directional antenna work, or should I stick with a directional?
>
> My TV antenna is up about 55', but the amplifier has the trap on and I
> can only get the strongest of the signals.
>
>
> Thanks in advance, SR1

4415. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 16:37:18 UTC
From: StrikitRich <strikitrich@nospam.net>
Message-ID: <strikitrich-695BE9.12371823062004@comcast.dca.giganews.com>
Source record: 93070

In article <z8iCc.2554$A44.2501@newssvr23.news.prodigy.com>,
"DJboutit" <Recordking@Hotmail.com> wrote:

> Get a APS-13 antenna best fm receive antenna kinda price though
> http://www.starkelectronic.com/aps13.htm. I have read a few user reviews on
> it before and everone says it is the best fm receiveing antenna they have
> ever used.
> For info on reviews check out this link.
> http://ecoustics.audioreview.com/pscAudioReview/Other/Tuners/APS-13,FM/PRD_1
> 21215_1596crx.aspx

At 207" in boom length, it may be a bit of overkill for my needs. The
antenna will be fixed, which is why I was wondering about
omni-directional ones.

4416. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 17:02:16 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <10djdsrpf5v1j60@corp.supernews.com>
Source record: 92971

Dear Bob Wood W5QCP:
Nice to see a name and call on a question.
Might you be asking about legs of 3 to 4 wavelengths on 40 meters?
Assuming that is the case, what is optimum depends on height and desired
take off angle (TOA) of the max. radiation.
Most often, three masts of a certain height are available and one
needs to deal with the limitations that result.
What are the expected heights of the masts? 73 Mac N8TT

Note that with one more mast, you will have a rhombic antenna, which is
a little better behaved and much more easy to terminate.
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Bob Wood" <bobw@zianet.com> wrote in message
news:10dhlq1m3vs6be7@corp.supernews.com...
> V Beam antenna question
>
> I want to put up a 40M V Beam antenna to enhance communication in one
> direction only. From the limited design information that I have
found, I am
> thinking of 3/4 wavelength on each side with a horizontal separation
angle
> of either 72 degrees or 120 degrees. I have seen both separation
angles
> listed as optimum for maximum gain. I was wondering if anyone knew
for sure
> which angle would produce the best result. Also, and actually most
> important, I need to have some idea of what the feed point impedance
might
> be. I can feed it with ladder line or good coax and a balun but I am
not
> sure what balun to use or would it be better to use ladder line? I
sure
> would appreciate any guidance on this antenna project.
>
> Bob
> W5QCP
>
>

4417. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 17:07:52 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40D9B8E8.6060100@psu.edu>
Source record: 92972

Yuri Blanarovich wrote:
>> What I have become stuck on is the claim of constant current along the
>>length of the antenna - or 80 percent as claimed. How does this work? I
>>don't profess to know much about these matters, but if the current stays
>>the same, then the voltage must too?
>>
>> And i still can't figure out how such an efficient antenna "melts". 8^)
>>
>> - Mike KB3EIA -
>>
>>
>>
>
>
> If they believe W8JI et al claim that current through the loading coil is
> constant, then they would claim that they made the current constant. More on
> the subject check
> http://www.k3bu.us/loadingcoils.htm

That work seems about right to me!

- Mike KB3EIA

4418. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 17:15:46 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <10djem6c4s1eped@corp.supernews.com>
Source record: 92973

They can be wonderful engineers, however.....
My 999 story: A major automobile manufacturer tasked their German branch to design a new transmission for a "sporty" car. Prototype arrived at the proving grounds and looked anemic. Transmission was placed into prototype car. Everyone went to see the first use. Driver wound up the engine to red line, and loud 9 9 9 was heard as clutch was engaged and shrapnel was produced. US engineers turned to German engineers and said: "We told you how it would be used - now believe us."
An antenna system was used to send data back for analysis. 73 Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

"Richard Harrison" <richardharrison@webtv.net> wrote in message news:19023-40D9A8CB-15@storefull-3258.bay.webtv.net...
> Cecil, W5DXP wrote:
<snip>
>
> Charlie Wright, an A.D. Ring and Accociates engineer used to drive our
> German engineers crazy, telling them that slopes on the autobahn used
> coble stones because they didn`t know how to pour concrete on an
> incline.
>
> Charlie also got to a group using an RCA WM-30A phase monitor to tune
> parasiitic elements in a curtain array. Most medium-wave directional
> stations at the time used a WM-30A as a phase monitor, just as shortwave
> stations used them for tune-up.
>
> Charlie had used the monitor for years and knew it had an underated
> resistor which sometimes failed. The group had upended the chassis and
> Charlie offered to help troubleshoot. The Germans acquiesced.
>
> Charlie asked for voltage measurements from unrelated parts of the
> circuit, took out his slide rule and feigned a few calculations. Then,
> Charlie pointed to the defective resistor and said: "Change that one."
>
> The crowd shook its collective heads but complied. The monitor
> miraculously sprang to life again. Charlie chuckled to himself as he
> left the incredulous crowd.
>
> Best regards, Richard Harrison, KB5WZI

>

4419. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 17:17:07 UTC
From: Bob Wood <bobw@zianet.com>
Message-ID: <10djeonn3kfk85c@corp.supernews.com>
Source record: 92974

Thanks for the comments Mark. I do appreciate your taking time to give me some advice. I only have a limited space around my home so can't put up a one wave per side. I am currently using a sloping dipole and doing fairly well but need to improve the reception to cover Texas, Arkansas, Oklahoma and Louisiana for Navy MARS region nets. I saw an article somewhere that indicated a V Beam 3/4 wave on a side would provide 3 dB gain over a dipole in one direction. I will have to research it some more but it is really difficult to find information on V Beams on the net. If you do discover any more info I sure would appreciate you sharing it with me. Thanks again,
73, Bob

"Mark Keith" <nm5k@wt.net> wrote in message news:40D922A1.416B@wt.net...
> Bob Wood wrote:
> >
> > V Beam antenna question
> >
> > I want to put up a 40M V Beam antenna to enhance communication in one
> > direction only. From the limited design information that I have found,
I am
> > thinking of 3/4 wavelength on each side with a horizontal separation
angle
> > of either 72 degrees or 120 degrees. I have seen both separation angles
> > listed as optimum for maximum gain. I was wondering if anyone knew for
sure
> > which angle would produce the best result. Also, and actually most
> > important, I need to have some idea of what the feed point impedance
might
> > be. I can feed it with ladder line or good coax and a balun but I am
not
> > sure what balun to use or would it be better to use ladder line? I sure
> > would appreciate any guidance on this antenna project.
> >
> > Bob
> > W5QCP
>
> A true V beam is a minimum of one wave per side. And that minimum is not
> much of a V beam...I'd have to double check, but with 3/4 wave per leg,
> IE: about the same as an extended double zepp, I think you would have
> the most gain with it straight like a normal EDZ. appx 5.1 dbi
> bidirectional. I bet your gain will drop off if you try to set it up
> like a V beam. As far as the feed impedance, it will vary per band. Not
> really a major issue. Just treat it like any other balanced antenna fed
> with ladder line. If if tunes, fine. If not, you might need to vary tyhe
> feedline length a bit. You could feed with coax for a 3/4 wave per leg

> antenna, "also 1/4 wave per leg on whatever band.." , but it would be
> better to use a ladder line for all band use. MK
> --
> http://web.wt.net/~nm5k

4420. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 17:25:26 UTC
From: tdonaly@aol.com
Message-ID: <20040623132526.23881.00000522@mb-m28.aol.com>
Source record: 92975

Art wrote,
>
>Tom, I wouldn't be so quick in using the term " impossible" if I were
>you until the facts come out. He has already stated that he has a
>distributed load antenna which he referres to as a two dimensional
>helix, which I see as a meander line on a circuit board. This
>ofcourse, provides an antenna of very small size which has some
>drawbacks. But the inventor states that the design is a combination of
>known ideas which may well be a method of overcomming initial
>drawbacks. After all a University have placed themselves behind the
>inventor and most of us did not go to University on a platform of
>disbelieving our professors . Even if it all turns out to be a
>mistaken idea the majority of hams will learn from future interchange
>rather than tagging along with those who believe all is already
>known.Usually the best inventions are an amaqlgamation of all the good
>observations noted in otherwise bad ideas/inventions made by somebody
>who looks for every morsel that is new and is
>resourceful enough to connect the dots before it becomes obvious to
>the followers.It is rare that someting that comes along is totally new
>in its entirety.
>Regards
>Art
>

Hi Art,
he may very well have produced an antenna that works as
advertised. Time will tell. However, in evaluating the claims of anyone
who invents something new it is always advisable to compare those claims with
current theory before accepting them wholeheartedly. It isn't impossible to
make a small, useful, antenna - the small-in-terms-of-wavelength loop
is a case in point - but to make a small antenna with all the characteristics
of a large antenna strains the credibility. It sounds as if this gentleman
is trying to take advantage of the properties of the double-tuned circuit in
order to achieve a larger bandwidth while maintaining good efficiency.
If so, it's an interesting idea and I hope it works, but I'm not going to
get excited about it until I know more, such as, what happens to
the radiation pattern when the current in the top part of the
antenna is out of phase with the current in the bottom
part? Does it then radiate straight up, or does he have some
method of controlling the phase so it doesn't do this?
73,
Tom Donaly, KA6RUH

4421. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 17:28:32 UTC
From: Kees <PA8540@home.removeee-thisss.nl>
Message-ID: <lbfjd09u1bo8pbuhgoej172736dtk964tj@4ax.com>
Source record: 92976
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

On Tue, 22 Jun 2004 05:45:27 GMT, yea right <spam@spam.spam> wrote:

>On Tue, 22 Jun 2004 00:56:48 +0000, M1LCR wrote:
>
>> between 3.5 and 28 Mhz. In addition the T2FD has some attractive
>> properties in terms of noise reduction, which some long wires / dipoles
>> and ATU combinations are susceptible too.
>>
>
>I live in a suburb. My dipoles and long wires had so much noise that I
>hardly ever would listen to HF. Once I read about the noise immunity
>provided by a T2FD antenna, I constructed one to try. It was the best
>thing I could have done! It made HF livable in my high noise urban
>environment. I almost don't notice the noise I had before. I am able to
>pick up signals that my neighbor with a tri-band 3 element yagi is unable
>to hear due to his noise.
>
>I would recommend this design to anyone combating local QRM.
>

That's indeed what it is:
a very low-noise antenna.

Look at : http://members.home.nl/rita.kees/t2fdmake.html

for my "version ".

4422. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 17:34:30 UTC
From: tdonaly@aol.com
Message-ID: <20040623133430.23881.00000523@mb-m28.aol.com>
Source record: 92977

tom wrote,
>
>About what I expected. If someone states something truthfull in this
>group, no one responds. And it as a group you are all, even Roy,
>obviously subject to this. No one bothered to even think about what I
>originally said, or try to see the tongue in cheek.
>
>I guess if you can't argue, it's no fun. I don't blame you all for
>that, but it is interesting to observe. And sad.
>
>tom
>K0TAR
>

You can think of it this way, or more probably, you need to
work on your communication skills.
73,
Tom Donaly, KA6RUH

4423. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 17:53:40 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <qogjd05lis0u2alhlc0vkmug97hfmvmha9@4ax.com>
Source record: 92978

On Wed, 23 Jun 2004 11:17:07 -0600, "Bob Wood" <bobw@zianet.com>
wrote:

>Thanks for the comments Mark. I do appreciate your taking time to give me
>some advice. I only have a limited space around my home so can't put up a
>one wave per side. I am currently using a sloping dipole and doing fairly
>well but need to improve the reception to cover Texas, Arkansas, Oklahoma
>and Louisiana for Navy MARS region nets. I saw an article somewhere that
>indicated a V Beam 3/4 wave on a side would provide 3 dB gain over a dipole
>in one direction. I will have to research it some more but it is really
>difficult to find information on V Beams on the net. If you do discover any
>more info I sure would appreciate you sharing it with me.

Ten Tec sells a v-beam antenna. You can download the manual at
http://www.tentec.com/3402.PDF

It might be helpful as far as setup info goes.

Bob
k5qwg

Thanks again,
>73, Bob
>
>"Mark Keith" <nm5k@wt.net> wrote in message news:40D922A1.416B@wt.net...
>> Bob Wood wrote:
>> >
>> > V Beam antenna question
>> >
>> > I want to put up a 40M V Beam antenna to enhance communication in one
>> > direction only. From the limited design information that I have found,
>I am
>> > thinking of 3/4 wavelength on each side with a horizontal separation
>angle
>> > of either 72 degrees or 120 degrees. I have seen both separation angles
>> > listed as optimum for maximum gain. I was wondering if anyone knew for
>sure
>> > which angle would produce the best result. Also, and actually most
>> > important, I need to have some idea of what the feed point impedance
>might
>> > be. I can feed it with ladder line or good coax and a balun but I am
>not
>> > sure what balun to use or would it be better to use ladder line? I sure
>> > would appreciate any guidance on this antenna project.
>> >
>> > Bob

>> > W5QCP
>>
>> A true V beam is a minimum of one wave per side. And that minimum is not
>> much of a V beam...I'd have to double check, but with 3/4 wave per leg,
>> IE: about the same as an extended double zepp, I think you would have
>> the most gain with it straight like a normal EDZ. appx 5.1 dbi
>> bidirectional. I bet your gain will drop off if you try to set it up
>> like a V beam. As far as the feed impedance, it will vary per band. Not
>> really a major issue. Just treat it like any other balanced antenna fed
>> with ladder line. If if tunes, fine. If not, you might need to vary tyhe
>> feedline length a bit. You could feed with coax for a 3/4 wave per leg
>> antenna, "also 1/4 wave per leg on whatever band.." , but it would be
>> better to use a ladder line for all band use. MK
>> --
>> http://web.wt.net/~nm5k
>

4424. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 18:28:50 UTC
From: dplatt@radagast.org
Message-ID: <10djiv237c39b33@corp.supernews.com>
Source record: 92979

>Pardon me if this is the wrong place to ask this question, but hopefully
>I can get an answer here.
>
>What would be the best type of antenna for receiving FM radio stations
>up 80 miles away(Tampa to the north, Fort Myers to the south)? The
>antenna would be mounted outside, up to 30' high. Would an
>omni-directional antenna work, or should I stick with a directional?

Stick with a directional. You'll probably need a log-periodic to
handle the full width of the FM band - a Yagi/Uda would be great for a
single frequency but probably would not have the bandwidth necessary
to do a decent job across the whole band.

My TV/FM log-periodic at about 35' does a decent job of bringing in
stations from San Francisco (about 40 miles away). 80 miles may be
pushing it.

>My TV antenna is up about 55', but the amplifier has the trap on and I
>can only get the strongest of the signals.

You might want to consider changing over to an amplifier which doesn't
have a trap, or whose trap can be switched on and off, and just use
your existing antenna.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4425. Re: Unity Gain?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 18:29:11 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <2VjCc.825$EK5.729@bignews3.bellsouth.net>
Source record: 92980

Gain loosely refers to 'better than' .
If you have an antenna with 2.5 dbd gain then it has 2.5 db gain of a
'dipole' (the last 'd' in dbd). (good).
"Unity" is another way of saying 'one'.
"Unity gain" means its no better than whatever you're comparing it to - and
no worse.
Unity gain is good if the antenna has other redeeming attributes (like
being smaller or less noticeable).
Unity gain is not good if you're expecting it to outperform the antenna
you're comparing it to.

The term 'Unity Gain' is not 'reserved' for any particular type of antenna.

"Dan Richardson @arrl.net>" <<ChangeThisToCallSign> wrote in message
news:3v5jd0p8i6khm4dms81a7c51qkqrmmbdud@4ax.com...
> From time to time an antenna manufactures will state that an antenna
> has "unity gain". It is my understanding that this term is used for
> describing antennas used in mobile applications and is referenced to
> the gain of a quarter-wave whip.
>
> Does anyone know of any instances where this term is used otherwise?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.708 / Virus Database: 464 - Release Date: 6/18/2004

4426. Re: DLM Antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 18:31:30 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <40D9CC82.8080105@psu.edu>
Source record: 92981

Art Unwin KB9MZ wrote:
> Tom, I wouldn't be so quick in using the term " impossible" if I were
> you until the facts come out. He has already stated that he has a
> distributed load antenna which he referres to as a two dimensional
> helix, which I see as a meander line on a circuit board. This
> ofcourse, provides an antenna of very small size which has some
> drawbacks. But the inventor states that the design is a combination of
> known ideas which may well be a method of overcomming initial
> drawbacks. After all a University have placed themselves behind the
> inventor and most of us did not go to University on a platform of
> disbelieving our professors . Even if it all turns out to be a
> mistaken idea the majority of hams will learn from future interchange
> rather than tagging along with those who believe all is already
> known.Usually the best inventions are an amaqlgamation of all the good
> observations noted in otherwise bad ideas/inventions made by somebody
> who looks for every morsel that is new and is
> resourceful enough to connect the dots before it becomes obvious to
> the followers.It is rare that someting that comes along is totally new
> in its entirety.
> Regards
> Art
>
>
>
>
>
> tdonaly@aol.com (Tdonaly) wrote in message
news:<20040622142833.10883.00000209@mb-m25.aol.com>...
>
>>Mike wrote,
>>
>>>
>>> What I have become stuck on is the claim of constant current along the
>>>length of the antenna - or 80 percent as claimed. How does this work? I
>>>don't profess to know much about these matters, but if the current stays
>>>the same, then the voltage must too?
>>>
>>> And i still can't figure out how such an efficient antenna "melts". 8^)
>>>
>>> - Mike KB3EIA -
>>>
>>
>> Anyone can make a "constant current" dipole, just by making it small
>>enough in relation to the wavelength of the frequency it's to be used for.

>>Of course, as has been pointed out here many times, feeding such an antenna
>>would be difficult to impossible, and bandwidth would be small, but you can't
>>have everything.

Well, I suppose that I could have qualified that as an antenna that
works! 8^)

>> Some theorists in the late 1940's did some work on the fundamental limits of
>>small antennas. There are one or two papers available on the web if you search
>>for "small antennas" with google. People who think they can make a small (in
>>terms of a wavelength) single radiator antenna, with good efficiency, and a large
>>bandwidth, that doesn't have to resort to feedline radiation to achieve its aims,
>>would do well to read these papers before making themselves look silly by
>>claiming the impossible.

It would seem that way to me.

From the description, I got the visualization of a hollow tube, with
perhaps three main parts. A center conductor, which would be the helix.
outside of this would be a vertical wire running from top to bottom. I
would assume these to be ground wire, and serve as half of the capacitor
function. There might be some version of little hats attached to the
helix from top to bottom as the other part of the capacitor(s).

Will it work? "work" is so subjective.....

- Mike KB3EIA -

4427. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 18:43:07 UTC
From: WB2JKX <mycall-N0SPAM@arrl.net>
Message-ID: <%akCc.20731$OB3.7851@bgtnsc05-news.ops.worldnet.att.net>
Source record: 92982

Chuck <no.spam@no.spam.net> wrote in message news:40d99efd_3@127.0.0.1...
> Woudn't the bird consitute but a tiny capacitance to ground and thus not
> experience an RF burn of consequence?
>
>
>
After all, birds sit on high voltage distribution lines with no ill effects.
At some point, I guess, corona leakage becomes a factor. You don't see them
sitting on the 100kv+ stuff.

4428. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 18:45:12 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <WPSdnfmPls8lUkTdRVn_iw@comcast.com>
Source record: 92983

"StrikitRich" <strikitrich@nospam.net> wrote in message
news:strikitrich-3A08E7.11481923062004@comcast.dca.giganews.com...
> Pardon me if this is the wrong place to ask this question, but hopefully
> I can get an answer here.
>
> What would be the best type of antenna for receiving FM radio stations
> up 80 miles away(Tampa to the north, Fort Myers to the south)? The
> antenna would be mounted outside, up to 30' high. Would an
> omni-directional antenna work, or should I stick with a directional?
>
> My TV antenna is up about 55', but the amplifier has the trap on and I
> can only get the strongest of the signals.
>
>
> Thanks in advance, SR1

What do you have now? A directional antenna will not work N and S unless you rotate it. Off the back it will be worse than a dipole. If the TV antenna is on a rotator, it sure would be nice to get rid of the trap, unless there is some station very close to you. Before you spend a lot of money, try a dipole running East and West. 80 miles is beyond normal range, and probably nothing will give you a good signal all the time.

Tam/WB2TT

4429. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 18:53:28 UTC
From: StrikitRich <strikitrich@nospam.net>
Message-ID: <strikitrich-680C9E.14532823062004@comcast.dca.giganews.com>
Source record: 92984

In article <10djiv237c39b33@corp.supernews.com>,
dplatt@radagast.org (Dave Platt) wrote:

> You might want to consider changing over to an amplifier which doesn't
> have a trap, or whose trap can be switched on and off, and just use
> your existing antenna.

I have to use the trap, or I lose a couple of stations. The amplifier is 50'+ high, and scurrying up and down the tower isn't feasible. Range is actually 60 miles north and 40 south.

At this point, I'm thinking of strapping a log-periodic onto the side of my TV tower. If I mounted it to the same mast as the TV antenna I can use the rotor, but this will block my access to the TV antenna.

SR1

4430. Re: Glass mount antenna speaker interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 19:18:40 UTC
From: kbozek@yahoo.com
Message-ID: <506a3e3b.0406231118.21a4ab4e@posting.google.com>
Source record: 92985

I installed a glass mount for day to day since the terrain is flat and repeater coverage drops off so efficiency is not an issue. I also wanted to get the car in a nd out of the garage and the antenna is a dual band antenna.

For better performance, I used a half wave.

Still getting the thing off of the glass and moving it is the current concern.

Keith

4431. Re: Glass mount antenna speaker interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 20:07:00 UTC
From: nick smith <NickS@ntlworld.com>
Message-ID: <LfmCc.202$ee6.167@newsfe5-gui.server.ntli.net>
Source record: 92986

> dual band antenna.
>
> For better performance, I used a half wave.
>
> Still getting the thing off of the glass and moving it is the current
> concern.
>
(if you'll pardon the pun - ho ho ho)

> Keith

4432. Re: Glass mount antenna speaker interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 20:21:34 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <10djq79frk1k9c3@corp.supernews.com>
Source record: 92988

removing a glass mount antenna is easy
razor blade
it's drilling a hole in the roof of your car that's hard

I did it, and I'm proud to admit it
think of it as marrying the vehicle, unless you sell it to another ham
at 90,000 miles my Durango sports a 200 watt Kenwood (NO TUNER!!)
and still has the original brakes (I don't stop much)

plus a Kenwood 742 on 144, 222 and 440
with a Comet tri-bander amid the roof, a Tarheel and 103" whip on the right
hip for low HF
(with a toroidal transformer that gives 50 ohms resistive on 20, baby)
and a Hi-Q that tops at 6 meters on the left hip
I also have a humongous Hi-Q for 160-80 when needed
what fun
73
H.
NQ5H

"nick smith" <NickS@ntlworld.com> wrote in message
news:LfmCc.202$ee6.167@newsfe5-gui.server.ntli.net...
> > dual band antenna.
> >
> > For better performance, I used a half wave.
> >
> > Still getting the thing off of the glass and moving it is the current
> > concern.
> >
> (if you'll pardon the pun - ho ho ho)
>
>
> > Keith
>
>

4433. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 20:27:24 UTC
From: William Mutch <wcm1@NOSPAM.cornell.edu>
Message-ID: <MPG.1b43b1b388d6d0039897a9@newsstand.cit.cornell.edu>
Source record: 92987

In article <strikitrich-3A08E7.11481923062004@comcast.dca.giganews.com>,
strikitrich@nospam.net says...
> Pardon me if this is the wrong place to ask this question, but hopefully
> I can get an answer here.
>
> What would be the best type of antenna for receiving FM radio stations
> up 80 miles away(Tampa to the north, Fort Myers to the south)? The
> antenna would be mounted outside, up to 30' high. Would an
> omni-directional antenna work, or should I stick with a directional?
>
> My TV antenna is up about 55', but the amplifier has the trap on and I
> can only get the strongest of the signals.
>
>
> Thanks in advance, SR1
>
At that range you will probably need *both* more altitude and a
high gain directional antenna to get full limiting on FM. If you want
both directions for both Tampa and Fort Meyers you will need either a
rotator or (maybe cheaper) two separate yagi's.
If you are very close to the geodesic connecting Tampa and Fort
Meyers an elegant solution would be to homebrew a sharp bidirectional
coalinear array.

4434. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 20:46:02 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <cbcqahlqs1@newshost.mot.com>
Source record: 92989

"Bob Wood" <bobw@zianet.com> wrote in message
news:10djeonn3kfk85c@corp.supernews.com...
> Thanks for the comments Mark. I do appreciate your taking time to give me
> some advice. I only have a limited space around my home so can't put up a
> one wave per side. ...I saw an article somewhere that
> indicated a V Beam 3/4 wave on a side would provide 3 dB gain over a
dipole
> in one direction.

While, classically, V beams have longer sides, I do know that a 3/4
vertical W/ground plane has a major lobe about 50 degrees above the horizon.
There was an antenna described by Inagaki (sp) some years back using this
characteristic to advantage with a corner reflector to obtain something like
18 dB gain and a nice 50 ohm Z. It also had a considerable minor lobe at
the horizon - obviously the main lobe remnant from "when it was a 1/4 wave",
so to speak.

If this can be generalized to a configuration where the "ground plane half"
of the antenna is supplied by another 3/4 wave element, then the V angle
would be about 100 degrees to get the two lobes to coincide. Modeling with
EZNEC should be easy...then there's the "how high is it" issue.

73, Steve

4435. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 21:01:23 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <cbcr7b$m0q$1@newshost.mot.com>
Source record: 92990

"WB2JKX" <mycall-N0SPAM@arrl.net> wrote in message
news:%akCc.20731$OB3.7851@bgtnsc05-news.ops.worldnet.att.net...
>
> Chuck <no.spam@no.spam.net> wrote in message news:40d99efd_3@127.0.0.1...
> > Woudn't the bird consitute but a tiny capacitance to ground and thus not
> > experience an RF burn of consequence?

Let's see here...
First, The bird must have some fundamental capacitance to the rest of the known universe. lets take a stab and say it is 10pf since he is pretty far away from almost everything. I'm sure there is a formula for the capacitance of a 4 inch diameter sphere somewhere...
Second, Lets model this as 10pf to ground.
Now, what's the current through this 10pf at the tip of the antenna (assuming his foot-element contact resistance is well below the Xc)...We're at 20M, 15M or 10M, so, without resorting to math, Xc is pretty low, in general terms. Hmmm could be substantial even at 100W, no?
Sounds like his poor feet could indeed get enough to make life difficult.

> After all, birds sit on high voltage distribution lines with no ill
effects.
> At some point, I guess, corona leakage becomes a factor. You don't see
them
> sitting on the 100kv+ stuff.

Completely different situation due to the 60 HZ. The 10pf would lead to negligible current... "Just don't get one foot on each wire, Son. Your Unkle Tweety did that and there was a loud pop and he was gone in a bright flash. Some feathers and a bad smell was all that remained."

"On the other hand, son, getting to the top of one of those really high man made trees with wires and your feathers'll all stand on end! Its really cool! Just don't let your mother catch you doing that."

--
Steve N, K,9;d, c. i My email has no u's.

4436. Re: Scanner sensitivity and path loss?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 22:56:00 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <4UnCc.15497$Wr.7056@newsread1.news.pas.earthlink.net>
Source record: 92991

> I just did some reading based on what you said. The sensitivity is
> actually based on a minimum S/N ratio... and if I understand
> correctly: if an audio signal comes in with a strength of 1.0uV and
> the receiver sensitivity is 1.0uV, it will be understandable?

If you are using FM then you will see a specification of say .5uv sinad or .7 uv for 20 db quieting. Usually that is about the same real world sensitivity unless I have it backwards for sinad and quieting. This level is for understandable audio. FM has a threshold level in that you get a bunch of noise with the audio comming out of the receiver tuil you hit the threshold point and then just a small aditional ammount of signal will clear up the audio. Any more signal will sound the same. You should hear the audio just fine at the above levels.

As far as the fade margin goes, the 0 level is what you get for the above sensitivity. YOu will need some ammount above this level to get a good signal all the time. At vhf and above for a distance of say 30 miles you will have a signal of so much for maybe 70 % of the time. To get to the 99 % or more you may need 20 or 30 db of fade margin. Maybe 2 % of the time you will have a stronger signal . All this is due to the way the atmosphere bends the signals.

4437. Re: Glass mount antenna speaker interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 23:03:12 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <ut2kd0hor9nie926ls6oass8ndnfo564ba@4ax.com>
Source record: 92992

On Wed, 23 Jun 2004 15:21:34 -0500, "H. Adam Stevens, NQ5H"
<NQ5H@ARRL.net> wrote:

>removing a glass mount antenna is easy
>razor blade
>it's drilling a hole in the roof of your car that's hard
>
>I did it, and I'm proud to admit it
>think of it as marrying the vehicle, unless you sell it to another ham
>at 90,000 miles my Durango sports a 200 watt Kenwood (NO TUNER!!)
>and still has the original brakes (I don't stop much)
>
Some use the NMO mount through a drilled hole.

This allows an easy switch to a cell antenna, and you turn a negative
(ham antenna installed through a hole) into a positive (cell phone
ready).

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4438. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 23:51:47 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40da179e$0$439$5cbedd26@news.real-time.com>
Source record: 92993

Tdonaly wrote:
>
> You can think of it this way, or more probably, you need to
> work on your communication skills.
> 73,
> Tom Donaly, KA6RUH
>
>
I've been here long enough to know that it's mostly that a lot of people here like to argue. And while I may need to work on my comm skills, it doesn't change that fact at all. Like I said, sad.

tom
K0TAR

4439. Re: Polarization conversion

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-23 23:57:13 UTC
From: dariolq@yahoo.com
Message-ID: <c92ca4d3.0406231557.37fcfd32@posting.google.com>
Source record: 92994

I think I just answered my own question...

dariolq@yahoo.com (Dario Lopez) wrote in message
news:<c92ca4d3.0406221034.fb294e2@posting.google.com>...
> Sorry Roy but I disagree. Well,... I agree with everything you said
> except for the "No" part and the conversion equations. You left out
> one part too. The RCP and LCP components of an elliptical wave are
> not equal otherwise they would collapse to a purely linear wave.
>
> Here's an example I came up with.
> Let E_elliptical = x + 2*j*y (left hand elliptical)
> E_elliptical = RCP + LCP
> = (a*x - j*a*y) + (b*x + j*b*y) = x + 2*j*y
> equating coefficients...
> a*x + b*x = x
> -j*a*y + j*b*y = 2*j*y ==> -a*(j*y) + b*(j*y) = 2*(j*y)
> or
> a + b = 1
> -a + b = 2
> solving for a & b
> a = -0.5
> b = 1.5
> so
> RCP = -0.5*x + j*0.5*y
> LCP = 1.5*x + j*1.5*y
>
> which clearly isn't
> Right Circ E = 0.5 * (Eh - j Ev)
> Left Circ E = 0.5 * (Eh + j Ev)
>
> Regards
>
> Dario
>
>
>
> Roy Lewallen <w7el@eznec.com> wrote in message
news:<10dcik648bpjc80@corp.supernews.com>...
> > No.
> >
> > All waves are elliptically polarized. Linear and circular are two
> > special cases of eliptically polarized waves. For analytical and
> > computational convenience, you can split any (elliptically polarized,
> > TEM) waves into two orthogonal components. One choice of two components

> > is vertical and horizontal linear. Another, equally valid, choice is
> > left and right circular. You can convert between one and the other with
> > the equations I provided.
> >
> > To be purely linearly polarized, Eh and Ev have to be in phase or 180
> > degrees out of phase. To be purely circular, Eh and Ev have to be equal
> > in magnitude, AND in phase quadrature. There is no combination of Eh and
> > Ev except both zero which result in the left or right circular
> > components to be zero. That is, a purely linearly polarized wave can
> > still be split into left and right circular components, and neither of
> > those components will be zero unless the field itself is zero. Likewise,
> > a purely circularly polarized field can be split into non-zero vertical
> > and horizontal linear components.
> >
> > Roy Lewallen, W7EL
> >
> > Dario Lopez wrote:
> > > Thanks Roy,
> > > But for those equations to be valid circular represenations,
> > > don't Eh & Ev need to be equal? As they stand, substituting "random"
> > > values for Eh & Ev will yield elliptically polarized waves.
> > >
> > > Dario
> > >
> > > Roy Lewallen <w7el@eznec.com> wrote in message
news:<10bbf105d7ulje7@corp.supernews.com>...
> > >
> > >>Left Circ E = 0.5 * (Eh + j Ev)
> > >>Right Circ E = 0.5 * (Eh - j Ev)
> > >>
> > >>where Eh and Ev are complex horizontal (phi) and vertical (theta)
> > >>linearly polarized E field components respectively. Left Circ E and
> > >>Right Circ E are of course also complex.
> > >>
> > >>You can find this in just about any antenna text. A text would probably
> > >>be a good investment if you're going to be digging into theory at this
> > >>level.
> > >>
> > >>Roy Lewallen, W7EL

4440. Re: Unity Gain?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 01:13:47 UTC
From: Dale Parfitt <par@parelectronics.com>
Message-ID: <fVpCc.25140$a61.13460@nwrddc01.gnilink.net>
Source record: 92995

"Dennis Kaylor" <k4oxg@tampabay.rr.com> wrote in message
news:fChCc.128342$0X2.5672800@twister.tampabay.rr.com...
> in my opnion unity gain is any antenna with ZERO gain such as a dipole
> or a discone
>

Which is it- a dipole or a discone. They do not have the same gain.

W4PO

4441. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 01:32:12 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <x%pCc.2756$vX6.2007@bignews2.bellsouth.net>
Source record: 92996

Birds also sit on high-tension lines carrying many amps at thousands of
volts.
Makes you wonder if it interferes with their built-in compass.

"AA5QT" <aa5qt@aol.com> wrote in message
news:20040623081749.11581.00000395@mb-m11.aol.com...
> For the first time in many years, I'm about to put up a 20 meter
monobander on
> a tower. The XYL is asking questions I cannot answer, specifically
relating to
> RF and birds. I wouldn't want to be a bird sitting on an element when a
KW is
> supplied to it? Are my concerns valid?
>
> Gary K5QT

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.708 / Virus Database: 464 - Release Date: 6/18/2004

4442. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 01:40:10 UTC
From: k9sqg@aol.com
Message-ID: <20040623214010.04762.00000398@mb-m10.aol.com>
Source record: 92997

Bob,

Unless the antenna is up in the clear, the full gain, F/B, and F/S will not be realized. You might be better off using 1/4 wavelength per side, rather than 3/4, and get the extra height instead. As to feeding it, open wire line will work quite well, over a broad frequency range, and be virtually lossless at even high SWRs negating the need for a balun and the associated problems. Just one ham's opinion.

73s,

Evan

4443. Re: Unity Gain?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 01:49:32 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <MqqCc.74927$2i5.40371@attbi_s52>
Source record: 92998

Hi Dale.

I've also seen the term mis-used by manufacturers when they mean omnidirectional. The antenna may have performance 20 dB down from isotropic, but they'll call it unity gain when it just has the same "gain" in all directions.

W4ZCB

4444. Degen Designs Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 01:51:21 UTC
From: G&R <spam@limbo.hell>
Message-ID: <rsqCc.29872$MU4.869422@news20.bellglobal.com>
Source record: 92999

We have updated our website to reflect new dealers.

www.degendesigns.com

Additionally, WiMo in Germany will be showing our BBQ at the up and coming hamfest.

Have fun on Field Day 2004 this weekend.

73,
Guenther VE3CVS
info@degendesigns.com
www.degendesigns.com

4445. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 02:36:51 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <X5rCc.2145$CR3.1423@lakeread03>
Source record: 93000

"WB2JKX" <mycall-N0SPAM@arrl.net> wrote in message
news:%akCc.20731$OB3.7851@bgtnsc05-news.ops.worldnet.att.net...
>
> Chuck <no.spam@no.spam.net> wrote in message news:40d99efd_3@127.0.0.1...
> > Woudn't the bird consitute but a tiny capacitance to ground and thus not
> > experience an RF burn of consequence?
> >
> >
> >
> After all, birds sit on high voltage distribution lines with no ill
effects.
> At some point, I guess, corona leakage becomes a factor. You don't see
them
> sitting on the 100kv+ stuff.
>
>
A more valid comparision is how much of a wavelength does the bird's two
feet shunt on the antenna wire? I'd suspect the problem would increase with
frequency; becoming very painful in the VHF regions.

Peter

4446. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 02:59:28 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <ksrCc.128988$0X2.5754909@twister.tampabay.rr.com>
Source record: 93001

i would suggest going to radio shack.com and they have a FM directional
antenna that is around $20-30 for it and its designed just for FM radio

StrikitRich wrote:
> Pardon me if this is the wrong place to ask this question, but hopefully
> I can get an answer here.
>
> What would be the best type of antenna for receiving FM radio stations
> up 80 miles away(Tampa to the north, Fort Myers to the south)? The
> antenna would be mounted outside, up to 30' high. Would an
> omni-directional antenna work, or should I stick with a directional?
>
> My TV antenna is up about 55', but the amplifier has the trap on and I
> can only get the strongest of the signals.
>
>
> Thanks in advance, SR1

4447. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 03:23:53 UTC
From: Tim Perry <timperryspammenot@adelphia.net>
Message-ID: <ks-dna8lcpf01EfdRVn-sQ@adelphia.com>
Source record: 93002

"Dennis Kaylor" <k4oxg@tampabay.rr.com> wrote in message
news:ksrCc.128988$0X2.5754909@twister.tampabay.rr.com...
> i would suggest going to radio shack.com and they have a FM directional
> antenna that is around $20-30 for it and its designed just for FM radio
>
> StrikitRich wrote:
> > Pardon me if this is the wrong place to ask this question, but hopefully
> > I can get an answer here.
> >
> > What would be the best type of antenna for receiving FM radio stations
> > up 80 miles away(Tampa to the north, Fort Myers to the south)? The
> > antenna would be mounted outside, up to 30' high. Would an
> > omni-directional antenna work, or should I stick with a directional?
> >
> > My TV antenna is up about 55', but the amplifier has the trap on and I
> > can only get the strongest of the signals.
> >
> >
> > Thanks in advance, SR1

i have found mounting these antennas vertically makes them longer lasting...
because birds land on them and bend the elements down when mounted
horizontally.

4448. Re: Unity Gain?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 03:32:09 UTC
From: Tim Perry <timperryspammenot@adelphia.net>
Message-ID: <qrOdnZB3IubB1kfdRVn-vw@adelphia.com>
Source record: 93003

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:MqqCc.74927$2i5.40371@attbi_s52...
> Hi Dale.
>
> I've also seen the term mis-used by manufacturers when they mean
> omnidirectional. The antenna may have performance 20 dB down from
isotropic,
> but they'll call it unity gain when it just has the same "gain" in all
> directions.
>
> W4ZCB
>

i thought the manufacture antenna gain specs were referenced to the
radiation from a heathkit cantenna which has been wrapped with chicken wire
then placed in a metal trash can :)

4449. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 03:35:46 UTC
From: gmz79@aol.comnospam
Message-ID: <20040623233546.11581.00000457@mb-m11.aol.com>
Source record: 93004

>strikitrich-3A08E7.11481923062004@comcast.dca.giganews.com>,
>strikitrich@nospam.net says...
>> Pardon me if this is the wrong place to ask this question, but hopefully
>> I can get an answer here.
>>
>> What would be the best type of antenna for receiving FM radio stations
>> up 80 miles away(Tampa to the north, Fort Myers to the south)? The
>> antenna would be mounted outside, up to 30' high. Would an
>> omni-directional antenna work, or should I stick with a directional?
>>
>> My TV antenna is up about 55', but the amplifier has the trap on and I
>> can only get the strongest of the signals.
>>
>>
>> Thanks in advance, SR1

My situation somewhat similar,watch TV stations 80 to 100+ miles
away, having a FM station 6 miles away and still wanting to listen
to FM stations 50 to 80miles away. I disabled the FM trap on the
mast mounted amp,split the sig in the house,than notched(trap) FM
from the line to the TV. DX tropo last year TV 800miles and FM about 400 miles.
73
Greg Z
to thine own sound be true
WG8Z

4450. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 03:49:10 UTC
From: tdonaly@aol.com
Message-ID: <20040623234910.19052.00000560@mb-m06.aol.com>
Source record: 93005

tom wrot,
>Message-id: <40da179e$0$439$5cbedd26@news.real-time.com>
>
>Tdonaly wrote:
>>
>> You can think of it this way, or more probably, you need to
>> work on your communication skills.
>> 73,
>> Tom Donaly, KA6RUH
>>
>>
>I've been here long enough to know that it's mostly that a lot of people
>here like to argue. And while I may need to work on my comm skills, it
>doesn't change that fact at all. Like I said, sad.
>
>tom
>K0TAR
>

What's wrong with wanting to argue? Argument, sometimes even violent argument,
has
been a hallmark of Western science for a long time. People who take everything

at face value, without question or disagreement, end up believing the strangest
things.
73,
Tom Donaly, KA6RUH

4451. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 03:55:22 UTC
From: tdonaly@aol.com
Message-ID: <20040623235522.19052.00000561@mb-m06.aol.com>
Source record: 93007

Hal wrote,
>
>Birds also sit on high-tension lines carrying many amps at thousands of
>volts.
>Makes you wonder if it interferes with their built-in compass.
>

There seems to be a general belief, around here (Belmont CA), that the changing
magnetic
fields from power lines retards children's development and lowers their
collective IQ. Has anyone noticed whether or not birds are acting
any more retarded than usual?
73,
Tom Donaly, KA6RUH

4452. Heavy Duty Antenna Wire, For Sale on ebay

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 03:55:26 UTC
From: marklinbuyer@yahoo.com
Message-ID: <9075af62.0406231955.5517ecea@posting.google.com>
Source record: 93006

I have listed 5 lots of NEW heavy duty antenna wire on ebay.

Please cleck on this link to see the listings and picture:
http://search.ebay.com/heavy-duty-antenna-wire_W0QQsosortpropertyZ1

I ship worldwide.

Thanks,

Bill

4453. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 04:00:54 UTC
From: Tim Perry <timperryspammenot@adelphia.net>
Message-ID: <G-udnQAZ9ZCKz0fd4p2dnA@adelphia.com>
Source record: 93008

"Steve Nosko" <suteuve.nosukowicuz@moutouroula.com> wrote in message
news:cbcr7b$m0q$1@newshost.mot.com...
>
> "WB2JKX" <mycall-N0SPAM@arrl.net> wrote in message
> news:%akCc.20731$OB3.7851@bgtnsc05-news.ops.worldnet.att.net...
> >
> > Chuck <no.spam@no.spam.net> wrote in message
news:40d99efd_3@127.0.0.1...
> > > Woudn't the bird consitute but a tiny capacitance to ground and thus
not
> > > experience an RF burn of consequence?
>
>
> Let's see here...
> First, The bird must have some fundamental capacitance to the rest of the
> known universe. lets take a stab and say it is 10pf since he is pretty
far
> away from almost everything. I'm sure there is a formula for the
> capacitance of a 4 inch diameter sphere somewhere...
> Second, Lets model this as 10pf to ground.
> Now, what's the current through this 10pf at the tip of the antenna
> (assuming his foot-element contact resistance is well below the
Xc)...We're
> at 20M, 15M or 10M, so, without resorting to math, Xc is pretty low, in
> general terms. Hmmm could be substantial even at 100W, no?
> Sounds like his poor feet could indeed get enough to make life difficult.
>
>
> > After all, birds sit on high voltage distribution lines with no ill
> effects.
> > At some point, I guess, corona leakage becomes a factor. You don't see
> them
> > sitting on the 100kv+ stuff.
>
> Completely different situation due to the 60 HZ. The 10pf would lead to
> negligible current... "Just don't get one foot on each wire, Son. Your
> Unkle Tweety did that and there was a loud pop and he was gone in a bright
> flash. Some feathers and a bad smell was all that remained."
>
> "On the other hand, son, getting to the top of one of those really high
man
> made trees with wires and your feathers'll all stand on end! Its really
> cool! Just don't let your mother catch you doing that."
>

i havent noticed a problem with injured birds on the broadcast towers. FMs up to 100,000 W ERP. (about 14,000 W per bay in my case).
5,000 W AM towers both non and directional including top loaded arrays. not a problem either (in fact i have had birds nest in them)

I have one site that uses open wire transmission lines to feed a 5 tower array... 10.4 amps of RF at the common point. up to 10 amps of base current. located in a wildlife refuge. still no birds frying themselves.

now i have been burnt a few times working on this thing... maybe it goes to show that birds ARE smarter then radio engineers.

4454. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 04:06:06 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40DA532E.67B9@wt.net>
Source record: 93009

Bob Wood wrote:
>
> Thanks for the comments Mark. I do appreciate your taking time to give me
> some advice. I only have a limited space around my home so can't put up a
> one wave per side. I am currently using a sloping dipole and doing fairly
> well but need to improve the reception to cover Texas, Arkansas, Oklahoma
> and Louisiana for Navy MARS region nets.

Where are you now? Are they all in the same direction?

I saw an article somewhere that
> indicated a V Beam 3/4 wave on a side would provide 3 dB gain over a dipole
> in one direction.

Dunno about that. Sounds a bit fishy to me, but I'm not saying it's
impossible. But consider this...
An extended double zepp, which is .64 wave per side, has almost that
exact gain over a dipole in TWO directions. If you only need 3 db, that
would work, if f/b ratio is not a problem. If you need some f/b and
gain, I would use an array of two dipoles parallel.

I will have to research it some more but it is really
> difficult to find information on V Beams on the net. If you do discover any
> more info I sure would appreciate you sharing it with me. Thanks again,
> 73, Bob

I have some in books, but I don't know what you want to know
specifically..But I don't consider a 3/4 wave per leg antenna a V beam.
It has none of the properties of a true V beam, which is a form of
traveling wave antenna. To really act as a V beam, and have decent gain,
it must be a few waves long on each side.
A single long wire is the simpliest form of traveling wave antenna. It
must be at least one wave, and should be several. A V beam is two long
wires connected at one end. A rhombic is two V beams back to back. They
are all closely related. The longer the V beam or rhombic in WL, the
narrower the angle between the wires should be.
A 3/4 wave per leg antenna folded into a V, is just a 3/4 wave per leg
dipole in a horizontal V config...Having straight like a true EDZ, and
using only .64 wave per leg, instead of .75, should actually give you
the most gain you can get with that antenna size. Thats the way I see it
anyway...I'd forget about V beams. You probably don't have the room for
a real one. There are better options like the phased dipole array, or
the simple EDZ itself if f/b is not an issue.. I've run the phased
dipoles on 40m. It's almost like having a 2 el beam that can point in
two directions. More than that if you play with the different phase
options. That would give you your wanted gain easy, and about a 15-20 db

f/b ratio to boot.
MK

--
http://web.wt.net/~nm5k

4455. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 05:14:10 UTC
From: wildboy74@webtv.net
Message-ID: <22084-40DA6322-41@storefull-3275.bay.webtv.net>
Source record: 93011

i have a radio shack fm antenna works great i can pick up stations
about 200 miles away i use a bose wave radio,onkyo.and one more
thing what kind of radio you got.

4456. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 05:14:24 UTC
From: wildboy74@webtv.net
Message-ID: <22083-40DA6330-159@storefull-3275.bay.webtv.net>
Source record: 93012

i have a radio shack fm antenna works great i can pick up stations
about 200 miles away i use a bose wave radio,onkyo.and one more
thing what kind of radio you got.

4457. Re: Glass mount antenna speaker interference

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 05:22:53 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <NntCc.4551$vX6.2949@bignews2.bellsouth.net>
Source record: 93010

How about if you turn the car radio off. You ought to have the car radio off when transmitting, anyway.

"Keith Bozek" <kbozek@yahoo.com> wrote in message news:506a3e3b.0406221057.5a83bf4d@posting.google.com...
> I recently installed a RS glass mount antenna on my '96 dodge
> Intrepid. The area I chose was near the bottom of the rear window.
>
> I get terrible feedback into my car radio. It is either coming in via
> the speaker or the cars antenna.
>
> Any way to eliminate interference without removing antenna or if I
> have to remove it will any of the reinstall kits work with the R/S
> model?
>
> I was looking at the double-sided tape and that seems to me that it
> might work ok?
>
> Keith, N3HGN

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.708 / Virus Database: 464 - Release Date: 6/18/2004

4458. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 11:55:04 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40dac123$0$436$5cbedd26@news.real-time.com>
Source record: 93013

Tdonaly wrote:

>
> What's wrong with wanting to argue? Argument, sometimes even violent argument,
> has
> been a hallmark of Western science for a long time. People who take everything
>
> at face value, without question or disagreement, end up believing the strangest
> things.
> 73,
> Tom Donaly, KA6RUH
>

Arguing endlessly on the same old subjects knowing the opposition won't
budge is what annoys me. And that's what goes on here very often. I
have no issues with a discussion that actually goes someplace.

tom
K0TAR

4459. Re: Heavy Duty Antenna Wire, For Sale on ebay

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 12:06:45 UTC
From: fractenna@aol.com
Message-ID: <20040624080645.25561.00000620@mb-m29.aol.com>
Source record: 93014

>I have listed 5 lots of NEW heavy duty antenna wire on ebay.
>
>Please cleck on this link to see the listings and picture:
>http://search.ebay.com/heavy-duty-antenna-wire_W0QQsosortpropertyZ1
>
>I ship worldwide.
>
>Thanks,
>
>Bill

Bill,

The claims you make about this wire don't sound right.

Stranded wire does emulate a conductor with the same, or slightly larger, diameter. However, the increased, self-shielding surface area is very prone to oxidation via mositure. Ergo the conductivity decreases somewhat over time. You compare to #14 wire, which is fairly thin in this application. Perhaps you should compare to a solid conductor of the same diameter, such as #10?

Stranded wire is used on LF and VLF transmitters because it is economically impractical to make wire with very wide diameters. However, it is not the STRANDING of the wire that's important, per se, but the overall diameter.

It's a good product, but the reasons you state for buying it don't make sense to me. Perhaps you have some data that shows superior gain and bandwidth of stranded copper compared to regular copper of the same diameter? I am not familiar with any measurable differences in the apps you target. Kindly fill us in if I am wrong.

I fear your potential buyers might assume substantial increases in gain and bandwidth from your comments on the description, when, in fact, little benefit , if any, is attained.

73,
Chip N1IR

4460. Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 12:26:10 UTC
From: mike <n0qfv@stic.net>
Message-ID: <40dac861$0$90385$39cecf19@news.twtelecom.net>
Source record: 93015

This sort of some what tounge in cheek question is what truely makes these forums interesting. I have followed this thread with interest.

Mike N0QFV

4461. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 12:28:40 UTC
From: Bob Wood <bobw@zianet.com>
Message-ID: <10dlogph8jsnbde@corp.supernews.com>
Source record: 92921

Thanks again Mark,

I am currently located in South Central New Mexico and all of the stations on the net are East and North East of my location. Since FB ratio is not a concern for me I think your suggestion of an Extended Double Zepp (EDZ) would work just fine. 0.64 wave on a side would work perfectly since the 0.75 wave per side that I had been considering was really pushing the size of my back yard. I will have to look into the EDZ but am assuming that the max radiation pattern would be broadside to the wire which would work perfectly for me. I have enough room on the property to run an EDZ North-South which would provide the East-West broadside radiation and if it has any gain over a dipole, I will be ahead for sure. I know that I do not have enough room on the property to install two elements so I think we will now shoot for the EDZ and see how it works. Thanks so much for the ideas as they have been enlightening.

Bob
W5QCP

4462. Re: Heavy Duty Antenna Wire, For Sale on ebay

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 13:32:07 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <cbel4n$423$1@sparta.btinternet.com>
Source record: 93016

"Fractenna" <fractenna@aol.com> wrote in message
news:20040624080645.25561.00000620@mb-m29.aol.com...
> >I have listed 5 lots of NEW heavy duty antenna wire on ebay.
> >
> >Please cleck on this link to see the listings and picture:
> >http://search.ebay.com/heavy-duty-antenna-wire_W0QQsosortpropertyZ1
> >
> >I ship worldwide.
> >
> >Thanks,
> >
> >Bill
>
> Bill,
>
> The claims you make about this wire don't sound right.
>
> Stranded wire does emulate a conductor with the same, or slightly larger,
> diameter. However, the increased, self-shielding surface area is very
prone to
> oxidation via mositure. Ergo the conductivity decreases somewhat over
time. You
> compare to #14 wire, which is fairly thin in this application. Perhaps you
> should compare to a solid conductor of the same diameter, such as #10?
>
> Stranded wire is used on LF and VLF transmitters because it is
economically
> impractical to make wire with very wide diameters. However, it is not the
> STRANDING of the wire that's important, per se, but the overall diameter.
>
> It's a good product, but the reasons you state for buying it don't make
sense
> to me. Perhaps you have some data that shows superior gain and bandwidth
of
> stranded copper compared to regular copper of the same diameter? I am not
> familiar with any measurable differences in the apps you target. Kindly
fill us
> in if I am wrong.
>
> I fear your potential buyers might assume substantial increases in gain
and
> bandwidth from your comments on the description, when, in fact, little
benefit
> , if any, is attained.

>
> 73,
> Chip N1IR

==========

Sranded wire is also used because it is flexible and easier to erect.

But stranded wire of the same diameter has a somewhat higher HF resistance.
As usual it is skin effect.

Current tends to flow only on the extreme outermost surfaces of the strands.
So the surface area is less than the surface area of a solid wire of the
same overall diameter. The fewer the number of strands the greater the
effect. Imagine where the current flows with only two strands. There is
also the very minor effect of spiralling.

But continue to use stranded wire for its undoubted superior mechanical
properties. If its HF resistance is too high then increase its diameter -
just as is done with the solid stuff. The loss or gain in S-units per lb
weight per mile is not worth the bother of consideration.

Reg, G4FGQ

4463. Re: How to Measure a 2M Yagi Impedance?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 13:32:50 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40dad8d6_2@corp.newsgroups.com>
Source record: 93017

Tdonaly wrote:
> What's wrong with wanting to argue?

What' wrong indeed? Arguments are the cornerstone of logic. My dictionary
says a definition of "argument" is "3. a process of reasoning".
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4464. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 13:38:02 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40dada0e_2@corp.newsgroups.com>
Source record: 93018

Tdonaly wrote:
> Has anyone noticed whether or not birds are acting
> any more retarded than usual?

I trap Starlings and House Sparrows, enemies of my Purple Martins.
I caught two Cardinals in my ***unbaited*** bird trap. I moved
the trap to my enclosed front porch where the lattice work has
one inch square openings. I caught two House Wrens in my unbaited
trap sitting on my front porch inside the lattice work.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4465. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 13:39:56 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40dada7f_2@corp.newsgroups.com>
Source record: 93019

Tim Perry wrote:
> now i have been burnt a few times working on this thing... maybe it goes to
> show that birds ARE smarter then radio engineers.

Birds are smart enough not to stand on the ground and put
their wings on the hot wires. :-)

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4466. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 13:59:14 UTC
From: Da Shadow <DAS@cat.net>
Message-ID: <T6BCc.7593$rn1.2467@okepread07>
Source record: 93020

```
--
Lamont Cranston

The Shadow Knows
"Cecil Moore" <w5dxp@hotmail.com> wrote in message
news:40dada7f_2@corp.newsgroups.com...
> Tim Perry wrote:
> > now i have been burnt a few times working on this thing... maybe it goes
to
> > show that birds ARE smarter then radio engineers.
>
> Birds are smart enough not to stand on the ground and put
> their wings on the hot wires. :-)

And the ones that don't go into the Field Day Bird Stew pot.

Field day -- participate -- you may need the experience when the BIG one
hits.
Grumppp no power, no phones, no cell phones, no internet
```

4467. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 14:17:23 UTC
From: Irv Finkleman <finkirv@shaw.ca>
Message-ID: <40DAE27C.96C3A09@shaw.ca>
Source record: 92922

AA5QT wrote:
>
> For the first time in many years, I'm about to put up a 20 meter monobander on
> a tower. The XYL is asking questions I cannot answer, specifically relating to
> RF and birds. I wouldn't want to be a bird sitting on an element when a KW is
> supplied to it? Are my concerns valid?
>
> Gary K5QT

Back in the '60's, at Naval Radio Station CKN, we had a number, perhaps ten or fifteen, of multikilowatt transmitters all feeding the antennas through open wire line. The transmitter building was like a huge barn with all the wires running from the transmitters to the antennas. An occasional bird would fly in, and we would chase them out with a broom! We never lost a bird, but the junior hand on the watch would have to sweep out, and in an evening we could count on half a trash-can full of dead flies! The building was in the middle of a swamp area and full of assorted flying insects. Those same flies were responsible for occasional trip-off's of the transmitters, and you could hear frequent snaps if and when they happened into a critical area, for example between capacitor plates, and drew an arc. If you picked up a fluorescent tube, it would light up from all the RF floating around. I've often wondered about how much effect the RF had on me -- although my Ex would tell you I am stark raving mad! :-0

The antenna fields should have been filled with dead birds if the feeders or the antennas themselves were a hazard, but apparently not.

Ah, the memories! Great!

Irv VE6BP
--

Diagnosed Type II Diabetes March 5 2001
Beating it with diet and exercise!
297/215/210 (to be revised lower)
58"/43"(!)/44" (already lower too!)

Visit my HomePage at http://members.shaw.ca/finkirv/
Visit my Baby Sofia website at http://members.shaw.ca/finkirv4/
Visit my OLDTIMERS website at http://members.shaw.ca/finkirv5/

Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

4468. Re: FM Antennas

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 15:23:10 UTC
From: StrikitRich <strikitrich@nospam.excite.com>
Message-ID: <strikitrich-169BC9.11231024062004@comcast.dca.giganews.com>
Source record: 92923

In article <20040623233546.11581.00000457@mb-m11.aol.com>,
gmz79@aol.comnospam (greg z) wrote:

> >strikitrich-3A08E7.11481923062004@comcast.dca.giganews.com>,
> >strikitrich@nospam.net says...
> >> Pardon me if this is the wrong place to ask this question, but hopefully
> >> I can get an answer here.
> >>
> >> What would be the best type of antenna for receiving FM radio stations
> >> up 80 miles away(Tampa to the north, Fort Myers to the south)? The
> >> antenna would be mounted outside, up to 30' high. Would an
> >> omni-directional antenna work, or should I stick with a directional?
> >>
> >> My TV antenna is up about 55', but the amplifier has the trap on and I
> >> can only get the strongest of the signals.
> >>
> >>
> >> Thanks in advance, SR1
>
> ---
> My situation somewhat similar,watch TV stations 80 to 100+ miles
> away, having a FM station 6 miles away and still wanting to listen
> to FM stations 50 to 80miles away. I disabled the FM trap on the
> mast mounted amp,split the sig in the house,than notched(trap) FM
> from the line to the TV. DX tropo last year TV 800miles and FM about 400
> miles.
> 73
> Greg Z
> to thine own sound be true
> WG8Z

What kind of FM trap are you using? My previous amplifier had a weak
trap, so I used an inline trap with a similar setup to yours. When I
had the amp replaced, woodpeckers wrecked the case, I was told that this
would no longer work, the inline trap didn't seem to work, either. I
was told that the trap needed to be close to the antenna, and inline
before the power source.

SR1

4469. Re: Heavy Duty Antenna Wire, For Sale on ebay

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 15:52:58 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <82uld0pas1lddu5npc44cs43mor3kjn5mu@4ax.com>
Source record: 92924

On 23 Jun 2004 20:55:26 -0700, marklinbuyer@yahoo.com (I buy Marklin trains) wrote:

>I have listed 5 lots of NEW heavy duty antenna wire on ebay.
>
>Please cleck on this link to see the listings and picture:
>http://search.ebay.com/heavy-duty-antenna-wire_W0QQsosortpropertyZ1
>
>I ship worldwide.
>
>Thanks,
>
>Bill

What guage is the stuff? All you say is it's 1/8-inch thick. I normally don't buy wire by thickness, but by guage.

Also, is it 100% copper? Or some combination of copper and steel?

thanks,

bob
k5qwg

4470. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 17:17:19 UTC
From: Tim Perry <timperryspammenot@adelphia.net>
Message-ID: <WN6dnedWb8k8kUbd4p2dnA@adelphia.com>
Source record: 92925

"Da Shadow" <DAS@cat.net> wrote in message
news:T6BCc.7593$rn1.2467@okepread07...
>
>
> --
> Lamont Cranston
>
> The Shadow Knows
> "Cecil Moore" <w5dxp@hotmail.com> wrote in message
> news:40dada7f_2@corp.newsgroups.com...
> > Tim Perry wrote:
> > > now i have been burnt a few times working on this thing... maybe it
goes
> to
> > > show that birds ARE smarter then radio engineers.
> >
> > Birds are smart enough not to stand on the ground and put
> > their wings on the hot wires. :-)
>

actually in this case grounded or ungrounded makes no difference. the RF
just burns a very painful hole in what ever part of your skin you carelessly
brush against the hot wires. some of the vacuum variable caps have
adjustment knobs with metal set screws... ouch try to remember to only
adjust with your fingertips touching the bakelite. this is a very old array
built in 1949.

> And the ones that don't go into the Field Day Bird Stew pot.
>
> Field day -- participate -- you may need the experience when the BIG one
> hits.
> Grumppp no power, no phones, no cell phones, no internet
>

4471. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 18:23:55 UTC
From: richardharrison@webtv.net
Message-ID: <17104-40DB1C3B-283@storefull-3253.bay.webtv.net>
Source record: 92926

Danny, K6MHE wrote:
"I hot jumped the tower several times."

I`ve done the same in a 5 KW medium wave broadcast station to avoid a burn during transfer, climbing the hot tower with no ill effects.

I`ve also accidentally contacted a 50 KW signal on a 600-ohm line while standing on the roof of a shortwave broadcast plant. That wire really burnt my ear. Glad I wasn`t a bird!

Our shortwave transmission lines carried mostly 50 KW and 100 KW signals, usually at near 100% modulation of the amplitude variety. Our carriers were between 6 MHz and 16 MHz, sometimes higher or lower, depending on target, time of day, or season.

When a bird landed on a transmission line wire he mostly evaporated without a trace except for his claws gripping the wire. There was a puff of smoke and steam during the instantaneous event. The transmitter usually had no visible response. It kept right on pumping out the megacycles. Our transmission lines were coated with bird claws.

Best regards, Richard Harrison, KB5WZI

4472. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 19:03:07 UTC
From: richardharrison@webtv.net
Message-ID: <1612-40DB256B-27@storefull-3257.bay.webtv.net>
Source record: 92927

Tim Perry wrote:
"---this is a very old array built in 1949."

In 1949 I worked at the KPRC (950 KHz) / KXYZ (1320 KHz) plant at Deep Water, TX.
They shared a main tower which was built for KTRH (740 KHz), which had moved to Cedar Bayou. The tower was near 1/2-wavelength at 1320 KHz and a high impedance for both stations.

One operator responsibility was periodic logging of tower currents. For lightning protection, the RF ammeters were shunted with knife switches which must be open during reading. Since the main tower was so hot at its feedpoint, we had a wooden stick with a bent nail in one end to operate the knife switches. RF burns are unpleasant. This stick would burn a carbon trail to your hand in a couple of weeks and be replaced. The sparks along the carbon trail were spectacular but benign if the stick was replaced soon enough.

Best regards, Richard Harrison, KB5WZI

4473. Re: RF transmission through various materials

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 21:36:26 UTC
From: Jeremy <mortonjeremyd@noway.yahoo.com>
Message-ID: <MPG.1b44e9235b1378d698973e@news.prodigy.net>
Source record: 92928

In article <fef44ceb.0406160823.317fc1e8@posting.google.com>,
achilles03@hotmail.com says...

> Yeah, now I can amaze all my friends and co-workers. All I need to do
> now is get some of that "male enhancement" Enzyte and I'll probably be
> CEO by next month.
>

It seemed to work for Smilin' Bob! I love those commercials.

4474. Re: Unity Gain?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 22:34:18 UTC
From: jason <jas@kto.net>
Message-ID: <FxJCc.264$Q57.74@newsfe1-win>
Source record: 92929

Hello,

Gain figures are often false and misleading - in the UK if you had told CBers a certain aerial had 10dB gain - they would all buy one. It's just a number plucked from the air in most cases.

"Dan Richardson @arrl.net>" <<ChangeThisToCallSign> wrote in message news:3v5jd0p8i6khm4dms81a7c51qkqrmmbdud@4ax.com...
> From time to time an antenna manufactures will state that an antenna
> has "unity gain". It is my understanding that this term is used for
> describing antennas used in mobile applications and is referenced to
> the gain of a quarter-wave whip.
>
> Does anyone know of any instances where this term is used otherwise?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.707 / Virus Database: 463 - Release Date: 15/06/2004

4475. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-24 23:54:15 UTC
From: spam@spam.com
Message-ID: <40db68d1.2501671@news.east.cox.net>
Source record: 92930

The only time I've heard of birds coming out on the short end of the deal was at a VOA transmitter site in Ohio running megawatts of power along open feed lines. I'm sure your maximum forward power wouldn't even approach their reflected power (grin).

Mark

--
On 23 Jun 2004 12:17:49 GMT, aa5qt@aol.com (AA5QT) wrote:

>For the first time in many years, I'm about to put up a 20 meter monobander on
>a tower. The XYL is asking questions I cannot answer, specifically relating to
>RF and birds. I wouldn't want to be a bird sitting on an element when a KW is
>supplied to it? Are my concerns valid?
>
>Gary K5QT

Mark

4476. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 00:25:36 UTC
From: kashe@sonic.net
Message-ID: <27smd0tu8979luo88q46arjilc2lgigslp@4ax.com>
Source record: 92931

On 24 Jun 2004 03:55:22 GMT, tdonaly@aol.com (Tdonaly) wrote:

>Hal wrote,
>>
>>Birds also sit on high-tension lines carrying many amps at thousands of
>>volts.
>>Makes you wonder if it interferes with their built-in compass.
>>
>
>There seems to be a general belief, around here (Belmont CA), that the changing
>magnetic
>fields from power lines retards children's development and lowers their
>collective IQ. Has anyone noticed whether or not birds are acting
>any more retarded than usual?

Just the ones we send to Sacramento and Washington. The rest
are OK.

4477. APRSPoint announcement

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 01:11:49 UTC
From: hxc98@yahoo.com
Message-ID: <aa8577c5.0406241711.1dd5a80a@posting.google.com>
Source record: 92932

Get APRSPoint and MapPoint 2004 for $119.95 instead of the regular
price of $169.95, valid till July 4th and while supplies last. Visit
http://www.aprspoint.com/ for details. Thank you.

4478. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 01:36:23 UTC
From: Tom Ring <news0000@taring.org>
Message-ID: <40db81a2$0$433$5cbedd26@news.real-time.com>
Source record: 92933

Richard Harrison wrote:

> In 1949 I worked at the KPRC (950 KHz) / KXYZ (1320 KHz) plant at Deep
> Water, TX.
> They shared a main tower which was built for KTRH (740 KHz), which had
> moved to Cedar Bayou. The tower was near 1/2-wavelength at 1320 KHz and
> a high impedance for both stations.
>
> One operator responsibility was periodic logging of tower currents. For
> lightning protection, the RF ammeters were shunted with knife switches
> which must be open during reading. Since the main tower was so hot at
> its feedpoint, we had a wooden stick with a bent nail in one end to
> operate the knife switches. RF burns are unpleasant. This stick would
> burn a carbon trail to your hand in a couple of weeks and be replaced.
> The sparks along the carbon trail were spectacular but benign if the
> stick was replaced soon enough.
>
> Best regards, Richard Harrison, KB5WZI
>

Thanks to all; these are nice stories when they show up. Almost a
thread of it's own, hint hint.

Too bad a lot of the current generation just coming online to do rf
systems engineering won't have such good ones to pass on - "Well we
fired up the 1W 5600Mhz biaamp and the female inverse TNC connector on
the antenna side was shorted! The amp got warm to the touch after 15
minutes! It was a close thing. Funny though, the users within 300m
could still get decent throughput."

tom
K0TAR

4479. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 03:38:40 UTC
From: Allan Butler <ka0ies@hotmail.com>
Message-ID: <47NCc.98650$HG.83976@attbi_s53>
Source record: 92934

Richard Harrison wrote:

> Tim Perry wrote:
> "---this is a very old array built in 1949."
>
> In 1949 I worked at the KPRC (950 KHz) / KXYZ (1320 KHz) plant at Deep
> Water, TX.
> They shared a main tower which was built for KTRH (740 KHz), which had
> moved to Cedar Bayou. The tower was near 1/2-wavelength at 1320 KHz and
> a high impedance for both stations.
>
> One operator responsibility was periodic logging of tower currents. For
> lightning protection, the RF ammeters were shunted with knife switches
> which must be open during reading. Since the main tower was so hot at
> its feedpoint, we had a wooden stick with a bent nail in one end to
> operate the knife switches. RF burns are unpleasant. This stick would
> burn a carbon trail to your hand in a couple of weeks and be replaced.
> The sparks along the carbon trail were spectacular but benign if the
> stick was replaced soon enough.
>
> Best regards, Richard Harrison, KB5WZI

I worked at KWLO in Waterloo, IA back in the late 70's. It was only a 5Kw station with a five element directional array. During the day only two of the towers were fed and the night time pattern used all five.

During my initial instruction on how to read the current meters at the tower bases, the chief engineer was showing me how to put the meter in the clips and then rock the shorting bar out of the parallel clips that were in the circuit. One side of the shorting bar was always in a clip. then you would read the meter and put the shorting bar back into the clips. After that you could remove the meter.

Well, he was behind the transmitters and the phasing cabinet in a fairly confined space showing me how to do the task. Set the meter in place, rock the shunt out of one clip, take the measurement, rock the meter out of the clips.

How many of you caught the problem in that sequence?

Yup, that is the way he did it. The arc from the clip to the current meter made the prettiest ohm sign I have ever seen. I saw the engineer starting to rock the meter and was already moving away when he broke the connection. The relexes of youth are a wonderful thing.

The only thing that happened to him was that he banged the back of his hand on the inside of the cabinet as he got it out of the way of the arc.

The transmitter didn't even miss a beat on that little shenannigan. It may have shown an overload on some of the warning lights but I can't recall right now.

4480. You are all old couch sitting tube thumpers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 03:43:51 UTC
From: yea right <spam@spam.spam>
Message-ID: <pan.2004.06.25.03.45.44.657637@spam.spam>
Source record: 92935
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

It appears the UPLC (United Powerline council) does not value people that enjoy tube radios. This from a group of people that use glass insulators and old wooden power poles to send hi-speed internet.

http://www.uplc.utc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
or
http://tinyurl.com/35ptp

4481. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 04:38:47 UTC
From: Mark Keith <nm5k@wt.net>
Message-ID: <40DBAC57.5AC7@wt.net>
Source record: 92936

Bob Wood wrote:
>
> Thanks again Mark,
>
> I am currently located in South Central New Mexico and all of the stations
> on the net are East and North East of my location. Since FB ratio is not a
> concern for me I think your suggestion of an Extended Double Zepp (EDZ)
> would work just fine. 0.64 wave on a side would work perfectly since the
> 0.75 wave per side that I had been considering was really pushing the size
> of my back yard. I will have to look into the EDZ but am assuming that the
> max radiation pattern would be broadside to the wire which would work
> perfectly for me.

Yes. Appx 5.1 dbi in two directions broadside to the wires. Or almost
exactly 3 db over the 1/2 wave dipole.

> North-South which would provide the East-West broadside radiation and if it
> has any gain over a dipole, I will be ahead for sure. I know that I do not
> have enough room on the property to install two elements so I think we will
> now shoot for the EDZ and see how it works.

Should do pretty well. Will be appx 84 ft a side. Get it as high as you
can, and preferably set up as a flat top. It will work as as inv vee,
but the gain may drop off a bit. I ran one on 20m one time, and it did
well. One thing about the 40m EDZ.. If you feed with ladder line and a
tuner, it can be used on other bands also. Even 80m should work ok,
being it's longer than a 80m 1/2 dipole. Always use the minimum
inductance needed to get a usable match when tuning the tuner. MK
--
http://web.wt.net/~nm5k

4482. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 05:48:08 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <s0PCc.30461$Yb1.8618@nwrddc02.gnilink.net>
Source record: 92937

Bob

If you are still uncertain about what angle to use for a V with 1/4 waves per side, you might get alot of insite from how good LPV antennas are designed. The basic idea used for the LPV depends on the pattern from each side of the V to combine to provide good directivity at that frequency where the elements are 3/4 wave long.

Jerry

"Bob Wood" <bobw@zianet.com> wrote in message
news:10dhlq1m3vs6be7@corp.supernews.com...
> V Beam antenna question
>
> I want to put up a 40M V Beam antenna to enhance communication in one
> direction only. From the limited design information that I have found, I
am
> thinking of 3/4 wavelength on each side with a horizontal separation angle
> of either 72 degrees or 120 degrees. I have seen both separation angles
> listed as optimum for maximum gain. I was wondering if anyone knew for
sure
> which angle would produce the best result. Also, and actually most
> important, I need to have some idea of what the feed point impedance might
> be. I can feed it with ladder line or good coax and a balun but I am not
> sure what balun to use or would it be better to use ladder line? I sure
> would appreciate any guidance on this antenna project.
>
> Bob
> W5QCP
>
>

4483. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 08:03:05 UTC
From: "Chuck...K1KW" <cdoneal@comcast.net>
Message-ID: <Z_QCc.114996$0y.92626@attbi_s03>
Source record: 92938

Came home one day in the early fall several years ago and found that many black birds were sitting on all elements of my top 18E log periodic. Decided to see what happened so I fired up the linear on 17 M and let out a full carrier. Looked like at least 1/2 the elements had significant voltage on them and the birds that didn't fall directly down and landed on the ground, flew off...for a while, some crashed also...empirical testing of voltage (power?) distribution....interesting....(:>)

Chuck...K1KW

"AA5QT" <aa5qt@aol.com> wrote in message news:20040623081749.11581.00000395@mb-m11.aol.com...
> For the first time in many years, I'm about to put up a 20 meter monobander on
> a tower. The XYL is asking questions I cannot answer, specifically relating to
> RF and birds. I wouldn't want to be a bird sitting on an element when a KW is
> supplied to it? Are my concerns valid?
>
> Gary K5QT

4484. Re: You are all old couch sitting tube thumpers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 08:32:02 UTC
From: Ed Price <edprice@cox.net>
Message-ID: <%pRCc.15713$rn1.2264@okepread07>
Source record: 92939
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"yea right" <spam@spam.spam> wrote in message
news:pan.2004.06.25.03.45.44.657637@spam.spam...
>
> It appears the UPLC (United Powerline council) does not value people that
> enjoy tube radios. This from a group of people that use glass
> insulators and old wooden power poles to send hi-speed internet.
>
>
http://www.uplc.utc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
> or
> http://tinyurl.com/35ptp
>
>

I believe the UPLC disrespects amateurs primarily due to our use of
armchairs. And I'm as guilty as any; for years, I've been sitting on my ass
in an armchair!

Well, what kind of logic could you expect from a CEO named Moron(ey)?

Ed
wb6wsn

4485. Re: You are all old couch sitting tube thumpers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 08:47:15 UTC
From: kashe@sonic.net
Message-ID: <fhpnd095hpbmkk98ck72qp5t0p206alnhk@4ax.com>
Source record: 92940
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Fri, 25 Jun 2004 03:43:51 GMT, yea right <spam@spam.spam> wrote:

>
>It appears the UPLC (United Powerline council) does not value people that
>enjoy tube radios. This from a group of people that use glass
>insulators and old wooden power poles to send hi-speed internet.
>
>http://www.uplc.utc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
>or
>http://tinyurl.com/35ptp
>

From the article"

"UPLC reminded the Commission that BPL is not just another broadband
access platform, but one that enables applications in ways that other
technologies do not by providing enhanced utility applications, home
networking, symmetric speeds, and low latency for a variety of
services. Unique applications will improve the efficiency and
reliability of electric service to utility customers as well as
promote broadband competition for consumers, carriers and ISPs -
saving lives, reducing electric generation costs, remedying the
digital divide and conquering the DSL- cable duopoly."

Wow! This stuff can do anything except restore virginity. And
I'm sure they're working on that little problem.

4486. Help newbie with Channel Master 9512 Rotor - homebrew controller ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 10:59:48 UTC
From: "K. Hastings" <myfamilydotcom@hotmail.com>
Message-ID: <EATCc.63777$Np3.2980746@ursa-nb00s0.nbnet.nb.ca>
Source record: 92941

I'm fixing up an older Channel Master light-duty rotor to turn a small 2m wooden quad I've built for my attic, but one of the plastic gears in the control unit disintegrated in my hand during the rennovation. The rest of the control unit is in rough shape too.

I'm thinking of building my own power supply/control unit for this rotor, but I'm not clear on just how these 3-wire units actually control the rotor. Any ideas? I can perhaps make my own simple PS, and figure out the direction-setting power scheme, but getting feedback on the antenna position to prevent over-turn cound be tricky.

Thanks to all who reply...

VE9XYZ Kevin

4487. Re: You are all old couch sitting tube thumpers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 13:16:44 UTC
From: Minnie Bannister <GoonButNotForgotten@NottheBBC.org>
Message-ID: <10do9dspbfal53d@corp.supernews.com>
Source record: 92942
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On 06/25/04 04:47 am kashe@sonic.net put fingers to keyboard and
launched the following message into cyberspace:

>>http://www.uplc.utc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
>>or
>>http://tinyurl.com/35ptp

> From the article"
>
> "UPLC reminded the Commission that BPL is not just another broadband
> access platform, but one that enables applications in ways that other
> technologies do not by providing enhanced utility applications, home
> networking, symmetric speeds, and low latency for a variety of
> services. Unique applications will improve the efficiency and
> reliability of electric service to utility customers as well as
> promote broadband competition for consumers, carriers and ISPs -
> saving lives, reducing electric generation costs, remedying the
> digital divide and conquering the DSL- cable duopoly."
>
> Wow! This stuff can do anything except restore virginity. And
> I'm sure they're working on that little problem.

They certainly will need to find a way of doing that, in view of what
they are doing to (potential) customers, to existing licensed users of
the RF spectrum, and probably to their investors as well.

MB

4488. Re: You are all old couch sitting tube thumpers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 14:50:39 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <3ZWCc.134549$Gx4.47094@bgtnsc04-news.ops.worldnet.att.net>
Source record: 92943
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"yea right" <spam@spam.spam> wrote in message
news:pan.2004.06.25.03.45.44.657637@spam.spam...
>
> It appears the UPLC (United Powerline council) does not value people that
> enjoy tube radios. This from a group of people that use glass
> insulators and old wooden power poles to send hi-speed internet.
>
>
http://www.uplc.utc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
> or
> http://tinyurl.com/35ptp
>
>

"The United Power Line Council (UPLC) forcefully replied to concerns ..."

Forcefully -- not truthfully or accurately but -- FORCEFULLY!

"... as well as promote broadband competition for consumers, carriers and
ISPs - saving lives, "

BPL saves lives! What could be more important than that?

"... ignore "armchair amateurs that still use vacuum tube transmitters" "

Ignore the power companies that still burn coal to make steam!

""BPL is an exciting technology with a promising future, but it's dependent
on the FCC to develop rules that will encourage companies to deploy
systems.."

No new rules are needed, because:

"...the risk of interference from BPL is extraordinarily low, ..."

Sounds like the Cranky Old Hams have struck a nerve!!

Frank Dresser

4489. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 15:29:32 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <wxXCc.65693$wH4.3827491@twister.southeast.rr.com>
Source record: 92944

<nospam@nouce.bellatlantic.net> wrote in message
news:naigd01g9b3ldsjcrcrh2umgjmc736p0f9@4ax.com...
> On Sun, 20 Jun 2004 17:38:26 GMT, "Jimmie" <Gfender@carolina
> dot.rr.dot com> wrote:
>
> >My only problem with J antennas is WHY. I can more easily build a 5/8.
>
> What your really asking is why a half wave vs a 5/8ths?
>
> The best answer I can give is a 5/8ths REQUIRES a groundplane to
> work at all correctly and that makes it more metal and complication.
> Yes the 5/8ths offers _some_ additional gain but for simplicity the
> end fed dipoles (all the J varients) do not require a ground plane and
> are more compact in general shape making them a better candiate
> for steath or portable ops.
>
> Seriously if I were going for more gain than the OSJ the antenna would
> be a 4 bay dipole for the same reasons. Rugged, simple, excellent
> gain and good radiation pattern. The 5/8ths does not offer enough
> gain increase to make it worth the effort when a 5.6db colinear or 4
> day dipole offers significantly more.
>
> Allison
> KB!GMX
>
>
Funny, I dont remember saying anything about gain. For me 5/8 are just
easier to build and tune.

4490. Re: Help newbie with Channel Master 9512 Rotor - homebrew controller ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 16:21:15 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40dc5397_2@news1.prserv.net>
Source record: 92945

Kevin:

Those 3 wire controllers depend on running a motor in the indicator at the same speed as the rotator, so indicator accuracy is sometimes less than perfect (snicker). Most light duty RatShack rotators use that approach. The rotator itself is typically a split phase AC motor, a common and one phase fed directly, the other through a phase shifting capacitor in the controller. Swap the two phase leads for reverse direction. You may want to consider buying or fabricating a replacement gear to get direction readout. Or adding a separate direction indicating mechanism. Good luck!

--
Crazy George
Remove N O and S P A M imbedded in return address
"K. Hastings" <myfamilydotcom@hotmail.com> wrote in message
news:EATCc.63777$Np3.2980746@ursa-nb00s0.nbnet.nb.ca...
> I'm fixing up an older Channel Master light-duty rotor to turn a small 2m
> wooden quad I've built for my attic, but one of the plastic gears in the
> control unit disintegrated in my hand during the rennovation. The rest of
> the control unit is in rough shape too.
>
> I'm thinking of building my own power supply/control unit for this rotor,
> but I'm not clear on just how these 3-wire units actually control the
rotor.
> Any ideas? I can perhaps make my own simple PS, and figure out the
> direction-setting power scheme, but getting feedback on the antenna
position
> to prevent over-turn cound be tricky.
>
> Thanks to all who reply...
>
> VE9XYZ Kevin
>
>

4491. Re: 40M V Beam question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 17:25:14 UTC
From: richardharrison@webtv.net
Message-ID: <11561-40DC5FFA-37@storefull-3254.bay.webtv.net>
Source record: 92946

Bob Wood wrote:
"I want to put up a 40M V Beam antenna to enhance communication in one direction only.---I am thinking of 3/4 wavelength on a side with a horizontal separation angle of either 72 degrees or 120 fegrees."

Arnold B. Bailey catalogs a bidirectional horizontal unterminated Vee in "TV and Other Receiving Antennas" Ends of the Vee must be terminated in their surge impedance for unidirectional response. Bailey gives 800 ohms as surge impedance of the wires in the Vee.

All antennas in Bailey`s catalog are "optimized" for a frequency of 200 MHz (1.5 meters).

The horizontal Vee is center-fed at its apex. So, it opens / closes toward its best directions, since It is unterminated. It is bidirectional.

Bailey`s Vee is several wavelengths per side. Its drivepoint resistance is 160 ohms. Gain is 10 dB. 3-dB bandwidth is 3%. It still behaves as a standing wave antenna without termination.

The Vee is made from two horizontal 35-foot #10 wires for 200 MHz, forming an included angle of 35-degrees (21-feet between outer ends).

At 40m, the wavelength is about 27 times that at 1.5m. So, that`s the scale factor. The wires become about 933 feet long.

The same wire formed into a rhombic is unidirectional if terminated. It only takes one termination resistor, and the rhombic gives 3 or 4 more dB gain than the same wires in a Vee. The rhombic is a little shorter overall than the Vee, too. At 40 meters the rhombic requires about 567 feet overall length and is about half as wide as it is long.

If you can accept a total gain of about only 4 dB, you can have an antenna with much less wire and space. Two parallel center-fed wires, each about 1/2-wavelength, and 1/4-wave apart, elevated at about 1/2-wavelength, and connected together with parallel open-wire line in the plane of the wires will give a drivepoint resistance of near 50 ohms across either antenna.

Which direction is favored depends on which dipole is fed directly and which acts as the directly connected reflector. 3 dB bandwidth is 60%, which is much better than the 3% of the unterminated Vee.

Arnold B. Bailey gives data on page 521 of "TV and Other Receiving Antennas" for the "Half-Wave Antenna and Connected Reflector". He credits P.S. Carter, Proc. I.R.E.,vol. 20, p1032, June 1932.

Best regards, Richard Harrison, KB5WZI

4492. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 18:05:14 UTC
From: CW <"no adddress"@spam>
Message-ID: <Lv-dnRWwlbzG9EHdRVn-vg@comcast.com>
Source record: 92947

So, that's their excuse.

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20040623235522.19052.00000561@mb->
> There seems to be a general belief, around here (Belmont CA), that the
changing
> magnetic
> fields from power lines retards children's development and lowers their
> collective IQ.

4493. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 18:22:32 UTC
From: CW <"no adddress"@spam>
Message-ID: <ANWdnS-vW_T18EHdRVn_iw@comcast.com>
Source record: 92948
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Yes, that is an advantage. Everytime someone asks a question about a receive only antenna on this newsgroup, there are always many responses saying to just put up a piece of wire and run it strait to your radio. That will work, assuming that you live out in the middle of nowhere, have no neighbors and have no electrical appliances. For the rest of us, noise is a consideration and more thought needs to be put into an antenna system.

"Kees" <PA8540@home.removeee-thisss.nl> wrote in message news:lbfjd09u1bo8pbuhgoej172736dtk964tj@4ax.com...
>
> That's indeed what it is:
> a very low-noise antenna.
>
> Look at : http://members.home.nl/rita.kees/t2fdmake.html
>
> for my "version ".
>
>
>

4494. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 18:51:45 UTC
From: Angtao-Ping <maoty2001@sinaman.com>
Message-ID: <40dc7443_2@news.tm.net.my>
Source record: 92949

During my working days in a shortwave relay station, we used to go out to the field to clear off the hanging charred claws on the feeder lines. The birds standing on the feeder line did not know when we will switch on the 250kw transmitters and burnt to death instantly, leaving behind the claws hanging on the line.

weng -9M2FO-

> Our shortwave transmission lines carried mostly 50 KW and 100 KW
> signals, usually at near 100% modulation of the amplitude variety. Our
> carriers were between 6 MHz and 16 MHz, sometimes higher or lower,
> depending on target, time of day, or season.
>
> When a bird landed on a transmission line wire he mostly evaporated
> without a trace except for his claws gripping the wire. There was a puff
> of smoke and steam during the instantaneous event. The transmitter
> usually had no visible response. It kept right on pumping out the
> megacycles. Our transmission lines were coated with bird claws.
>
> Best regards, Richard Harrison, KB5WZI
>

4495. Re: Help newbie with Channel Master 9512 Rotor - homebrew controller ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 21:45:38 UTC
From: L G <rolf183@yahoo.com>
Message-ID: <2k3kmrF17qvk8U1@uni-berlin.de>
Source record: 92950

Think it was 20V AC applied one way or the other.

"Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
news:40dc5397_2@news1.prserv.net...
> Kevin:
>
> Those 3 wire controllers depend on running a motor in the indicator at the
> same speed as the rotator, so indicator accuracy is sometimes less than
> perfect (snicker). Most light duty RatShack rotators use that approach.
> The rotator itself is typically a split phase AC motor, a common and one
> phase fed directly, the other through a phase shifting capacitor in the
> controller. Swap the two phase leads for reverse direction. You may want
> to consider buying or fabricating a replacement gear to get direction
> readout. Or adding a separate direction indicating mechanism. Good luck!
>
> --
> Crazy George
> Remove N O and S P A M imbedded in return address
> "K. Hastings" <myfamilydotcom@hotmail.com> wrote in message
> news:EATCc.63777$Np3.2980746@ursa-nb00s0.nbnet.nb.ca...
> > I'm fixing up an older Channel Master light-duty rotor to turn a small
2m
> > wooden quad I've built for my attic, but one of the plastic gears in the
> > control unit disintegrated in my hand during the rennovation. The rest
of
> > the control unit is in rough shape too.
> >
> > I'm thinking of building my own power supply/control unit for this
rotor,
> > but I'm not clear on just how these 3-wire units actually control the
> rotor.
> > Any ideas? I can perhaps make my own simple PS, and figure out the
> > direction-setting power scheme, but getting feedback on the antenna
> position
> > to prevent over-turn cound be tricky.
> >
> > Thanks to all who reply...
> >
> > VE9XYZ Kevin
> >
> >
>
>

4496. Re: You are all old couch sitting tube thumpers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 21:46:24 UTC
From: mr microphone 909 <vvrap3000dc@yahoo.com>
Message-ID: <e27ba$40dc9d40$d1cc57d6$7424@snip.allthenewsgroups.com>
Source record: 92951
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"yea right" <spam@spam.spam> wrote in message
news:pan.2004.06.25.03.45.44.657637@spam.spam...
>
> It appears the UPLC (United Powerline council) does not value people that
> enjoy tube radios. This from a group of people that use glass
> insulators and old wooden power poles to send hi-speed internet.

Did you compose that wonderful example of
convoluted logic before, or after, you got drunk
with the rest of the chain-smoking boys at the
ham club meeting or the VFW Post?

4497. Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 22:25:38 UTC
From: Jeff Maass <jmaass@columbus.rr.com>
Message-ID: <CD1Dc.35$Nx1.19@fe2.columbus.rr.com>
Source record: 92952

Go and read this BPL related press release:

http://www.uplc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser

Pay particular attention to paragraph three!

Several people I've heard from are also emailing their comments on this release to the
email contact address included in this press release. We expect that she should have
a pretty full email box come Monday morning!

73,

Jeff Maass K8ND

4498. Re: Help newbie with Channel Master 9512 Rotor - homebrew controller ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-25 23:51:58 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <KPOdnU_8A5wHJ0Hd4p2dnA@comcast.com>
Source record: 92953

"L G" <rolf183@yahoo.com> wrote in message
news:2k3kmrF17qvk8U1@uni-berlin.de...
> Think it was 20V AC applied one way or the other.
>
> "Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
> news:40dc5397_2@news1.prserv.net...
> > Kevin:
> >
> > Those 3 wire controllers depend on running a motor in the indicator at
the
> > same speed as the rotator, so indicator accuracy is sometimes less
than.....

Are you sure about that? The Alliance and CDE rotators had an interrupter switch in the remote unit that caused a solenoid in the control unit to advance the indicator pointer. This pulsing took place every 10 or 15 degrees of antenna rotation. The pointer turned in whatever direction the control knob had been turned.

Tam/WB2TT

4499. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 00:11:29 UTC
From: Greg Knapp <gknapp@freshrain.org>
Message-ID: <0KCdnR-4lt-kIkHdRVn-gQ@speakeasy.net>
Source record: 92954

Thanks for the heads up. I just sent my "reply" to them as follows--others may like to do so as well:

In response to the Press Release re: BPL
I commented to the FCC that I was opposed to BPL in its current state because it has always, to the best of my research, generated some level of interference in the high frequency (HF) spectrum in the numerous actual deployment tests. Any interference to HF reception has always been unacceptable.

I have heard the interference from some actual BPL deployments, and the interference would make most of the communications in the HF spectrum difficult, especially to the SW Broadcast industry.

The "press release" statement that "UPLC also commented on amateur radio opposition to the technology, urging the Commission to ignore "armchair amateurs that still use vacuum tube transmitters" and listen to the reputable companies and entrepreneurs who are the real experts on BPL" is simply not true, is insulting, and misses the whole point.

Whether tubes, transistors, ICs, or the new computer-driven radios are used, the interference from BPL still makes HF use impractical for most current HF users and listeners. This is unacceptable.

To have the FCC redefine the "no interference" standard to a "fixed limit of level of interference" is also unacceptable.

With satellite, dial-up modem, cable modem, and DSL all providing adequate connectivity today, there is no legitimate need justifying BPL with its interference to legitimate HF broadcaster, military, and amateur communications.

Sincerely,

Gregory J. Knapp, J.D.

73,

Greg, N6GK

Jeff Maass" <jmaass@columbus.rr.com> wrote in message
news:CD1Dc.35$Nx1.19@fe2.columbus.rr.com...
> Go and read this BPL related press release:
>
>
http://www.uplc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
>
>

> Pay particular attention to paragraph three!
>
> Several people I've heard from are also emailing their comments on this
> release to the
> email contact address included in this press release. We expect that she
> should have
> a pretty full email box come Monday morning!
>
> 73,
>
> Jeff Maass K8ND
>
>

4500. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 00:46:15 UTC
From: Roger Halstead <Delete-Invallid.groups@tm.net>
Message-ID: <fqhpd0toatjq7sdp36hs5fjtcibekt73bj@4ax.com>
Source record: 92955

On 23 Jun 2004 12:17:49 GMT, in rec.radio.amateur.antenna you wrote:

>For the first time in many years, I'm about to put up a 20 meter monobander on
>a tower. The XYL is asking questions I cannot answer, specifically relating to
>RF and birds. I wouldn't want to be a bird sitting on an element when a KW is
>supplied to it? Are my concerns valid?
>
Some where around here I have several photos of Cormorants (I think
that's how it's spelled) sitting on the beams. Those are *big* birds
and it shows in the droop of the booms and elements. They didn't seem
to be concerned about 1500 watts.

I couldn't get rid of the darn things. They had decided that was
where they were staying for the night. When I'd chase them off they'd
just come back. Worse than a load of ice. They are bigger than ducks
and there were 8 or 10 of them up there.

Roger Halstead (K8RI & ARRL life member)
(N833R, S# CD-2 Worlds oldest Debonair)
www.rogerhalstead.com

>Gary K5QT

Roger Halstead (K8RI & ARRL life member)
(N833R, S# CD-2 Worlds oldest Debonair)
www.rogerhalstead.com

4501. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 01:10:10 UTC
From: Marty <NOSPAM_vk2umj@yahoo.com.au_NOSPAM>
Message-ID: <40dcccf2_1@news.iprimus.com.au>
Source record: 92956

"Jeff Maass" <jmaass@columbus.rr.com> wrote in message
news:CD1Dc.35$Nx1.19@fe2.columbus.rr.com...
> Go and read this BPL related press release:
>
>
http://www.uplc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
>
>
> Pay particular attention to paragraph three!
>
> Several people I've heard from are also emailing their comments on this
> release to the
> email contact address included in this press release. We expect that she
> should have
> a pretty full email box come Monday morning!
>
> 73,
>
> Jeff Maass K8ND

Being a non-US amateur this really doesn't concern me, but after reading the media release I couldn't resist having may say on her comments about amateurs! My reply to her is copied below.

Cheers

Martin, VK2UMJ

Dear Ms Patterson

Whilst I am not a US citizen and so the current issue of BPL in the USA does not concern me, I am what you incorrectly referred to in your media release as a"armchair amateurs that still use vacuum tube transmitters" and as such, I feel an apology from you to all amateurs, worldwide, is warranted.

Firstly, it is obvious that you are merely an "armchair media officer" that has absolutely no idea or concept of what amateur radio is, what equipment we use, and what knowledge we have. Your comments are defamatory to the entire hobby, worldwide, and are proof that the UPLC hav absolutely no interests other than their own profit margin. It seems that 'truth' is a concept that is lost on people such as yourself.

The level of your own technical inadequacy is further proven by your comment in the release: "Moreover, these systems will incorporate adaptive interference mitigation capabilities that will effectively remedy any

interference that might result to fixed and mobile operations in the High Frequency (HF) band (1.7-80 MHz).". Elementary school level research will tell you that the High Frequency (HF) band actually only covers from 3.0 MHz to 30 MHz, so again your own "armchair media officers that still use kindergarten research material" have shown their level of incompetence.

Whilst I do not believe you are mature enough to admit your errors and apologise to the international amateur radio community for your misguided and inaccurate stereotyping, I can only hope that those in power will see your media release for the inaccurate, defamatory and poorly reasearched garbage that it is.

Yours most disrespectfully

Martin Howells
Australian Amateur Station VK2UMJ

>
>

4502. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 02:32:36 UTC
From: CW <"no adddress"@spam>
Message-ID: <0Y-dnZiiLbDYfUHdRVn-gg@comcast.com>
Source record: 92957

"Greg Knapp" <gknapp@freshrain.org> wrote in message
news:0KCdnR-4lt-kIkHdRVn-gQ@speakeasy.net...
> Thanks for the heads up. I just sent my "reply" to them as
follows--others
> may like to do so as well:
>
> In response to the Press Release re: BPL
> I commented to the FCC that I was opposed to BPL in its current state
> because it has always, to the best of my research, generated some level of
> interference in the high frequency (HF) spectrum in the numerous actual
> deployment tests. Any interference to HF reception has always been
> unacceptable.
>
> I have heard the interference from some actual BPL deployments, and the
> interference would make most of the communications in the HF spectrum
> difficult, especially to the SW Broadcast industry.
>
> The "press release" statement that "UPLC also commented on amateur radio
> opposition to the technology, urging the Commission to ignore "armchair
> amateurs that still use vacuum tube transmitters" and listen to the
> reputable companies and entrepreneurs who are the real experts on BPL" is
> simply not true, is insulting, and misses the whole point.

Translation: Ignore those without a large financial stake and listen to
those who would do anything for a buck.
>
> Whether tubes, transistors, ICs, or the new computer-driven radios are
used,
> the interference from BPL still makes HF use impractical for most current
HF
> users and listeners. This is unacceptable.

The statement about amateurs didn't strike me as stating what kind of
equipment would be effected, it seemed more an attempt to show amateur radio
operators as a group of ignorant, backwards idividuals.
>
> To have the FCC redefine the "no interference" standard to a "fixed limit
of
> level of interference" is also unacceptable.
>
> With satellite, dial-up modem, cable modem, and DSL all providing adequate
> connectivity today, there is no legitimate need justifying BPL with its
> interference to legitimate HF broadcaster, military, and amateur
> communications.
>

> Sincerely,
>
> Gregory J. Knapp, J.D.
>
>
>
> 73,
>
> Greg, N6GK
>
> Jeff Maass" <jmaass@columbus.rr.com> wrote in message
> news:CD1Dc.35$Nx1.19@fe2.columbus.rr.com...
> > Go and read this BPL related press release:
> >
> >
>
http://www.uplc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
> >
> >
> > Pay particular attention to paragraph three!
> >
> > Several people I've heard from are also emailing their comments on this
> > release to the
> > email contact address included in this press release. We expect that
she
> > should have
> > a pretty full email box come Monday morning!
> >
> > 73,
> >
> > Jeff Maass K8ND
> >
> >
>
>

4503. Re: Help newbie with Channel Master 9512 Rotor - homebrew controller ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 03:16:47 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40dced27_1@news1.prserv.net>
Source record: 92958

Tam:

I've held my tongue for quite a while over your inappropriate and unhelpful answers, but you desperately need to learn to read the questions before posing one of your answers. He clearly said 3 WIRE ROTATOR. The clickers are 4 wire.

--
Crazy George
Remove N O and S P A M imbedded in return address
"Tam/WB2TT" <t-tammaru@c0mca$t.net> wrote in message
news:KPOdnU_8A5wHJ0Hd4p2dnA@comcast.com...
>
> "L G" <rolf183@yahoo.com> wrote in message
> news:2k3kmrF17qvk8U1@uni-berlin.de...
> > Think it was 20V AC applied one way or the other.
> >
> > "Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
> > news:40dc5397_2@news1.prserv.net...
> > > Kevin:
> > >
> > > Those 3 wire controllers depend on running a motor in the indicator at
> the
> > > same speed as the rotator, so indicator accuracy is sometimes less
> than.....
>
> Are you sure about that? The Alliance and CDE rotators had an interrupter
> switch in the remote unit that caused a solenoid in the control unit to
> advance the indicator pointer. This pulsing took place every 10 or 15
> degrees of antenna rotation. The pointer turned in whatever direction the
> control knob had been turned.
>
> Tam/WB2TT
>
>

4504. Re: You are all old couch sitting tube thumpers (close to OT)

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 06:22:28 UTC
From: Gray Shockley <gray-87a@cybercoffee.org>
Message-ID: <wK-dnd8h28-4i0DdRVn-gw@giganews.com>
Source record: 92959
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Fri, 25 Jun 2004 09:50:39 -0500, Frank Dresser wrote:

>
> Sounds like the Cranky Old Hams have struck a nerve!!
>
> Frank Dresser
>

I hate to have to say this Frank but I fear that it is about time
that we set up the:

C ranky
O ld
R adio
P articipating
S ociety
E xtended

Motto: Just don't do something; lie there.

Requirement for SWLs: Have conclusively proved that a
5-tube AC-DC superhet really does have a hot chassis.

Requirement for Hams: Minimum of one RF burn.
Extra points for burn thru fingernail or thumbnail.

Dues: if you haven't already paid
them, what are you doing /here/?

Recruiting Slogan: Why, yes; actually
we /are/ as stupid as we look.

Gray Shockley

Be all the B+ that you can be. -30- & 73

4505. Re: You are all old couch sitting tube thumpers

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 06:25:59 UTC
From: Gray Shockley <gray-87a@cybercoffee.org>
Message-ID: <wK-dnd4h289li0DdRVn-gw@giganews.com>
Source record: 92960
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Fri, 25 Jun 2004 03:47:15 -0500, kashe@sonic.net wrote
(in article <fhpnd095hpbmkk98ck72qp5t0p206alnhk@4ax.com>):

> On Fri, 25 Jun 2004 03:43:51 GMT, yea right <spam@spam.spam> wrote:
>
>>
>> It appears the UPLC (United Powerline council) does not value people that
>> enjoy tube radios. This from a group of people that use glass
>> insulators and old wooden power poles to send hi-speed internet.
>>
>> http://www.uplc.utc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=content
>> browser
>> or
>> http://tinyurl.com/35ptp
>>
>
>
> From the article"
>
> "UPLC reminded the Commission that BPL is not just another broadband
> access platform, but one that enables applications in ways that other
> technologies do not by providing enhanced utility applications, home
> networking, symmetric speeds, and low latency for a variety of
> services. Unique applications will improve the efficiency and
> reliability of electric service to utility customers as well as
> promote broadband competition for consumers, carriers and ISPs -
> saving lives, reducing electric generation costs, remedying the
> digital divide and conquering the DSL- cable duopoly."
>
>
>
> Wow! This stuff can do anything except restore virginity. And
> I'm sure they're working on that little problem.

Well, it sorta sounds as if they're actually
going the other way with it.

Picture . . .

Uh, oh - wrong newsgroup - best not.

Forget I brought it up.

++ Gray //

4506. Trade Kenwood for Tuner

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 09:15:25 UTC
From: Carl Domanico <vze2686b@verizon.net>
Message-ID: <N8bDc.6598$aJ3.3323@nwrdny02.gnilink.net>
Source record: 92961

Hi everyone in the group........I have a nice Kenwood TM-741A Triband Mobile radio...It has 144 mhz / and 440 mhz in the radio...However, the 144 mhz (2 meter Module is not functioning...The Radio has all the modifications...I have the owner / operator manual...I'm looking to trade the radio for Either a Johnson Killawatt Tuner...or a James Millen 2 killawatt tuner...Tuner must be in good working condition...and it would be nice if it was also cosmetically in shape....

Carl N2MFW

P. S. I will take cash if the offer presents itself...

4507. BPL Saved my Life!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 14:54:34 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <K6gDc.30906$OB3.21097@bgtnsc05-news.ops.worldnet.att.net>
Source record: 92962
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"Gray Shockley" <gray-87a@cybercoffee.org> wrote in message
news:wK-dnd8h28-4i0DdRVn-gw@giganews.com...

[snip]

>
> Requirement for SWLs: Have conclusively proved that a
> 5-tube AC-DC superhet really does have a hot chassis.
>

[snip]

Not only survived close encounters with the Hot Chassis, but I might have been killed several times over by fully active 5U4s. Yet I survived, thanks to BPL.

But how? Isn't BPL a new invention, far more recent than my clumsy repair efforts? Don't we have a temporal anomoly here? Consider that BPL will provide reliable broadband powerline access to everybody at a very low price. BPL will make power lines quieter. BPL saves lives. And I'm now sure the Rules of Time present no barrier to BPL.

I now realize that BPL exists outside the world of known physics. BPL has found a portal into the world of magical psudeoscience commonly found on Saturday morning cartoons and Star Trek episodes.

Frank Dresser

4508. Re: Help newbie with Channel Master 9512 Rotor - homebrew controller ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 15:07:33 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <TJGdnWeCqqWtDEDdRVn-hQ@comcast.com>
Source record: 92963

"Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
news:40dced27_1@news1.prserv.net...
> Tam:
>
> I've held my tongue for quite a while over your inappropriate and
unhelpful
> answers, but you desperately need to learn to read the questions before
> posing one of your answers. He clearly said 3 WIRE ROTATOR. The clickers
> are 4 wire.
>
> --
> Crazy George
George,
I did not say you were wrong. Just asking if you knew for a fact, or were
guessing. It could be done with 3 wires.

Tam

4509. Re: Help newbie with Channel Master 9512 Rotor - homebrew controller ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 15:33:36 UTC
From: Ralph Mowery <rmowery28146@earthlink.net>
Message-ID: <kHgDc.1774$lh4.1746@newsread1.news.pas.earthlink.net>
Source record: 92964

> I did not say you were wrong. Just asking if you knew for a fact, or were
> guessing. It could be done with 3 wires.
>

I have not looked at a CM in about 15 years but the one then that had 3 wires did not have any feedback to give any indication the antenna was even turning but relied on the two motors to turn at the same speed. The U-100 type rotators used a 4 th wire for the 'clicker'. The rotation on both types were determined by which one of the two winding got the direct power and which one was connected to the capacitor . It takes 3 wires to do that.

4510. Re: Help newbie with Channel Master 9512 Rotor - homebrew controller ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 16:16:17 UTC
From: "G.Beat" <now9spamgb@no.comcast.spam.net>
Message-ID: <IjhDc.113073$eu.29380@attbi_s02>
Source record: 92965

"K. Hastings" <myfamilydotcom@hotmail.com> wrote in message
news:EATCc.63777$Np3.2980746@ursa-nb00s0.nbnet.nb.ca...
> I'm fixing up an older Channel Master light-duty rotor to turn a small 2m
> wooden quad I've built for my attic, but one of the plastic gears in the
> control unit disintegrated in my hand during the rennovation. The rest of
> the control unit is in rough shape too.
>
> I'm thinking of building my own power supply/control unit for this rotor,
> but I'm not clear on just how these 3-wire units actually control the
> rotor.
> Any ideas? I can perhaps make my own simple PS, and figure out the
> direction-setting power scheme, but getting feedback on the antenna
> position
> to prevent over-turn cound be tricky.
>
> Thanks to all who reply...
>
> VE9XYZ Kevin
>

You should be able to find a suitable gear replacement from Small Parts,
Inc. (Florida)
Small Parts, Inc.
13980 N.W. 58th Court
P.O. Box 4650
Miami Lakes, FL 33014-0650

http://www.smallparts.com/

Other interesting rotator sites (modifications and diagrams)

Doug Braun's addition of an indicator to the Radio Shack rotator
http://www.dougbraun.com/rotor_mod.html

http://www.dougbraun.com/pix/rotorpix/P1010017.jpg

http://web.usna.navy.mil/~bruninga/rotator1.html

w9gb

4511. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 18:52:34 UTC
From: jason <jas@kto.net>
Message-ID: <dukDc.742$ni6.26@newsfe2-gui.server.ntli.net>
Source record: 92966

Hello,

It would be easier just to say what the problem was, without going into great detail, then I wouldn't have to skip past your message. I can't be bothered having to read a long document. You should be able to state the problem in a few lines.

"Jeff Maass" <jmaass@columbus.rr.com> wrote in message news:CD1Dc.35$Nx1.19@fe2.columbus.rr.com...
> Go and read this BPL related press release:
>
>
http://www.uplc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
>
>
> Pay particular attention to paragraph three!
>
> Several people I've heard from are also emailing their comments on this
> release to the
> email contact address included in this press release. We expect that she
> should have
> a pretty full email box come Monday morning!
>
> 73,
>
> Jeff Maass K8ND
>
>

4512. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 18:53:58 UTC
From: jason <jas@kto.net>
Message-ID: <xvkDc.743$ni6.237@newsfe2-gui.server.ntli.net>
Source record: 92968

Hello,

No one on here seems capable of saying exactly what the problem is. I don't want to read long boring rambling emails! Just say what's wrong in a few lines in your own words without pointing towards websites.

"Marty" <NOSPAM_vk2umj@yahoo.com.au_NOSPAM> wrote in message news:40dcccf2_1@news.iprimus.com.au...
> "Jeff Maass" <jmaass@columbus.rr.com> wrote in message
> news:CD1Dc.35$Nx1.19@fe2.columbus.rr.com...
> > Go and read this BPL related press release:
> >
> >
>
http://www.uplc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
> >
> >
> > Pay particular attention to paragraph three!
> >
> > Several people I've heard from are also emailing their comments on this
> > release to the
> > email contact address included in this press release. We expect that
she
> > should have
> > a pretty full email box come Monday morning!
> >
> > 73,
> >
> > Jeff Maass K8ND
>
> Being a non-US amateur this really doesn't concern me, but after reading
the
> media release I couldn't resist having may say on her comments about
> amateurs! My reply to her is copied below.
>
> Cheers
>
> Martin, VK2UMJ
> ----------------------
>
> Dear Ms Patterson
>
> Whilst I am not a US citizen and so the current issue of BPL in the USA
does
> not concern me, I am what you incorrectly referred to in your media

release
> as a"armchair amateurs that still use vacuum tube transmitters" and as
such,
> I feel an apology from you to all amateurs, worldwide, is warranted.
>
> Firstly, it is obvious that you are merely an "armchair media officer"
that
> has absolutely no idea or concept of what amateur radio is, what equipment
> we use, and what knowledge we have. Your comments are defamatory to the
> entire hobby, worldwide, and are proof that the UPLC hav absolutely no
> interests other than their own profit margin. It seems that 'truth' is a
> concept that is lost on people such as yourself.
>
> The level of your own technical inadequacy is further proven by your
comment
> in the release: "Moreover, these systems will incorporate adaptive
> interference mitigation capabilities that will effectively remedy any
> interference that might result to fixed and mobile operations in the High
> Frequency (HF) band (1.7-80 MHz).". Elementary school level research will
> tell you that the High Frequency (HF) band actually only covers from 3.0
MHz
> to 30 MHz, so again your own "armchair media officers that still use
> kindergarten research material" have shown their level of incompetence.
>
> Whilst I do not believe you are mature enough to admit your errors and
> apologise to the international amateur radio community for your misguided
> and inaccurate stereotyping, I can only hope that those in power will see
> your media release for the inaccurate, defamatory and poorly reasearched
> garbage that it is.
>
> Yours most disrespectfully
>
> Martin Howells
> Australian Amateur Station VK2UMJ
>
>
> >
> >
>
>

4513. Re: Lisa & Maggie Simpson secretly make love with Bart

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 18:54:18 UTC
From: jason <jas@kto.net>
Message-ID: <RvkDc.744$ni6.583@newsfe2-gui.server.ntli.net>
Source record: 92967
Cross-posted to: alt.tv.xena.creative.mature,rec.radio.amateur.antenna

No not really as a woman can't!

"Him" <inearnest@toontoon.com> wrote in message
news:cbi8cd$2v84$114@news.nextra.cz...
> Also, ever dream of watching Marge Simpson cum?
>
> Click on Http://www.ToonToon.com///ximpsons
>
>
>
>
>
>
> To <herfellating@toontoon.com> wrote in message
> news:4XEKfZhbvwTYjNFMeGFQN@toontoon.com...
> >
> > rhythms He was whimpering now absolutely shaking
> >
> >
>
>

4514. Re: Indoor antenna question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 20:12:03 UTC
From: william rothenberg <jbroth@bellsouth.net>
Message-ID: <ZIkDc.5061$5N4.1840@bignews4.bellsouth.net>
Source record: 92969

Try the new screw driver ant systems. They look impressive on HF
"Bob P" <nospam@nospam.end> wrote in message
news:UuJBc.27072$eH1.12631746@newssvr28.news.prodigy.com...
> Anyone familiar with these full length roof vents on newer houses and
> re-roofs?
> Are they metal or plastic?
> Looking to buy a house (in Michigan) and it has such a vent. An outside
> antenna seems unlikely as it is a newer subdivision so I'll probably have
to
> go camouflaged vertical or a peak of the roof, indoor dipole.
> 73, thanks
> Bob
> kb8tl at Yahoo dot com
>
> (spam disguised, replying directly to this note won't work)
>
>

4515. siro827 5/8 wave cb ant tuned to 10 meters working on 20 meters

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 20:14:34 UTC
From: DAVID BROWNE <david.browne7@ntlworld.com>
Message-ID: <BGIDc.237$326.225@newsfe1-win>
Source record: 92970

hi i used a mfj ant analyser and tuned this ant to 29.600,
checked on 20 meters and analyser reed swr of 2:1, 60 ohm so will this work
well, will it be working as a 1/4 wave on 20 meters, with atu
thanks dave browne

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.711 / Virus Database: 467 - Release Date: 25/06/2004

4516. Re: Unity Gain?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 20:15:43 UTC
From: william rothenberg <jbroth@bellsouth.net>
Message-ID: <pMkDc.5101$5N4.93@bignews4.bellsouth.net>
Source record: 92871

Also reflects a vertical or horizontal dipole signal. (No gain over a
dipole)
"Dan Richardson @arrl.net>" <<ChangeThisToCallSign> wrote in message
news:3v5jd0p8i6khm4dms81a7c51qkqrmmbdud@4ax.com...
> From time to time an antenna manufactures will state that an antenna
> has "unity gain". It is my understanding that this term is used for
> describing antennas used in mobile applications and is referenced to
> the gain of a quarter-wave whip.
>
> Does anyone know of any instances where this term is used otherwise?

4517. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 20:15:57 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <NeucnddUz688REDdUSdV9g@ptd.net>
Source record: 92872

"Jeff Maass" <jmaass@columbus.rr.com> wrote in message
news:CD1Dc.35$Nx1.19@fe2.columbus.rr.com...
> Go and read this BPL related press release:
>
>
http://www.uplc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
>
>
> Pay particular attention to paragraph three!

The entire thing is (there is no polite way to put it ...) a stinking pile
of crap and their assertions about interference ate totally contrary to the
facts (not to mention the laws of physics).

Carl - wk3c

4518. inline swr meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 20:25:39 UTC
From: RB <rbig@bellsouth.nospam.net>
Message-ID: <qOkDc.2139$AN5.559@bignews2.bellsouth.net>
Source record: 92873

I have a very nice ham SWR meter that was bought in '74 timeframe in the electronics district in Tokyo. It is an inline Osker Block unit (never heard of 'em). I would like to use it, and think I can. But, need an understanding of how it works first, and this is what I'm seeking help on.

It appears it is designed for 75m-2m ops.

The unit is well built, and is a metal box approx 3" square on the ends, and 8" across the front. It has coax fittings on each end. There is a 75ohm/50ohm selector switch by one of the coax fittings. There are separate power and SWR panel meters in the box.

There is a calibration chart that is obviously used in conjunction with a small control device which is knob adjustable. It may be a var cap, or a variable resistor (pot). The calibration card has two control setting scenarios: one for 50 ohms, and one for 75 ohms.

The calibration card has different control settings for different power levels at the same freq.

I ASSUME the cal card setpoints are supposed to give me approx 0 meter reading if the xmtr signal is seeing close to 1:1 SWR. Is this likely correct?

And yes, I could easily rig things, using a coax switch, to where I could take comparative readings between the Osker and my normal SWR meter, and do a cut and try thing. However, it would be an inconvenience to have to do this. And, I figure there are people in this group who probably have the info I'm looking for at hand.

4519. Re: inline swr meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 21:16:17 UTC
From: jason <jas@kto.net>
Message-ID: <XAmDc.766$ni6.293@newsfe2-gui.server.ntli.net>
Source record: 92874

Hello,

First switch it to 50 ohms as that's what CB's use. While you hold the mic button in and transmit, put the meter to SET or CAL and adjust so the needle goes to the SET/CAL mark on the scale. Switch it to REF or reflected and it will show the SWR reading.
You need to adjust it if you change power by the way !

"RB" <rbig@bellsouth.nospam.net> wrote in message news:qOkDc.2139$AN5.559@bignews2.bellsouth.net...
> I have a very nice ham SWR meter that was bought in '74 timeframe in the
> electronics district in Tokyo. It is an inline Osker Block unit (never
> heard of 'em). I would like to use it, and think I can. But, need an
> understanding of how it works first, and this is what I'm seeking help on.
>
> It appears it is designed for 75m-2m ops.
>
> The unit is well built, and is a metal box approx 3" square on the ends, and
> 8" across the front. It has coax fittings on each end. There is a
> 75ohm/50ohm selector switch by one of the coax fittings. There are separate
> power and SWR panel meters in the box.
>
> There is a calibration chart that is obviously used in conjunction with a
> small control device which is knob adjustable. It may be a var cap, or a
> variable resistor (pot). The calibration card has two control setting
> scenarios: one for 50 ohms, and one for 75 ohms.
>
> The calibration card has different control settings for different power
> levels at the same freq.
>
> I ASSUME the cal card setpoints are supposed to give me approx 0 meter
> reading if the xmtr signal is seeing close to 1:1 SWR. Is this likely
> correct?
>
> And yes, I could easily rig things, using a coax switch, to where I could
> take comparative readings between the Osker and my normal SWR meter, and do
> a cut and try thing. However, it would be an inconvenience to have to do
> this. And, I figure there are people in this group who probably have the
> info I'm looking for at hand.
>
>

4520. 2M homemade colinear designs?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 22:56:07 UTC
From: Larry Gagnon <lagagnon@fakeuniserve.com>
Message-ID: <pan.2004.06.26.22.56.04.291812@fakeuniserve.com>
Source record: 92875

Am looking for some links to homebrew designs for a base station 2M colinear (two stacked 5/8 wave type). I prefer something simple made from PVC and wire. Any ideas considered.

Larry VE7EA

4521. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 23:03:24 UTC
From: kashe@sonic.net
Message-ID: <q50sd0phs1ahjk5ai6is763bgvrchjchfg@4ax.com>
Source record: 92876

On Sat, 26 Jun 2004 19:53:58 +0100, "jason" <jas@kto.net> wrote:

>Hello,
>
>No one on here seems capable of saying exactly what the problem is. I don't
>want to read long boring rambling emails! Just say what's wrong in a few
>lines in your own words without pointing towards websites.

Richard Feynman, after receiving a Nobel Prize in physics, was
honored at a ladies' club tea. The MC asked him to describe simply the
research for which he had been given the prize. He replied, "Madam, if
it could be described simply, they wouldn't have given me a prize."

4522. FM arial help

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 23:24:22 UTC
From: FB <calumnospam@mandalay8.freeserve.co.uk>
Message-ID: <cbl0j5$qd0$1@sparta.btinternet.com>
Source record: 92877

Hello,
Judging by your posts (I didn't understand one) this might seem obvious but I'm no radio expert.
I want to improve the FM reception in the house for my new DVD player (Sony DAV SC5 - excellent sound) and plan to run a co-ax cable to the attic. There is a spare tv arial up there from the previous owner. Will that be of any use or should I buy a dedicated FM arial, and if so what should I look for? I am in Scotland and the house is two storey so the attic is quite high up.

Thanks in advance.

Calum

4523. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-26 23:49:46 UTC
From: KL=?ISO-8859-1?B?2A==?=S <kl0s@cox.net>
Message-ID: <BD0383D9.4E5FA%kl0s@cox.net>
Source record: 92878

Here's my note to the media assistant....probably won't do much good but I feel better anyway.

73 - Dino KLï¿½S/4

As a licensed amateur radio operator, FCC call sign KL0S, I am very concerned with the spectrum pollution (interference) associated with the new broadband over power line technology the FCC is considering for approval for use by the power line industry.

As a retired U.S. Army officer I have had extensive experience in radio communications operations under active electronic warfare conditions and many of the those experiences mirror the noise conditions that will potentially be generated by the BPL initiative.

The industry plans to use a form of power line carrier (PLC) technology using existing low and medium-voltage power lines to deliver broadband (internet) services to homes and businesses. It uses frequencies between 2 MHz and 80 MHz; and ARRL laboratory and in field tests have documented that BPL causes interference (spectrum pollution) to HF and low-VHF frequencies currently in use by the Government (Department of Defense and Homeland Security), law enforcement agencies, amateur radio and commercial businesses. Further, the current BPL technology itself may be susceptible to transmissions from other existing services.

To appreciate the level of interference, please visit the ARRL web page at [http://www.arrl.org/news/stories/2003/08/08/2/?nc=1] and listen to the BPL interference recorded from one of the FCC test sites. As I mentioned the noise portrayed eerily matches that encountered during electronic warfare conditions. Contrary to power industry claims, the ARRL tests convinced me the current BPL technology will generate major
interference to existing services, including amateur radio, public service and and potentially other Homeland Security communications activities such as those conducted under the MARS AND SHARES programs. The ARRL President, Mr. Jim Haynie is prepared to provide the FCC with more details. He can be reached at 214-366-9400 or w5jbp@arrl.org

Regarding the FCC Notice of Inquiry, I recommend tightening of the FCC Part 15 requirements and/or standards for power line carrier (PLC) devices to assure they will not cause interference (or be susceptible from) to existing services. In addition, I would appreciate documentation from the FCC that adequate testing has been performed to assure broadband over power line technology will not cause interference to existing services. Hopefully, this testing will be well documented and made public before the technology is approved for use by the power line industry.

I recently had occasion to work with my local power provider, Dominion Virginia Power on a power distribution system generated incidental radiator that caused significant noise at my home. The power company worked expeditiously to find and resolve the problem, however I can only imagine the magnitude of the problems that potentially will be initiated by BPL type incidental radiation levels. With only that small problem (a faulty underground cable splice) my ability to communicate was severely degraded, much to the same degree as discovered by the ARRL in their fact finding mission mentioned above.

All communicators, both professional and amateur sincerely hope the power line industry discovers a technical solution to the BPL interference issue so we can all enjoy the benefits of having broadband internet to our home via power lines.

Constantine T. Papas
Colonel United States Army Retired

4524. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 00:37:17 UTC
From: Marty <NOSPAM_vk2umj@yahoo.com.au_NOSPAM>
Message-ID: <40de16bc_1@news.iprimus.com.au>
Source record: 92879

"jason" <jas@kto.net> wrote in message
news:xvkDc.743$ni6.237@newsfe2-gui.server.ntli.net...
> Hello,
>
> No one on here seems capable of saying exactly what the problem is. I
don't
> want to read long boring rambling emails! Just say what's wrong in a few
> lines in your own words without pointing towards websites.

Well, personally, I took offence at the general comments about amateur radio
operators:

"UPLC also commented on amateur radio opposition to the technology, urging
the Commission to ignore "armchair amateurs that still use vacuum tube
transmitters" and listen to the reputable companies and entrepreneurs who
are the real experts on BPL and who have overcome enormous technical
obstacles to make BPL a reality in the U.S. "

Of course, those in the USA will probably be disputing much more than just
that, but as I am not in the US I could not make comment on the entire BPL
issue.

No doubt, we in Australia will soon be facing similar debates as the BPL
experiments continue down here!!! It would be good if the FCC decides BPL
is too risky - kind of set an example that operators in other countries can
use to argue their point!

Cheers

Martin, VK2UMJ

>
> "Marty" <NOSPAM_vk2umj@yahoo.com.au_NOSPAM> wrote in message
> news:40dcccf2_1@news.iprimus.com.au...
> > "Jeff Maass" <jmaass@columbus.rr.com> wrote in message
> > news:CD1Dc.35$Nx1.19@fe2.columbus.rr.com...
> > > Go and read this BPL related press release:
> > >
> > >
> >
>
http://www.uplc.org/?cbr_v=dcb&nt=true&cbr_eid=25276&p=admin&ct=contentbrowser
> > >
> > >
> > > Pay particular attention to paragraph three!
> > >

> > > Several people I've heard from are also emailing their comments on
this
> > > release to the
> > > email contact address included in this press release. We expect that
> she
> > > should have
> > > a pretty full email box come Monday morning!
> > >
> > > 73,
> > >
> > > Jeff Maass K8ND
> >
> > Being a non-US amateur this really doesn't concern me, but after reading
> the
> > media release I couldn't resist having may say on her comments about
> > amateurs! My reply to her is copied below.
> >
> > Cheers
> >
> > Martin, VK2UMJ
> > ----------------------
> >
> > Dear Ms Patterson
> >
> > Whilst I am not a US citizen and so the current issue of BPL in the USA
> does
> > not concern me, I am what you incorrectly referred to in your media
> release
> > as a"armchair amateurs that still use vacuum tube transmitters" and as
> such,
> > I feel an apology from you to all amateurs, worldwide, is warranted.
> >
> > Firstly, it is obvious that you are merely an "armchair media officer"
> that
> > has absolutely no idea or concept of what amateur radio is, what
equipment
> > we use, and what knowledge we have. Your comments are defamatory to the
> > entire hobby, worldwide, and are proof that the UPLC hav absolutely no
> > interests other than their own profit margin. It seems that 'truth' is
a
> > concept that is lost on people such as yourself.
> >
> > The level of your own technical inadequacy is further proven by your
> comment
> > in the release: "Moreover, these systems will incorporate adaptive
> > interference mitigation capabilities that will effectively remedy any
> > interference that might result to fixed and mobile operations in the
High
> > Frequency (HF) band (1.7-80 MHz).". Elementary school level research
will

> > tell you that the High Frequency (HF) band actually only covers from 3.0
> MHz
> > to 30 MHz, so again your own "armchair media officers that still use
> > kindergarten research material" have shown their level of incompetence.
> >
> > Whilst I do not believe you are mature enough to admit your errors and
> > apologise to the international amateur radio community for your
misguided
> > and inaccurate stereotyping, I can only hope that those in power will
see
> > your media release for the inaccurate, defamatory and poorly reasearched
> > garbage that it is.
> >
> > Yours most disrespectfully
> >
> > Martin Howells
> > Australian Amateur Station VK2UMJ
> >
> >
> > >
> > >
> >
> >
>
>

4525. Re: FM arial help

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 02:20:03 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40de316f_3@news1.prserv.net>
Source record: 92880

Calum:

You can try it, it won't hurt anything, but the TV antenna is for UHF unless it is very old, and since FM is a longer wavelength (VHF), it needs a larger antenna. On the other hand, just having some metal in the attic may work better than the present antenna. Give it a try, and if it is unsatisfactory, replace the TV antenna with a FM antenna.

--
Crazy George
Remove N O and S P A M imbedded in return address
"FB" <calumnospam@mandalay8.freeserve.co.uk> wrote in message
news:cbl0j5$qd0$1@sparta.btinternet.com...
> Hello,
> Judging by your posts (I didn't understand one) this might seem obvious
but
> I'm no radio expert.
> I want to improve the FM reception in the house for my new DVD player
(Sony
> DAV SC5 - excellent sound) and plan to run a co-ax cable to the attic.
> There is a spare tv arial up there from the previous owner. Will that be
of
> any use or should I buy a dedicated FM arial, and if so what should I look
> for? I am in Scotland and the house is two storey so the attic is quite
> high up.
>
> Thanks in advance.
>
> Calum
>
>

4526. Re: BPL Saved my Life!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 05:38:18 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40DE5D4A.58DFE0CF@cwis.net>
Source record: 92881
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

Frank,
Can I have some of whatever you're smoking?
'Doc

4527. Vertical 40m~6m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 06:35:13 UTC
From: /* frank */ <__frank__@despammed.com>
Message-ID: <2k77t8F18r6bcU2@uni-berlin.de>
Source record: 92882

Which vertical antenna 40m~6m (WARC included) do you suggest?
Thanks

4528. Re: BPL Saved my Life!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 06:44:08 UTC
From: Gray Shockley <gray-87a@cybercoffee.org>
Message-ID: <4LadncaNKLck8UPdRVn-uA@giganews.com>
Source record: 92883
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

On Sat, 26 Jun 2004 09:54:34 -0500, Frank Dresser wrote
(in article
<K6gDc.30906$OB3.21097@bgtnsc05-news.ops.worldnet.att.net>):

>
> "Gray Shockley" <gray-87a@cybercoffee.org> wrote in message
> news:wK-dnd8h28-4i0DdRVn-gw@giganews.com...
>
> [snip]
>
>>
>> Requirement for SWLs: Have conclusively proved that a
>> 5-tube AC-DC superhet really does have a hot chassis.
>>
>
> [snip]
>
> Not only survived close encounters with the Hot Chassis, but I might have
> been killed several times over by fully active 5U4s. Yet I survived, thanks
> to BPL.
>
> But how? Isn't BPL a new invention, far more recent than my clumsy repair
> efforts? Don't we have a temporal anomoly here? Consider that BPL will
> provide reliable broadband powerline access to everybody at a very low
> price. BPL will make power lines quieter. BPL saves lives. And I'm now
> sure the Rules of Time present no barrier to BPL.
>
> I now realize that BPL exists outside the world of known physics. BPL has
> found a portal into the world of magical psudeoscience commonly found on
> Saturday morning cartoons and Star Trek episodes.
>
> Frank Dresser
>
>

The campus radio station (mid 1960's) at Ole Miss broadcast over
power lines. Quite unreliable but if one hasn't got a 'tenna,
then a cable will do and if you don't have a 'tenna, then God
bless you.

Gray Shockley

Have you ever had just /one/ of those centuries?

4529. Re: To those that said it would not work

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 06:52:36 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <U8uDc.68080$2o2.4296290@twister.southeast.rr.com>
Source record: 92884

<nospam@nouce.bellatlantic.net> wrote in message
news:l6jod051fd4gemf76neg751p6bf09vcumi@4ax.com...
> On Fri, 25 Jun 2004 15:29:32 GMT, "Jimmie" <Gfender@carolina
> dot.rr.dot com> wrote:
> >Funny, I dont remember saying anything about gain. For me 5/8 are just
> >easier to build and tune.
>
> Still it needs a ground plane and that does add mechanical
> complication of a different sort.
Not much on two meters, use 3/4 inch wooden dowl or acrylic rod for
supporting 3/4 inch tublar radiator. This also becomes the coil form for
thre matching coil. Groudplane can be anythinh from stiff wire held on by a
radiator clamp to a metal roof. Even with the radials going nearly straight
down from the antenna it seems to work pretty well. Ive cobbled these to
gether in an hour or so and have spent all evening making one look pretty.
They both worked well and gave long service. Constuction goes a lot faster
once you get some experience on where to tap the coil and know how many
turns, One day I am going to write this down when I make one.However I find
that figuring the right lengths for the 5/8 is not nearly as fussy as doing
a J from scratch
I dont mind J antennas a a horizontal dipole on HF where the stub length is
convinent to handle. This can be a problem when you get on down in freq. I
can use one on 20 meters at this freq the stub works well as my transmission
line. For me J's work from 6m trhough 20 meters. Wouldnt dream of actually
buying one though.
>
> I've built both and for differing reasons each works well when well
> made. I find making a 5/8ths harder to achive for say 2m or 6m out of
> copper pipe than a J.
>
>
> Allison
> KB!GMX

4530. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 11:09:58 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <aWxDc.188458$Ly.9934@attbi_s01>
Source record: 92885

jason wrote:
> Hello,
>
> No one on here seems capable of saying exactly what the problem is. I don't
> want to read long boring rambling emails! Just say what's wrong in a few
> lines in your own words without pointing towards websites.

BPL comes into your house at the power company service box. Even if you
don not connect to it.

It creates S9++ signals from 2 to 80 MHz.

You can't hear anything on your new 10,000 dollar ICOM 7800 or any other
radio except 'Data Hash'.

Is that clear enough??

4531. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 11:47:50 UTC
From: fractenna@aol.com
Message-ID: <20040627074750.23168.00000766@mb-m07.aol.com>
Source record: 92886

>BPL comes into your house at the power company service box. Even if you
>don not connect to it.
>

FACT: The Cedar Rapids deployment has a WLAN link from the pole. The wires carry the 2-80 MHz. How does that go from 2-80 MHz --into-- the house?

>It creates S9++ signals from 2 to 80 MHz.

FACT: Sure, if you drive your 1972 Nova with 'HAM ON BOARD' sticker (for example) under the power line, this is a consistently true statement. Otherwise, there are some, few, circumstances in which an unacceptabel (pun and sic intended) level of 'hash' will arise in that passband to the annoyance of some hams. Based on assumption, the number of hams affected nation wide is in the hundreds. For comparison, the number of hams affected by tower erection restrictions is in the tens of thousands.

>You can't hear anything on your new 10,000 dollar ICOM 7800 or any other
>radio except 'Data Hash'.
>

FACT: Sure, if very nearby and unfiltered, this could be a problem. However, the FCC rules require filtering for RFI mitigation in such circumstances.

>Is that clear enough??
>

FACT: A vocal minority of hams want to 'kill BPL'. As opposed to working with the power companies to fix the problem.

FACT: The press has used this exchange, in many circumstances, to view us with the jaundiced eye of being anti-technology and very out of date. Why is it that they just don't see it as reason to 'kill BPL'?

God Bless,

Chip N1IR

4532. Re: Bird Brained Question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 12:37:06 UTC
From: billybeeper@juno.com
Message-ID: <1e4e3692.0406270437.68a69e51@posting.google.com>
Source record: 92887

Cecil Moore <w5dxp@hotmail.com> wrote in message news:<40d98cd4_8@corp.newsgroups.com>...
> AA5QT wrote:
> > For the first time in many years, I'm about to put up a 20 meter monobander on
> > a tower. The XYL is asking questions I cannot answer, specifically relating to
> > RF and birds. I wouldn't want to be a bird sitting on an element when a KW is
> > supplied to it? Are my concerns valid?
>
> I've tried to chase Starlings away by applying 100W to my 20m rotatable
> dipole. Some fly away. Some just sit there and tingle, jumping around
> and ruffling their feathers. On my antenna, the only place guaranteed to
> chase away a bird is the feedpoint with one foot on each side.

Cecil, place a bird feeder on the boom directly in front of the feedpoint. ;^)

4533. Millen grid dip meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 13:07:56 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <MEzDc.7677$x9.5280@nwrddc02.gnilink.net>
Source record: 92888

I want to make a coil for a Millen grid dip meter that I bought *without*
coils. It would be alot easier if I had a picture of the coil Milen uses
for the 60 to 150 MHz range. Is there anyone who'd be willing to send me a
picture of that coil?

Thanks
Jerry

4534. ATAS-120 balcony mount

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 13:14:51 UTC
From: Gery Duyck <Gery@duyck-co.be>
Message-ID: <40dec855$0$8395$a0ced6e1@news.skynet.be>
Source record: 92889

Hi,

At the end of this summer we're going on a little trip, and I was thinking to take our ATAS-120 with us.

Would the balcony be fine to use ass mass (aprox 4m x 1m), or should I need extra radials.

Anybody with experiance with this?

ON4GDK

4535. Re: Millen grid dip meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 13:21:03 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40decc76_4@news1.prserv.net>
Source record: 92890

Go to the jamesmillenco.com web site and scroll halfway down page 1 for a photo of the coils in the rack. A further Google search will reveal many other pages with photos. The 60 - 150 coil is two turns of #20 wire 3/8" dia., and spaced about 1/8" apart out at the end of the plastic tube (inside it).

--
Crazy George
Remove N O and S P A M imbedded in return address
"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:MEzDc.7677$x9.5280@nwrddc02.gnilink.net...
> I want to make a coil for a Millen grid dip meter that I bought
without
> coils. It would be alot easier if I had a picture of the coil Milen uses
> for the 60 to 150 MHz range. Is there anyone who'd be willing to send me
a
> picture of that coil?
>
> Thanks
> Jerry
>
>

4536. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 13:58:22 UTC
From: derswede@aol.comspam.com
Message-ID: <20040627095822.23881.00000737@mb-m28.aol.com>
Source record: 92891

<< >BPL comes into your house at the power company service box. Even if you don
not connect to it.>

FACT: The Cedar Rapids deployment has a WLAN link from the pole. The wires
carry the 2-80 MHz. How does that go from 2-80 MHz --into-- the house? >>

Umm..."rf propagation"?? I thought you designed antennas...you don't know
THIS?

<< >It creates S9++ signals from 2 to 80 MHz.

FACT: Sure, if you drive your 1972 Nova with 'HAM ON BOARD' sticker (for
example) under the power line, this is a consistently true statement.
Otherwise, there are some, few, circumstances in which an unacceptabel (pun
and sic intended) level of 'hash' >>

Hmmm...ok, this is for "rural internet access." "Looking out the window, what
do I see? A POWER POLE!!" Oh, 50ft away or so from the house. Hmmm...BPL at
50ft....??!!?? (Oh, and the car is a T5 Volvo...5 spd manual, of course...no
stickers...just speed & style)

<< Based on assumption, the number of hams affected nation wide is
in the hundreds. >>

Of thousands? Last time I checked, most houses had powerlines SOMEWHERE in the
general vicinity.

<< FACT: Sure, if very nearby and unfiltered, this could be a problem. However,
the FCC rules require filtering for RFI mitigation in such circumstances. >>

See above. Ever tried to get the bloody power companies to fix an arcing
insulator??

<< FACT: A vocal minority of hams want to 'kill BPL'. As opposed to working
with
the power companies to fix the problem. >>

Hmm...Germany and Japan are a "vocal minority?" Both tried it, and discarded
it due to interference. THAT "fixed it," but good.

WLAN (mebbe 5.6 ghz or so? W/a cable feed?) is a good idea, tho. PLC is not.
Duke Power (Duke Energy) is working on some trials.....I unwittingly drove thru
one neighborhood w/PLC and later realized that I had done so....interference
ranges from S5 to S9+ on my mobile. The houses are not much farther away from
the PL than my mobile. Empirical data says that interference would be present
there, also. I had shut off the mobile as I wished to save my ears. Thought
something had started arcing nearby. Heh...and just wait 'til the sunspot
cycle starts back upwards....

A

4537. Re: Coaxial sleeve antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 14:09:17 UTC
From: Jimmie <Gfender@carolina>
Message-ID: <hyADc.68321$2o2.4339693@twister.southeast.rr.com>
Source record: 92892

"VE8AE Andrew" <antennas@yahoo.com> wrote in message
news:e8be44e3.0406202018.2d9c2aa@posting.google.com...
> I want to build a nice small antenna for my boat. I had a J pole in a
> PVC tube, but I thought about a vertical dipole of the sleeve type.
> Can you make such a beast with the coax and just remove outer
> insulation and then pull braid back over the coax until they are both
> the same length? I want it for 156.8 MHz so it should be around 1.5 ft
> per side. But I have seen an article that says the top portion should
> be smaller than the lower braid portion to balance things out
> electrically. Can anyone shed some light on this for me? I have tried
> it and my analyzer doesn't show it resonant anywhere near that freq.
> Hmmmm.
> Help please.
> Any other good marine antennas that are easy to build would be great
> if you have plans or ideas. Thanks folks.
> Andrew VE8AE

The outer jacket of coax has some pretty bad properties at these
frequencies. Normally this is not a problem as it is generally just used to
keep water out of the coax. With the sleeve type antenna you are building
you are expecting it to be an RF insulator, a job it was never designed to
do. Ive found these work much better by cutting off the shield where they
fold back and replacing it with a length of Teflon insulted wire. Other
types of insulation may work as well but I have not tried it.

4538. Re: Millen grid dip meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 14:11:46 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <CAADc.7753$DT5.2033@nwrddc03.gnilink.net>
Source record: 92893

Thanks, George I just made one. I wound a piece of 1/8 th diameter
aluminum wire around a 3/8 th bolt. The leads on the coil to the meter are
that same 1/8 th wire, about 2 inches long.
I'm impressed that the grid dipper now produces 137.50 MHz when the dial
reads 130.00. Hows that for good instructions from you??
I can tweek the frequency later, but now I see that this meter doesnt have
alot os "power out".

The grid dipper needle doesnt get above 0.1 so the poor sensitivity is
going to make this meter difficult to interpret. I got a schematic with
this (eBay) grid dipper so I expect I'll be able to do something to get the
meter to read a little farther up scale.

I appreciate your help.

Thanks
Jerry

"Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
news:40decc76_4@news1.prserv.net...
> Go to the jamesmillenco.com web site and scroll halfway down page 1 for a
> photo of the coils in the rack. A further Google search will reveal many
> other pages with photos. The 60 - 150 coil is two turns of #20 wire 3/8"
> dia., and spaced about 1/8" apart out at the end of the plastic tube
(inside
> it).
>
> --
> Crazy George
> Remove N O and S P A M imbedded in return address
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> news:MEzDc.7677$x9.5280@nwrddc02.gnilink.net...
> > I want to make a coil for a Millen grid dip meter that I bought
> *without*
> > coils. It would be alot easier if I had a picture of the coil Milen
uses
> > for the 60 to 150 MHz range. Is there anyone who'd be willing to send
me
> a
> > picture of that coil?
> >
> > Thanks
> > Jerry
> >
> >

>
>

4539. Re: BPL Saved my Life!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 14:20:04 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <oIADc.147125$Gx4.17017@bgtnsc04-news.ops.worldnet.att.net>
Source record: 92894
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"'Doc" <w5lz@cwis.net> wrote in message news:40DE5D4A.58DFE0CF@cwis.net...
>
>
> Frank,
> Can I have some of whatever you're smoking?
> 'Doc

Smoking? No sir, I'm in BPL nirvana. BPL nirvana is the best sort of nirvana, because wishing for something makes it so. The only thing I haven't been able to wish away is the occasional cacophony of Cranky Old Hams. They sound just like my alarm clock.

However, I fear it may already be morning in America.

Frank Dresser

4540. Re: BPL Saved my Life!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 14:20:13 UTC
From: Frank Dresser <analogdial@worldnet.att.net>
Message-ID: <xIADc.147126$Gx4.62975@bgtnsc04-news.ops.worldnet.att.net>
Source record: 92895
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"Gray Shockley" <gray-87a@cybercoffee.org> wrote in message
news:4LadncaNKLck8UPdRVn-uA@giganews.com...

> The campus radio station (mid 1960's) at Ole Miss broadcast over
> power lines. Quite unreliable but if one hasn't got a 'tenna,
> then a cable will do and if you don't have a 'tenna, then God
> bless you.
>
>

Now that you mention it, my survival probably has more to do with Divine Intervention than BPL. I'm sure Divine Intervention is even better than BPL, because I don't imagine The Divine would get so flummoxed by Cranky Old Hams.

Frank Dresser

4541. FS: Hustler RM-75-S

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 14:34:48 UTC
From: k7itm@aol.com
Message-ID: <3200347.0406270634.5102813d@posting.google.com>
Source record: 92896

Hi all. I have for sale a Hustler RM-75-S assembly as came with a Hustler 5BTV. Use it to replace a bad one on your 5BTV, or turn a 4BTV into a 5BTV. Unused, in original shipping tube, complete with the whip and the little wrench for adjusting the whip. Came with a 5BTV a long time ago but I never put the 75M resonator on it. Best offer by 5 July over $15 + shipping.

Cheers,
Tom

4542. Re: Vertical 40m~6m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 15:26:21 UTC
From: Bob Nielsen <nielsen@removethis.oz.net>
Message-ID: <cbmout$786$0@216.39.144.81>
Source record: 92897

On Sun, 27 Jun 2004 08:35:13 +0200, /* frank */ wrote:
> Which vertical antenna 40m~6m (WARC included) do you suggest?
> Thanks

I'm quite pleased with my Hy-Gain AV-640.

Bob, N7XY

4543. Outbacker Fly Lead Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 16:06:42 UTC
From: patrickatwood@earthlink.net
Message-ID: <d1d0e015.0406270806.13541eec@posting.google.com>
Source record: 92898

Greetings,

Can anyone tell me what the proper fly lead length is for an Outbacker Perth Plus antenna? It's the lead that connects to ground. I have already been to the Terlin Aerials website and emailed them twice, with no response. Thanks in advance.

Pat WL7Z

4544. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 16:30:55 UTC
From: "Carl R. Stevenson" <wk3cqth@wk3c.com>
Message-ID: <ZCmdnSle_rM-a0PdUSdV9g@ptd.net>
Source record: 92899

"Fractenna" <fractenna@aol.com> wrote in message
news:20040627074750.23168.00000766@mb-m07.aol.com...
> >BPL comes into your house at the power company service box. Even if you
> >don not connect to it.
> >
>
> FACT: The Cedar Rapids deployment has a WLAN link from the pole. The
wires
> carry the 2-80 MHz. How does that go from 2-80 MHz --into-- the house?

It is true that at least one (proprietary - they're all proprietary)
implementation of BPL forgoes the issues associated with coupling around the
transformer that steps the MV distribution down to 220 VAC for the feed to
the house by using 802.11b to link from a distribution point (essentially an
802.11b access point) to the computers in nearby houses.

However ...

> >It creates S9++ signals from 2 to 80 MHz.

Even the "flavor" that uses 802.11b to get from the pole to your house
radiates a LOT of interference in the HF/low VHF bands it uses from the
(nearby) distribution lines.

The "main.net" system operated by PP&L in Emmaus, PA measured -60 dBm
(that's S9+13 dB) of interference in a 3 kHz bandwidth, using an "Outbacker
Joey" short whip clamped to the roof rack of my Ford Explorer.

That rendered 20m SSB signals in the range of -80 to -100 dBm (which would
normally be quite usable) unintelligible.

> FACT: Sure, if you drive your 1972 Nova with 'HAM ON BOARD' sticker (for
> example) under the power line, this is a consistently true statement.
> Otherwise, there are some, few, circumstances in which an unacceptabel
(pun
> and sic intended) level of 'hash' will arise in that passband to the
annoyance
> of some hams. Based on assumption, the number of hams affected nation wide
is
> in the hundreds.

I'm not sure where you come up with the assertion that the number of hams
affected is "in the hundreds."

Are you referring to the number affected by the current, very limited "trial
area" deployments of BPL? If so, the numbers are probably relatively small.
HOWEVER, if BPL is deployed more or less ubiquitously, there will be few

hams far enough from a power line to not be SERIOUSLY affected.

> For comparison, the number of hams affected by tower erection restrictions
is in the tens of thousands.

True, and that's a valid crusade as well, but how does the existence of that
problem imply that we should ignore the problem of BPL?
(Remember, BPL will not affect just those who want to/can afford to erect
towers, but ALL hams that use HF/6m ... even with simple dipoles or
verticals.)
>
> >You can't hear anything on your new 10,000 dollar ICOM 7800 or any other
> >radio except 'Data Hash'.
> >
>
> FACT: Sure, if very nearby and unfiltered, this could be a problem.
However,
> the FCC rules require filtering for RFI mitigation in such circumstances.

Right now, the FCC rules don't require squat other than for the Part 15
device (in this case the BPL system) to shut down unless/until interference
can be eliminated. The radiated emission limits for BPL are WAY too high.
The "mitigation techniques" that the FCC and the BPL folks pay lip service
to are not in place, nor is it at all clear that they will be effective,
even if the power companies are responsive (and we've seen how responsive
most of them are [not]).

> >Is that clear enough??

Is that clear enough???

> FACT: A vocal minority of hams want to 'kill BPL'. As opposed to working
with
> the power companies to fix the problem.

I don't see it as a "vocal minority" ... all of the hams I know are
concerned that BPL will trash the HF bands and that the FCC and the power
companies will do little/nothing about it (the FCC hasn't acted on
complaints thusfar ... they've been buried in OET rather than being dealt
with in accordance with the existing rules.)

If someone could show me a technically sound way that BPL could use the HF
spectrum without trashing us, I'd have no problem with it. The problem is
that, as it is, it *does* trash us in any area where it's deployed and there
is no solution in sight.

There is one BPL technology - from a company called "Corridor" - that
appears to avoid the problem by not using the HF/low VHF bands ...

> FACT: The press has used this exchange, in many circumstances, to view us
with
> the jaundiced eye of being anti-technology and very out of date. Why is it
that

> they just don't see it as reason to 'kill BPL'?

"The press" feeds on controversy and frequently distorts things - at best in the interest of making the story more "sensational, at the worst because they have taken sides and have their own agenda to promote rather than objectively and dispassionately reporting the facts.

Carl - wk3c

4545. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 16:49:50 UTC
From: yea right <spam@spam.spam>
Message-ID: <pan.2004.06.27.16.51.55.455603@spam.spam>
Source record: 92900

On Sun, 27 Jun 2004 11:47:50 +0000, Fractenna wrote:

>>BPL comes into your house at the power company service box. Even if you
>>don not connect to it.
>>
>>
> FACT: The Cedar Rapids deployment has a WLAN link from the pole. The
> wires carry the 2-80 MHz. How does that go from 2-80 MHz --into-- the
> house?

FULL FACT: plugin smart appliances are being promoted. How do they work
if the signal does not come into the house.

>>>It creates S9++ signals from 2 to 80 MHz.
>
> FACT: Sure, if you drive your 1972 Nova with 'HAM ON BOARD' sticker (for
> example) under the power line, this is a consistently true statement.

FULL FACT: These levels are well documented and allowable within 33M of
any power line or household appliance.

> affected nation wide is in the hundreds. For comparison, the number of
> hams affected by tower erection restrictions is in the tens of
> thousands.

FULL FACT: I am able to purchase a house where there are no tower
restrictions. With BPL, I have no choice except to disconnect from the
power grid on a house far from powerlines. Infact, you would need to be a
mile from powerlines.

>>
> FACT: Sure, if very nearby and unfiltered, this could be a problem.
> However, the FCC rules require filtering for RFI mitigation in such
> circumstances.

FULL FACT: So far, none of the hams reported anyone adding filtering and
the BPL industry has been unresponsive. Also, I listen to radios in the
bands from DC to daylight. I prefer to listen to foreign broadcast along
with amateur bands. How would they be able to keep ALL the bands clean?
Blocking foreign broadcast in any country is against the international
law. Our government must protect these bands from interference.

>>
> FACT: A vocal minority of hams want to 'kill BPL'. As opposed to working
> with the power companies to fix the problem.

FULL FACT: Once BPL has a foothold, there will be very little chance of having any issues resolved. All the other countries who tried BPL dumped it.

> FACT: The press has used this exchange, in many circumstances, to view
> us with the jaundiced eye of being anti-technology and very out of date.
> Why is it that they just don't see it as reason to 'kill BPL'?

FULL FACT: The media is for big business, owned by big business and promotes big business. That is why the press has lost most all it's respect from the people.

> God Bless,
>
> Chip N1IR

Chip, don't be so easly fooled! The BPL industry only has one goal in mind, to make money. Radio enthusiast are their enemy.

4546. Hustler 40 super resonator rod length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 16:51:04 UTC
From: BJ <rajohngm@worldnet.att.net>
Message-ID: <YVCDc.147779$Gx4.10210@bgtnsc04-news.ops.worldnet.att.net>
Source record: 92901

Can anyone supply the approximate exposed tip rod lengths on the RM-40-S resonator as a starting point..
Tnx, Bob AA8X

4547. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 17:32:39 UTC
From: Reg Edwards <g4fgq.regp@ZZZbtinternet.com>
Message-ID: <cbn0bnnvd1@sparta.btinternet.com>
Source record: 92902

> Chip, don't be so easly fooled! The BPL industry only has one goal in
> mind, to make money. Radio enthusiast are their enemy.

==========

Radio enthusiasts are not their enemy. At most they may become an
insignificant nuisance to the capitalist system.

4548. Re: Outbacker Fly Lead Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 17:50:37 UTC
From: "David G. Nagel" <nagel@core.com>
Message-ID: <10du27lqtblvb92@corp.supernews.com>
Source record: 92903

Pat WL7Z wrote:

> Greetings,
>
> Can anyone tell me what the proper fly lead length is for an Outbacker
> Perth Plus antenna? It's the lead that connects to ground. I have
> already been to the Terlin Aerials website and emailed them twice,
> with no response. Thanks in advance.
>
> Pat WL7Z

Pat;

I just measured the length of the fly lead on my plus. It measures 27 inches from the tip of the plug to the end of the wire. I hope that helps.

Dave WD9BDZ

4549. Power Industry BPL Reply Comments & Press Release - Try sucking an Egg if you want substance

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 17:55:59 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <seutd0drh2tt0n6blsor6padr8utktl9ks@4ax.com>
Source record: 92904

>"Fractenna" <fractenna@aol.com> wrote in message
>news:20040627074750.23168.00000766@mb-m07.aol.com...
>> FACT: The Cedar Rapids deployment has a WLAN link from the pole. The
>>wires carry the 2-80 MHz. How does that go from 2-80 MHz --into-- the house?

Myopic views and a redefined issue to suit self serving logic solves
nothing. To this point it should be obvious that solutions are not
being solicited - as the administration and lobbyists see it, there is
no problem.

>> FACT: Sure, if you drive your 1972 Nova with 'HAM ON BOARD' sticker

The standard industrial-political complex branding of targets of
interest.

>>Based on assumption, the number of hams affected nation wide is
>> in the hundreds.
>
>I'm not sure where you come up with the assertion that the number of hams
>affected is "in the hundreds."

Such challenges are typically deflected by those entitled to revenue
enhancements (more properly known as the Wall Street Welfare State).

>> FACT: The press has used this exchange, in many circumstances, to view us with
>> the jaundiced eye of being anti-technology and very out of date.
>"The press" feeds on controversy and frequently distorts things - at best in
>the interest of making the story more "sensational, at the worst because
>they have taken sides and have their own agenda to promote rather than
>objectively and dispassionately reporting the facts.

I'm not sure which is worse, this contrivance of the "press" as a foil
(more static than signal); or the disconnect with the FCC's puppet
activities in the broader scope of aggregating media into fewer and
fewer hands. If the quote above is a complaint outside of this former
thread's narrow special interest, it should be obvious that this "new"
problem has been cultivated by the administration's puppet master
activity. With the balkanization of grievances, no one is worrying
about the greater systemic poisoning.

The stale right wing gasp of the threat of liberal media is out dated
and has been a wheeze for nearly two decades. They have been using
this eviscerated rag doll as a punching bag for so long, that all of
the stuffing has been scattered to the winds and it is simply a
tattered scrap of cloth whipping in the wind. Perhaps the right

whiners are complaining of rug burn as their limp wrists get caught up in the shreds.

I've been following this silly notion of petitioning the FCC for redress in just one particular - BPL - when the problem is obvious on the face of it: complete indifference from the outset due to the larger scope issues. Why do they have to listen anyway? How would you know if they did? We have just one advantage over the Reds who allowed their comrades to offer protest - we save money by not sending them to the Gulags. The discount for ignoring these "comments" outweighs the construction costs alone. [However, now that we are embarked on no-bid contracts (that same Welfare State again), then that may soon re-vitalize industries that the right wing has mined from the communist economic model.]

The entire mandate of the Communication Act of 1932 has been set out on the curb for pick-up and if it doesn't impact a QSO, I doubt if there would be any ruffled feathers here.

Such provincialism is self castration. Looking out for your(our)self(selves) and the Devil take the rest is a myopic attitude guaranteed to eliminate future generations.

73's
Richard Clark, KB7QHC

4550. Free: "DoppleScAnt" system

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 18:07:59 UTC
From: k7itm@aol.com
Message-ID: <3200347.0406271007.e01c826@posting.google.com>
Source record: 92905
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Hi all...

Continuing my downsizing. Free for pickup in the Seattle/Everett area: my homebrew doppler scanning DF antenna system, including the antenna structure, control box with compass rose LED readout, and cables. Worked well the last time I used it a few years ago. I believe the article describing this system was in May 1978 QST.

Cheers,
Tom

4551. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 18:47:00 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <sBEDc.1168$Rr2.4@lakeread03>
Source record: 92906
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

"CW" <no adddress@spam free.com> wrote in message
news:ANWdnS-vW_T18EHdRVn_iw@comcast.com...
> Yes, that is an advantage. Everytime someone asks a question about a
receive
> only antenna on this newsgroup, there are always many responses saying to
> just put up a piece of wire and run it strait to your radio. That will
work,
> assuming that you live out in the middle of nowhere, have no neighbors and
> have no electrical appliances. For the rest of us, noise is a
consideration
> and more thought needs to be put into an antenna system.
>

How does the antenna differentiate between "noise" and a valid signal?

(Perhaps these are going to be the solution to BPL.)

Pete

4552. Re: Millen grid dip meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 20:05:59 UTC
From: Crazy George <muNnscOh@attSglPobaAl.nMet>
Message-ID: <40df2b48_4@news1.prserv.net>
Source record: 92907

Jerry:

If it still has the original selenium and filter capacitor, that is a good place to start. Of course, the tube may be weak, although none of mine have ever needed tubes.

--
Crazy George
Remove N O and S P A M imbedded in return address
"Jerry Martes" <j.jmartes@verizon.net> wrote in message
news:CAADc.7753$DT5.2033@nwrddc03.gnilink.net...
>
> Thanks, George I just made one. I wound a piece of 1/8 th
diameter
> aluminum wire around a 3/8 th bolt. The leads on the coil to the meter
are
> that same 1/8 th wire, about 2 inches long.
> I'm impressed that the grid dipper now produces 137.50 MHz when the dial
> reads 130.00. Hows that for good instructions from you??
> I can tweek the frequency later, but now I see that this meter doesnt
have
> alot os "power out".
>
> The grid dipper needle doesnt get above 0.1 so the poor sensitivity is
> going to make this meter difficult to interpret. I got a schematic with
> this (eBay) grid dipper so I expect I'll be able to do something to get
the
> meter to read a little farther up scale.
>
> I appreciate your help.
>
> Thanks
> Jerry
>
>
>
> "Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
> news:40decc76_4@news1.prserv.net...
> > Go to the jamesmillenco.com web site and scroll halfway down page 1 for
a
> > photo of the coils in the rack. A further Google search will reveal
many
> > other pages with photos. The 60 - 150 coil is two turns of #20 wire
3/8"
> > dia., and spaced about 1/8" apart out at the end of the plastic tube

> (inside
> > it).
> >
> > --
> > Crazy George
> > Remove N O and S P A M imbedded in return address
> > "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> > news:MEzDc.7677$x9.5280@nwrddc02.gnilink.net...
> > > I want to make a coil for a Millen grid dip meter that I bought
> > *without*
> > > coils. It would be alot easier if I had a picture of the coil Milen
> uses
> > > for the 60 to 150 MHz range. Is there anyone who'd be willing to
send
> me
> > a
> > > picture of that coil?
> > >
> > > Thanks
> > > Jerry
> > >
> > >
> > >
> > >
>
>

4553. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 20:40:36 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-E7F086.13403527062004@news.sf.sbcglobal.net>
Source record: 92909
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

In article <sBEDc.1168$Rr2.4@lakeread03>,
" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote:

> "CW" <no adddress@spam free.com> wrote in message
> news:ANWdnS-vW_T18EHdRVn_iw@comcast.com...
> > Yes, that is an advantage. Everytime someone asks a question about
> > a receive only antenna on this newsgroup, there are always many
> > responses saying to just put up a piece of wire and run it strait
> > to your radio. That will work, assuming that you live out in the
> > middle of nowhere, have no neighbors and have no electrical
> > appliances. For the rest of us, noise is a consideration and more
> > thought needs to be put into an antenna system.
> >
> How does the antenna differentiate between "noise" and a valid
> signal?

Antennas are not intelligent agents able to differentiate between noise and a broadcast signal. If the noise signal is generated a long distance from the antenna it will be received right along with broadcast signals. The only advantage some antennas would have here is its reception pattern where the antenna could be orientated to be relatively insensitive in the direction of the noise signal. This generally is not helpful for short wave signals though because they are generally too spread out directionally instead of looking like a point source to take advantage of antenna nulls. Another problem for most people is the fact that they cannot get the antenna up high enough for it to exhibit its directional characteristics to a great degree.

A local noise is another matter greatly affecting many peoples reception of short wave signals since many electronic devices around the home and neighborï¿½s homes generate noise. Here the type of antenna, how it is connected to the receiver, and where it is located on the userï¿½s property makes a huge difference on what may be heard.

Fundamentally, you want the entire antenna system to reject common mode noise since to a local antenna this is the mode in which, the local noise will couple to the antenna. You will want to use an antenna that is balanced (Hertzian) instead of unbalanced (Marconi). You might also want to consider using an antenna type that responds more to the magnetic field component of the radio wave instead of the electric. These two suggestions encompass the fact that most of the local noise energy reaching and coupling to the antenna is a common mode electric field and since the far field broadcast signals you want to receive is composed of both electric and magnetic the later will be enhanced at

the expense of the former.

The connection from radio to antenna is best shielded so you would use coax. You could use a balance line but they are harder to acquire, use, and still will not work as well as coax shielding against local noise.

The antenna would be located as far from the majority of local noise sources as possible on the property. Distance reduces the coupling to local noise sources.

--
Telamon
Ventura, California

4554. 80 meter multi turn loop antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 20:43:24 UTC
From: Jaap <jaap.verheul@ditweghalenhetnet.nl>
Message-ID: <cbnbiu$60q$1@reader10.wxs.nl>
Source record: 92908

HI,

I'm thinking about building a multi turn loop for 80 meters, using in for TX and RX purpose.
This would be a loop thats 1 meter big and 5 turns. Is there anyone who has tried this before?

Jaap PA3DTR

4555. Re: "DoppleScAnt" system

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 21:27:15 UTC
From: Roger Sparks <rsparks@elltel.net>
Message-ID: <40df3be7$1_5@corp.newsgroups.com>
Source record: 92910
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Hi Tom,

You are correct about the QST reference. The article is entitled "A DoppleScAnt" by Terrence Rogers, WA4BVY.

The article is very positive about the method.

Your generosity should be much appreciated by someone.

73, Roger, W7WKB

"Tom Bruhns" <k7itm@aol.com> wrote in message news:3200347.0406271007.e01c826@posting.google.com...
> Hi all...
>
> Continuing my downsizing. Free for pickup in the Seattle/Everett
> area: my homebrew doppler scanning DF antenna system, including the
> antenna structure, control box with compass rose LED readout, and
> cables. Worked well the last time I used it a few years ago. I
> believe the article describing this system was in May 1978 QST.
>
> Cheers,
> Tom

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 100,000 Newsgroups - 19 Different Servers! =-----

4556. Re: Millen grid dip meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 22:00:23 UTC
From: carkenord@juno.com
Message-ID: <4346b55e.0406271400.1fed7308@posting.google.com>
Source record: 92912

"> I want to make a coil for a Millen grid dip meter that I bought
without
> coils. It would be alot easier if I had a picture of the coil Milen uses
> for the 60 to 150 MHz range. Is there anyone who'd be willing to send me a
> picture of that coil?
>
> Thanks
> Jerry

The following website may be of use to you. In any event, it's a very
interesting site for anyone interested in GDO's.

http://www.qsl.net/n4xy/gdos.html

Lee Carkenord KA0FPJ

4557. Re: Millen grid dip meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 22:16:37 UTC
From: "NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net>
Message-ID: <8HHDc.3352$856.397@newssvr27.news.prodigy.com>
Source record: 92913

And, another thought: Often times on ebay, and at swap meets, you will see
ones by Measurments Corp-- Model 59. (think some also calles "Boontown"
meters , were made in Boontown, N.J.) These were made even with modern
day houseings (saw one at the last local meet), and relatively CHEAP! These
come in 2 varieties- a LOW freq head (freq range unknown), and a HF-VHF
version 2.2 MHz to 400 MHz in 7 ranges, and have a 4 inch meter (great
for these fadeing eyes) But- make sure that these have all their coils, and
tuneing
head! Tuneing is quite smooth and freq is acurate - modification article
for them
is in vintage Ham Radio issue. Agree with george- selenium is probably
shot, as well
as filter cap., and tube probably getting quite old (glow violet?- its
"gassy", and migh
salvage it by keeping power on it for couple weeks, but cheap to replace)!
Good luck, either way! Jim NN7K

"Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
news:40df2b48_4@news1.prserv.net...
> Jerry:
>
> If it still has the original selenium and filter capacitor, that is a good
> place to start. Of course, the tube may be weak, although none of mine
have
> ever needed tubes.
>
> --
> Crazy George
> Remove N O and S P A M imbedded in return address
> "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> news:CAADc.7753$DT5.2033@nwrddc03.gnilink.net...
> >
> > Thanks, George I just made one. I wound a piece of 1/8 th
> diameter
> > aluminum wire around a 3/8 th bolt. The leads on the coil to the meter
> are
> > that same 1/8 th wire, about 2 inches long.
> > I'm impressed that the grid dipper now produces 137.50 MHz when the
dial
> > reads 130.00. Hows that for good instructions from you??
> > I can tweek the frequency later, but now I see that this meter doesnt
> have
> > alot os "power out".
> >

> > The grid dipper needle doesnt get above 0.1 so the poor sensitivity is
> > going to make this meter difficult to interpret. I got a schematic with
> > this (eBay) grid dipper so I expect I'll be able to do something to get
> the
> > meter to read a little farther up scale.
> >
> > I appreciate your help.
> >
> > Thanks
> > Jerry
> >
> >
> >
> > "Crazy George" <muNnscOh@attSglPobaAl.nMet> wrote in message
> > news:40decc76_4@news1.prserv.net...
> > > Go to the jamesmillenco.com web site and scroll halfway down page 1
for
> a
> > > photo of the coils in the rack. A further Google search will reveal
> many
> > > other pages with photos. The 60 - 150 coil is two turns of #20 wire
> 3/8"
> > > dia., and spaced about 1/8" apart out at the end of the plastic tube
> > (inside
> > > it).
> > >
> > > --
> > > Crazy George
> > > Remove N O and S P A M imbedded in return address
> > > "Jerry Martes" <j.jmartes@verizon.net> wrote in message
> > > news:MEzDc.7677$x9.5280@nwrddc02.gnilink.net...
> > > > I want to make a coil for a Millen grid dip meter that I bought
> > > *without*
> > > > coils. It would be alot easier if I had a picture of the coil Milen
> > uses
> > > > for the 60 to 150 MHz range. Is there anyone who'd be willing to
> send
> > me
> > > a
> > > > picture of that coil?
> > > >
> > > > Thanks
> > > > Jerry
> > > >
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>

>

4558. Re: Outbacker Fly Lead Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 22:19:03 UTC
From: patrickatwood@earthlink.net
Message-ID: <rJHDc.30680$Y3.29100@newsread2.news.atl.earthlink.net>
Source record: 92914

Dave,

Thanks so much! I can't believe how difficult it was to get that info. Now I
can finally get back on the air.

73,
Pat WL7Z

"David G. Nagel" <nagel@core.com> wrote in message
news:10du27lqtblvb92@corp.supernews.com...
> Pat WL7Z wrote:
>
> > Greetings,
> >
> > Can anyone tell me what the proper fly lead length is for an Outbacker
> > Perth Plus antenna? It's the lead that connects to ground. I have
> > already been to the Terlin Aerials website and emailed them twice,
> > with no response. Thanks in advance.
> >
> > Pat WL7Z
>
>
> Pat;
>
> I just measured the length of the fly lead on my plus. It measures 27
> inches from the tip of the plug to the end of the wire. I hope that helps.
>
> Dave WD9BDZ
>

4559. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-27 22:49:26 UTC
From: Dave Shrader <david.shrader@comcast.net>
Message-ID: <W9IDc.106150$Hg2.98089@attbi_s04>
Source record: 92915

Chip, As much as I respect your knowledge there are BPL issues that are simple to understand and problems that have not been resolved.

Fractenna wrote:

>>BPL comes into your house at the power company service box. Even if you
>>don[sic] not connect to it.
>>
>
>
> FACT: The Cedar Rapids deployment has a WLAN link from the pole. The wires
> carry the 2-80 MHz. How does that go from 2-80 MHz --into-- the house?
>

SNIP: Well Chip, since the pole is only 20 feet from the ham shack ...
What can I expect if it deploys here in suburban Concord NH?

30 uV/meter [AKA ~ S9] at 7 meters from the pole is pretty significant when my station is 7 to 10 meters meters from the pole.

RE: Cedar Rapids ... see below.

>
>>It creates S9++ signals from 2 to 80 MHz.
>
>
> FACT: Sure, if you drive your 1972 Nova with 'HAM ON BOARD' sticker (for
> example) under the power line, this is a consistently true statement.

SNIP: Well Chip, since 30 uV/meter at 10 meters puts me [at 7 to 10 meters from the pole] in the fairly close field what will my noise levels be?

> Otherwise, there are some, few, circumstances in which an unacceptabel (pun
> and sic intended) level of 'hash' will arise in that passband to the annoyance
> of some hams. Based on assumption, the number of hams affected nation wide is
> in the hundreds.

SNIP: There is NO BASIS for that assumption!! BPL has not been tested in an densely Amateur Radio populated community. I live in a small town of slightly more than 4500 people and we have eight [8] hams in town. There is approximately one [1] amateur operator for every 420 citizens of the USA. [700,000 hams/300 million citizens]. Where is the BPL data to support that assumption?

For comparison, the number of hams affected by tower erection
> restrictions is in the tens of thousands.

SNIP: Red Herring ... non sequitor. But, they can still operate with
'stealth antennas' and a quiet environment.

>
>
>>You can't hear anything on your new 10,000 dollar ICOM 7800 or any other
>>radio except 'Data Hash'.
>>
>
>
> FACT: Sure, if very nearby and unfiltered, this could be a problem. However,
> the FCC rules require filtering for RFI mitigation in such circumstances.
>
>

SNIP: The ARRL has entered the case of W0SR because mitigation has not
worked after more than 2 months of effort in the case of Jim Spencer,
W0SR, in Cedar Rapids Iowa, reference your statement above. Jim is in a
BPL test area and has been off the air for two months while the supplier
has tried unsuccessfully to mitigate the noise.
Reference <http://www.arrl.org/news/stories/2004/06/15/2/>

Boeing, a highly reputable Aerospace and Civil Aviation Corporation has
made the following comment:

"Boeing told the FCC that Commission-proposed interference mitigation
techniques "are INADEQUATE [emphasis added] to protect safety of life
aeronautical HF communications services." The aircraft manufacturer
urged the FCC to "carefully investigate these issues" before adopting
rules to authorize BPL networks in spectrum used by aeronautical HF
radio services."
[Ref: <http://www.arrl.org/news/stories/2004/06/24/1/?nc=1>

>>Is that clear enough??
>>
>

SNIP: The original request was for a simple and clear statement of the
issue. I offer that I made a simple [elementary school level] level of
issue statement. Make the principle point so that it is understood [As a
former teacher you recognize that a little hyperbole is an acceptable
part of the teaching tool]. Once the principle is understood then
advancing the discussion to a higher more mature level of understanding
is possible.

>
> FACT: A vocal minority of hams want to 'kill BPL'. As opposed to working with
> the power companies to fix the problem.

SNIP: In the absence of data to the contrary, I refuse to believe that
there is a non vocal majority who are advocating BPL. [The antithesis to
your hypothesis].
>
> FACT: The press has used this exchange, in many circumstances, to view us with

> the jaundiced eye of being anti-technology and very out of date. Why is it that
> they just don't see it as reason to 'kill BPL'?

Once again, STILL ??, the press is/maybe wrong!!

I understand that on 22 June 2004 President Bush made the following comments in a speech to the Department of Commerce.

" ... We need to get broadband to more Americans and so, therefore, I want to talk about two other ways to get broadband to the consumer. We need to use our power lines better. They go everywhere. It seems to make sense, doesn't it, if what you're looking for is avenues into the home. Well, electricity goes into the home. And so one great opportunity is to spread broadband throughout America via our power lines.

And one of the problems we've got here is that the Commerce Department has had to develop technical standards that will make sure that our broadband can go across power lines without unnecessary interference. So it's a technological problem. It's a technological issue. It turns out that sometimes the competition of broadband and electricity just doesn't go too good across one line. And so -- if I could put it in simple vernacular. And so, therefore, the Commerce Department is helping to sort through these issues so that broadband access will be available through -- by our power companies..."
[Ref: <http://www.whitehouse.gov/news/releases/2004/06/20040624-7.html>

So, the executive branch has made up it's mind. I wonder if there is credible and competent technical dissent in the Department of Commerce?

Chip, I am still waiting for public disclosure on successful mitigation techniques. My suspicion is that when Hams complain at a later date the argument will be dismissed as 'you had you chance and didn't make your case'. Capital Investment wins...

Successful mitigation for the Amateur Radio market requires suppressing 8 portions of the HF spectrum for a total of 4.25 MHz [Ham and MARS] or 15% of the available spectrum. Other licensed services will also require some level of mitigation. Where is the data that supports a successful mitigation technology? How much suppression is required and under what conditions ... -40 dB, -50 dB, etc. What is the capital investment for suppression? Is the Rate of Return equitable for our investors? What are the HF susceptibilities to 1.5 KW PEP within those 8 HF segments? Are additional suppression techniques required for susceptibility? Will susceptibility issues be local or distributed? What about the capital investment and rate of return on this issue?

If BPL is proposed in my area I will be at all meetings raising the mitigation technical and business issues.

4560. Re: Outbacker Fly Lead Length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 00:58:13 UTC
From: dplatt@radagast.org
Message-ID: <10dur95e1pdmm0e@corp.supernews.com>
Source record: 92916

>Greetings,
>
>Can anyone tell me what the proper fly lead length is for an Outbacker
>Perth Plus antenna? It's the lead that connects to ground. I have
>already been to the Terlin Aerials website and emailed them twice,
>with no response. Thanks in advance.

You want it as short as is practical, to minimize stray inductance.

If I recall correctly, the instructions were to plug the connector
into the NC jack, measure the wire-to-ground so that it would be taut
when connected to the grounding point, and then move the connector
from NC to GROUND. This results in a fly lead which has enough slack
to allow a spring mount to flex without ripping the connector out of
the plug, but not enough extra length to add sufficient stray
inductance to de-tune the antenna.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

4561. Re: 2M homemade colinear designs?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 01:01:51 UTC
From: Kim & Steve Merrill <buck0@comcast.net>
Message-ID: <ZL6dnf_gMYPT8ELdRVn-vg@comcast.com>
Source record: 92917

Hi Larry,

This sound like what your looking for:
http://home.comcast.net/~buck0/5-8thx2j.htm

I did this design about 5 years ago. Something of a "what if" project.
Works... Everything you need to build this is at Home Depot.

Hope this helps.
73,
Steve KB1DIG

Hope this helps
"Larry Gagnon" <lagagnon@fakeuniserve.com> wrote in message
news:pan.2004.06.26.22.56.04.291812@fakeuniserve.com...
> Am looking for some links to homebrew designs for a base station 2M
> colinear (two stacked 5/8 wave type). I prefer something simple made from
> PVC and wire. Any ideas considered.
>
> Larry VE7EA

4562. Re: Power Industry BPL Reply Comments & Press Release

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 01:10:02 UTC
From: fractenna@aol.com
Message-ID: <20040627211002.05745.00000598@mb-m14.aol.com>
Source record: 92918

>Chip, don't be so easly fooled! The BPL industry only has one goal in
>mind, to make money. Radio enthusiast are their enemy.
>

...and you are...

?

73,
Chip N1IR

4563. Re: 80 meter multi turn loop antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 01:18:41 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <40df7102@news.alphalink.com.au>
Source record: 92919

"Jaap" <jaap.verheul@ditweghalenhetnet.nl> wrote in message
news:cbnbiu$60q$1@reader10.wxs.nl...
> HI,
>
> I'm thinking about building a multi turn loop for 80 meters, using in for
TX
> and RX purpose.
> This would be a loop thats 1 meter big and 5 turns. Is there anyone who
has
> tried this before?

I use a 1.4m diam single turn loop for 160-15m which is quite successful on
80m.

The ARRL Ant book says that multiturn loops aren't that much better than
single turn loops if the coils are too close. It might be better to use the
tubing to make a larger (3-4m?) single turn loop. The same source says that
radials can improve mag loop performance. However I found that 3 radials 2x
loop diameter made no difference.

73, Peter VK3YE

4564. Homer & Marge having sex with Maggie Simpson

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 01:35:00 UTC
From: At <longlast@toons-x.com>
Message-ID: <8BKDc.12940$vO1.88846@nnrp1.uunet.ca>
Source record: 92920
Cross-posted to: comp.sys.handhelds,rec.radio.amateur.antenna,sci.energy

And a wild bonus: see Maggie reaching sexual climax with Bart Simpson

Click on Http://toontoon.com///ximpsons/../ximpsons?

Don't you forget HTTP://toons-x.com///simpsons_family for
bonus intimate pix of Lisa & Bart moaning in powerful climax.

Slowly <shimmiedthem@toons-x.com> wrote in message
news:PCySkFehwyx9xB8ESfJut5uk8l@toons-x.com...
>
> down her soft legs pulling her feet toward her to remove her
>
>
> ddx501s

4565. Rohn 25G Tower FS

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 01:41:49 UTC
From: Jack <w1wef@intergate.com>
Message-ID: <10dufot9d4dq69c@corp.supernews.com>
Source record: 92911

Very clean 50 ft Rohn 25 tower in Ct garage includes a new concrete base plate , rotor shelf and top section which accepts up to 2 inch mast. $295
JACK w1wef@arrl.net

4566. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 01:58:11 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <HVKDc.1192$Rr2.241@lakeread03>
Source record: 92821
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

"Telamon" <telamon_spamshield@pacbell.net.is.invalid> wrote in message
news:telamon_spamshield-E7F086.13403527062004@news.sf.sbcglobal.net...
> In article <sBEDc.1168$Rr2.4@lakeread03>,
> " Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote:
>
> > > > How does the antenna differentiate between "noise" and a valid
> > signal?
>
>

SNIP

>
> Fundamentally, you want the entire antenna system to reject common mode
> noise since to a local antenna this is the mode in which, the local
> noise will couple to the antenna. You will want to use an antenna that
> is balanced (Hertzian) instead of unbalanced (Marconi). You might also
> want to consider using an antenna type that responds more to the
> magnetic field component of the radio wave instead of the electric.
> These two suggestions encompass the fact that most of the local noise
> energy reaching and coupling to the antenna is a common mode electric
> field and since the far field broadcast signals you want to receive is
> composed of both electric and magnetic the later will be enhanced at
> the expense of the former.
>
> The connection from radio to antenna is best shielded so you would use
> coax. You could use a balance line but they are harder to acquire, use,
> and still will not work as well as coax shielding against local noise.
>
> The antenna would be located as far from the majority of local noise
> sources as possible on the property. Distance reduces the coupling to
> local noise sources.
>
> --
> Telamon
> Ventura, California

You'd also have to decouple the coax shield from the antenna to
prevent signals or noise from carried on the outside of the shield
common-mode fashion from being coupled back into your
remotely located antenna.

Pete

4567. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 02:06:02 UTC
From: John Doty <jpd@whispertel.LoseTheH.net>
Message-ID: <40DF7D0A.7080705@whispertel.LoseTheH.net>
Source record: 92822
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Telamon wrote:

> A local noise is another matter greatly affecting many peoples
> reception of short wave signals since many electronic devices around
> the home and neighborï¿½s homes generate noise. Here the type of antenna,
> how it is connected to the receiver, and where it is located on the
> userï¿½s property makes a huge difference on what may be heard.
>
> Fundamentally, you want the entire antenna system to reject common mode
> noise since to a local antenna this is the mode in which, the local
> noise will couple to the antenna.

Yes!

> You will want to use an antenna that
> is balanced (Hertzian) instead of unbalanced (Marconi).

With an unbalanced antenna you must take more care to keep common mode out of the feed system. It is not terribly hard, however, to reduce common mode coupling to negligible levels, even with an unbalanced antenna (see http://www.anarc.org/naswa/badx/antennas/low-noise_antenna.html). One may want an unbalanced system for other reasons. A balanced dipole close to the ground generally has a poor vertical radiation pattern, while an inverted-L is much better.

> You might also
> want to consider using an antenna type that responds more to the
> magnetic field component of the radio wave instead of the electric.
> These two suggestions encompass the fact that most of the local noise
> energy reaching and coupling to the antenna is a common mode electric
> field and since the far field broadcast signals you want to receive is
> composed of both electric and magnetic the later will be enhanced at
> the expense of the former.

This claim is widely made in the hobbyist literature, but I've never seen any measurements to back it up. I've tried to check it myself, and found the opposite: close to modern sources of EMI, the field tends to be predominantly magnetic. You have to be very close the source to see any effect at all: beyond ~0.1 wavelength induction balances the field pretty effectively.

> The connection from radio to antenna is best shielded so you would use
> coax. You could use a balance line but they are harder to acquire, use,
> and still will not work as well as coax shielding against local noise.

>
> The antenna would be located as far from the majority of local noise
> sources as possible on the property. Distance reduces the coupling to
> local noise sources.

Yes!

-jpd

4568. Re: Millen grid dip meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 02:15:14 UTC
From: Jerry Martes <j.jmartes@verizon.net>
Message-ID: <SaLDc.12395$x9.7108@nwrddc01.gnilink.net>
Source record: 92823

"NN7KEXK7ZFG@(nospam)SBCGLOBAL.NET" <nn7kexk7zfg@sbcglobal.net> wrote in
message news:8HHDc.3352$856.397@newssvr27.news.prodigy.com...
> And, another thought: Often times on ebay, and at swap meets, you will
see
> ones by Measurments Corp-- Model 59. (think some also calles "Boontown"
> meters , were made in Boontown, N.J.) These were made even with modern
> day houseings (saw one at the last local meet), and relatively CHEAP!
These
> come in 2 varieties- a LOW freq head (freq range unknown), and a HF-VHF
> version 2.2 MHz to 400 MHz in 7 ranges, and have a 4 inch meter (great
> for these fadeing eyes) But- make sure that these have all their coils,
and
> tuneing
> head! Tuneing is quite smooth and freq is acurate - modification article
> for them
> is in vintage Ham Radio issue. Agree with george- selenium is probably
> shot, as well
> as filter cap., and tube probably getting quite old (glow violet?- its
> "gassy", and migh
> salvage it by keeping power on it for couple weeks, but cheap to replace)!
> Good luck, either way! Jim NN7K
>

Jim

There was a decent looking Measurements Grid Dipper on eBay a few weeks
ago and I thought I'd win it when I placed a $ 75.00 bid. But when I got
outbid, I assumed that there was a rich market for the Measuurement-Boonton
meters, so I lowered my sights and got this Millen (minus coils) for $16.00.
I think this Millen will be fun to make work and I'm actually happy with it
now that George has shown me how to make the coil for the one frequency I'm
interested in.
The Millen has a jack that allows the user to include a meter in series
with the Millen meter. I plugged a 250 Microamp (FS) ammeter and think the
meter is OK for my use now.
The more I learn about Grid Dip Meters, the more respect I have for them.

Thanks for all the help and advice.

Jerry

4569. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 02:55:58 UTC
From: CW <"no adddress"@spam>
Message-ID: <Qu2dnel0ZLAjFULdRVn-gg@comcast.com>
Source record: 92824
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

They don't but if you go by the advice you generally get on the antenna group, you run an unshielded lead in (part of the antenna) right into the shack (big noise source). When I made my prior comments about the lack of consideration given to receive antenna, I was referring to the antenna group. I didn't realize that the message was cross posted. It just amazes me that they will debate a transmitting antenna to minute detail but receiving antennas deserve no consideration other than a random piece of wire thrown into a tree. Despite their often one sidedness I have learned a great deal from them and mean no disrespect.

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message news:sBEDc.1168$Rr2.4@lakeread03...
>
> How does the antenna differentiate between "noise" and a valid signal?
>

4570. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 02:56:46 UTC
From: CW <"no adddress"@spam>
Message-ID: <3Oidnd9L57ByFULdRVn-iQ@comcast.com>
Source record: 92825
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

```
" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:HVKDc.1192$Rr2.241@lakeread03...
>
> "Telamon" <telamon_spamshield@pacbell.net.is.invalid> wrote in message
> news:telamon_spamshield-E7F086.13403527062004@news.sf.sbcglobal.net...
> > In article <sBEDc.1168$Rr2.4@lakeread03>,
> > " Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote:
> >
> > > > > How does the antenna differentiate between "noise" and a valid
> > > signal?
> >
> >
>
> SNIP
>
> >
> > Fundamentally, you want the entire antenna system to reject common mode
> > noise since to a local antenna this is the mode in which, the local
> > noise will couple to the antenna. You will want to use an antenna that
> > is balanced (Hertzian) instead of unbalanced (Marconi). You might also
> > want to consider using an antenna type that responds more to the
> > magnetic field component of the radio wave instead of the electric.
> > These two suggestions encompass the fact that most of the local noise
> > energy reaching and coupling to the antenna is a common mode electric
> > field and since the far field broadcast signals you want to receive is
> > composed of both electric and magnetic the later will be enhanced at
> > the expense of the former.
> >
> > The connection from radio to antenna is best shielded so you would use
> > coax. You could use a balance line but they are harder to acquire, use,
> > and still will not work as well as coax shielding against local noise.
> >
> > The antenna would be located as far from the majority of local noise
> > sources as possible on the property. Distance reduces the coupling to
> > local noise sources.
> >
> > --
> > Telamon
> > Ventura, California
>
> You'd also have to decouple the coax shield from the antenna to
> prevent signals or noise from carried on the outside of the shield
> common-mode fashion from being coupled back into your
```

> remotely located antenna.
>
> Pete

Quite true.
>
>

4571. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 04:26:41 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <jb5vd0pb48mj0jb3l9gtfacu9m8nacrcbc@4ax.com>
Source record: 92826
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

On Sun, 27 Jun 2004 19:55:58 -0700, "CW" <no adddress@spam free.com>
wrote:

> When I made my prior comments about the lack of
>consideration given to receive antenna, I was referring to the antenna
>group. I didn't realize that the message was cross posted. It just amazes me
>that they will debate a transmitting antenna to minute detail but receiving
>antennas deserve no consideration other than a random piece of wire thrown
>into a tree.

Hi OM,

As generalizations go, this one falls short with them all.

We here at rec.radio.amateur.antenna often recite the credo that
"reciprocity rules." This means that all considerations given to a
transmitting antenna are equally applied to receiving antennas.

However, I am sure you are responding to the disparity in coverage
between receiving and transmitting antennas - and this is for good
reason. Reception and Transmission are NOT reciprocal operations. A
receiver has far more latitude to accomplish its goal than does a
transmitter. Unless you have an abysmal receiver poorly connected to
an inadequate whip, the stock receiver with a simple length of wire is
often very close to doing a good job. If the receiver suffers from
any of a multitude of issues, there is generally a solution that
answers the problem specifically. About the only thing you can do for
the transmitter is to turn up the power, or lower the transmission
loss. It stands to reason that our focus is on optimizing the loss
side of the balance ledger.

Returning to the credo of "reciprocity rules," any gain to the
advantage of a transmitter is enjoyed by the receiver and the SWLer
stands the same advantage. But if that advantage is measured at 3dB,
this has the significance of 50W in 100W compared to the SWL S-Meter
change from S5 to S6 (BFD). Even though it is the same 3dB, there is
the illusion of perspective (my 50W compared to your 5ï¿½V). If the SW
station is buried in S9 noise, then this is not an antenna problem
(unless you can null the noise out through careful lobe positioning).
Filtering and/or DSP stand to answer the problem, but these are
obviously not remedies to transmission issues.

There is another thread discussing the goal of constructing a small
loop for 80M reception (and how well 5 turns might achieve some
benefit). The same issues of loss prevail for the comparison of

Radiation Resistance to Ohmic Resistance for a 1 Meter loop. The loop Rr is in the thousandths of an Ohm and about on par for a small wire's Ohmic loss. There's that 3dB again and what concerns the transmission efficiency is far easier to tolerate with the receiver and its surplus of gain. If the SWLer pays attention to this issue as it concerns the transmission problems, then that SWLer stands to gain in the efficiency returned. However, this is not to suggest that there is an actual need to obtain this efficiency; but if the SWLer mismanages the construction, the topic is discussed to the necessary depth to correct it.

A simple basis of comparison will illustrate. Many SW radios have a ferrite stick antenna that will work with at least some stations (VOA, WWV, BBC and a host of others). Try transmitting through that same ferrite stick and it will be like trying to shout through a straw. Our only alternative is to add an amp, but the big KW is only going to render smoke.

73's
Richard Clark, KB7QHC

4572. Re: BPL Saved my Life!

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 04:56:41 UTC
From: ole_kingfish@yahoo.com
Message-ID: <342f41b9.0406272056.199e4531@posting.google.com>
Source record: 92827
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

"Frank Dresser" <analogdial@worldnet.att.net> wrote in message
news:<K6gDc.30906$OB3.21097@bgtnsc05-news.ops.worldnet.att.net>...
> "Gray Shockley" <gray-87a@cybercoffee.org> wrote in message
> news:wK-dnd8h28-4i0DdRVn-gw@giganews.com...
>
> [snip]
>
> >
> > Requirement for SWLs: Have conclusively proved that a
> > 5-tube AC-DC superhet really does have a hot chassis.
> >
>
> [snip]
>
> Not only survived close encounters with the Hot Chassis, but I might have
> been killed several times over by fully active 5U4s. Yet I survived, thanks
> to BPL.
>
> But how? Isn't BPL a new invention, far more recent than my clumsy repair
> efforts? Don't we have a temporal anomoly here? Consider that BPL will
> provide reliable broadband powerline access to everybody at a very low
> price. BPL will make power lines quieter. BPL saves lives. And I'm now
> sure the Rules of Time present no barrier to BPL.
>
> I now realize that BPL exists outside the world of known physics. BPL has
> found a portal into the world of magical psudeoscience commonly found on
> Saturday morning cartoons and Star Trek episodes.
>
> Frank Dresser

Another satisfied user heard from... :-)

4573. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 07:32:41 UTC
From: Telamon <telamon_spamshield@pacbell.net.is.invalid>
Message-ID: <telamon_spamshield-39A0DB.00324028062004@news.sf.sbcglobal.net>
Source record: 92828
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

In article <40DF7D0A.7080705@whispertel.LoseTheH.net>,
John Doty <jpd@whispertel.LoseTheH.net> wrote:

> Telamon wrote:
>
< Snip >
>
> This claim is widely made in the hobbyist literature, but I've never
> seen any measurements to back it up. I've tried to check it myself,
> and found the opposite: close to modern sources of EMI, the field
> tends to be predominantly magnetic. You have to be very close the
> source to see any effect at all: beyond ~0.1 wavelength induction
> balances the field pretty effectively.

First off I did not realize this was cross posted so this is my last
post to this thread.

I'm not not regurgitating hobbyist claims but my experience in this
matter. Although 0.1 wavelength is more than enough to cover a urban
lot and your neighbor at short wave frequencies theory does not do
justice to a non homogenous environment we all live in. Most electronic
noise generators do not have efficient antennas attached to them where
the environment easily distorts the electric fields. I have repeatedly
experienced predominantly voltage common mode coupling of local noise
sources. Without exception mitigation methods against voltage common
mode noise were always successful and current mode antennas always
picked up less local noise.

--
Telamon
Ventura, California

4574. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 08:27:05 UTC
From: BDK <kingratboyoboy@buckeye-express.com>
Message-ID: <MPG.1b49a06713c0d059989b0d@news.buckeye-express.com>
Source record: 92829
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

In article <telamon_spamshield-39A0DB.00324028062004
@news.sf.sbcglobal.net>, telamon_spamshield@pacbell.net.is.invalid
says...
> In article <40DF7D0A.7080705@whispertel.LoseTheH.net>,
> John Doty <jpd@whispertel.LoseTheH.net> wrote:
>
> > Telamon wrote:
> > >
> < Snip >
> >
> > This claim is widely made in the hobbyist literature, but I've never
> > seen any measurements to back it up. I've tried to check it myself,
> > and found the opposite: close to modern sources of EMI, the field
> > tends to be predominantly magnetic. You have to be very close the
> > source to see any effect at all: beyond ~0.1 wavelength induction
> > balances the field pretty effectively.
>
> First off I did not realize this was cross posted so this is my last
> post to this thread.
>
> I'm not not regurgitating hobbyist claims but my experience in this
> matter. Although 0.1 wavelength is more than enough to cover a urban
> lot and your neighbor at short wave frequencies theory does not do
> justice to a non homogenous environment we all live in. Most electronic
> noise generators do not have efficient antennas attached to them where
> the environment easily distorts the electric fields. I have repeatedly
> experienced predominantly voltage common mode coupling of local noise
> sources. Without exception mitigation methods against voltage common
> mode noise were always successful and current mode antennas always
> picked up less local noise.
>
>

My main problems with noise have been the next door neighbors dimmer and
the transformer that threw out hash galore and took the electric company
about 2 years to fix. When it rained, or was cold enough for dew to
form, it was like a really annoying buzzer from about 0 to 10 MHZ. I was
overjoyed the night it blew up. It was "on the list" due to my nagging
them, but lightning did the job...

BDK

4575. Re: Vertical 40m~6m

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 11:23:11 UTC
From: "H. Adam Stevens" <mayaone@earthlink.net>
Message-ID: <zcTDc.16002$w07.10564@newsread2.news.pas.earthlink.net>
Source record: 92830

Fluidmotion BiggIR.
www.SteppIR.com
NQ5H

"/* frank */" <__frank__@despammed.com> wrote in message
news:2k77t8F18r6bcU2@uni-berlin.de...
> Which vertical antenna 40m~6m (WARC included) do you suggest?
> Thanks

4576. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 12:25:23 UTC
From: flightless steaming duck <brandaris400@hotmail_com>
Message-ID: <a670c$40e01b68$d549ea4c$16722@news.multikabel.nl>
Source record: 92831
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

For your information:
You are posting this hole trhead on two dutch newsgroups!

Telamon a ï¿œcrit
> In article <40DF7D0A.7080705@whispertel.LoseTheH.net>,
> John Doty <jpd@whispertel.LoseTheH.net> wrote:
>
>> Telamon wrote:
>>
> < Snip >
>>
>> This claim is widely made in the hobbyist literature, but I've never
>> seen any measurements to back it up. I've tried to check it myself,
>> and found the opposite: close to modern sources of EMI, the field
>> tends to be predominantly magnetic. You have to be very close the
>> source to see any effect at all: beyond ~0.1 wavelength induction
>> balances the field pretty effectively.
>
> First off I did not realize this was cross posted so this is my last
> post to this thread.
>
> I'm not not regurgitating hobbyist claims but my experience in this
> matter. Although 0.1 wavelength is more than enough to cover a urban
> lot and your neighbor at short wave frequencies theory does not do
> justice to a non homogenous environment we all live in. Most electronic
> noise generators do not have efficient antennas attached to them where
> the environment easily distorts the electric fields. I have repeatedly
> experienced predominantly voltage common mode coupling of local noise
> sources. Without exception mitigation methods against voltage common
> mode noise were always successful and current mode antennas always
> picked up less local noise.

4577. Re: Hustler 40 super resonator rod length

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 21:35:14 UTC
From: Roger Leone <raleoneTAKEOUT@sbcglobal.net>
Message-ID: <ma0Ec.4197$mZ6.390@newssvr27.news.prodigy.com>
Source record: 92832

Bob:

About 36 inches would be a good starting point.

Roger K6XQ

"BJ" <rajohngm@worldnet.att.net> wrote in message
news:YVCDc.147779$Gx4.10210@bgtnsc04-news.ops.worldnet.att.net...
> Can anyone supply the approximate exposed tip rod lengths on the RM-40-S
> resonator as a starting point..
> Tnx, Bob AA8X
>
>

4578. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 22:33:54 UTC
From: rhf-newsgroups@pacbell.net
Message-ID: <ff3145e8.0406281433.278d7960@posting.google.com>
Source record: 92833
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

"CW" <no adddress@spam free.com> wrote in message
news:<Qu2dnel0ZLAjFULdRVn-gg@comcast.com>...
> They don't but if you go by the advice you generally get on the antenna
> group, you run an unshielded lead in (part of the antenna) right into the
> shack (big noise source). When I made my prior comments about the lack of
> consideration given to receive antenna, I was referring to the antenna
> group. I didn't realize that the message was cross posted. It just amazes me
> that they will debate a transmitting antenna to minute detail but receiving
> antennas deserve no consideration other than a random piece of wire thrown
> into a tree. Despite their often one sidedness I have learned a great deal
> from them and mean no disrespect.
>
>

CW,

That is 'why' I set-up the "Shortwave Listeners (SWL) AM/FM Antennas"
eGroup on YAHOO !
SWL-ANT=> http://groups.yahoo.com/group/Shortwave-SWL-Antenna/

Most HAM are concerned about getting the most power transfer
into the Antenna and the greatest Signal Output from the
Antenna. This may not result in the best receiving antenna.
A better SWL Receive ONLY Antenna is usually a result of
a Clean 'outside' Signal with a "Low Noise" factor.

Yes the topic is SWL Receive ONLY Antennas.
SWL-ANT=> http://groups.yahoo.com/group/Shortwave-SWL-Antenna/

iane ~ RHF

.

4579. Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 23:38:22 UTC
From: rh3x@erols.com
Message-ID: <2ta1e01lbdrq4dcrdoqupdvos1v2qsdq3b@4ax.com>
Source record: 92834

Looking for a rotatable dipole covering 40-10M. Any company make
one?

Tks de Rich/N2JR

4580. test mozilla

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-28 23:57:22 UTC
From: sbc yahoo news <nn7kexk7zfg@sbcglobal.net>
Message-ID: <Cf2Ec.79073$A5.48588@newssvr29.news.prodigy.com>
Source record: 92835

test

4581. Re: ,,,and you are?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 00:13:35 UTC
From: k3bu@aol.comNoUsama
Message-ID: <20040628201335.19227.00000916@mb-m06.aol.com>
Source record: 92836

I am deeply saddened...
where is Freak, Freaktenna, Freaktennnna ?
Chip, Chirp, Chippy, Nate, Nate, Nathan, hot dogs ?
Looks to me like lack of prior art search :-(

Bada BUm

>
>Who is Fractenna?
>
>Total posts by Fractenna, 6560 in rec.radio.antenna, containing the
>following keywords or phrases, arranged by times used :
>
>fractal antenna, 1140
>Phil, 769
>patent, 304
>Fractal Antenna Systems (or FAS), 289
>legal, 221
>abuse, 171
>copyright, 168
>Fractal Antenna Reflector, 148
>libel, 137
>attack, 126
>bogus, 125
>fraud, 118
>lies, 112
>malicious. 112
>harassment, 110
>illegal, 92
>lawsuit, 86
>hate, 83
>credibility, 75
>Patent pending, 75
>sue, 71
>This thread is closed, 69
>public notice, 65
>lawyer, 63
>warning, 63
>My attorney, 62
>Your attorney, 62
>defamation, 58
>defend, 58
>threat, 58
>fraudulent, 56
>abusive, 50

>counsel, 50
>litigation, 48
>threatening, 47
>liar, 41
>harassing, 39
>patent Infringement, 38
>destroy. 37
>distortion, 31
>criminal, 28
>obsession, 27
>Wakefield killer, 23
>damages, 22
>malign, 16
>hatred, 15
>pirating, 14
>antisemitic, 13
>www.n1IR.com, 13
>death threat, 10
>retraction, 9
>offenders, 3
>legal counsel, 2
>
>

4582. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 00:19:51 UTC
From: rhf-newsgroups@pacbell.net
Message-ID: <ff3145e8.0406281619.4c4af6d2@posting.google.com>
Source record: 92837
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

= = = Richard Clark <kb7qhc@comcast.net> wrote in message
= = = news:<jb5vd0pb48mj0jb3l9gtfacu9m8nacrcbc@4ax.com>...
> On Sun, 27 Jun 2004 19:55:58 -0700, "CW" <no adddress@spam free.com>
> wrote:
>
> > When I made my prior comments about the lack of
> >consideration given to receive antenna, I was referring to the antenna
> >group. I didn't realize that the message was cross posted. It just amazes me
> >that they will debate a transmitting antenna to minute detail but receiving
> >antennas deserve no consideration other than a random piece of wire thrown
> >into a tree.
>
> Hi OM,
>
> As generalizations go, this one falls short with them all.
>
> We here at rec.radio.amateur.antenna often recite the credo that
> "reciprocity rules." This means that all considerations given to a
> transmitting antenna are equally applied to receiving antennas.
>
> However, I am sure you are responding to the disparity in coverage
> between receiving and transmitting antennas - and this is for good
> reason. Reception and Transmission are NOT reciprocal operations. A
> receiver has far more latitude to accomplish its goal than does a
> transmitter. Unless you have an abysmal receiver poorly connected to
> an inadequate whip, the stock receiver with a simple length of wire is
> often very close to doing a good job. If the receiver suffers from
> any of a multitude of issues, there is generally a solution that
> answers the problem specifically. About the only thing you can do for
> the transmitter is to turn up the power, or lower the transmission
> loss. It stands to reason that our focus is on optimizing the loss
> side of the balance ledger.
>
> Returning to the credo of "reciprocity rules," any gain to the
> advantage of a transmitter is enjoyed by the receiver and the SWLer
> stands the same advantage. But if that advantage is measured at 3dB,
> this has the significance of 50W in 100W compared to the SWL S-Meter
> change from S5 to S6 (BFD). Even though it is the same 3dB, there is
> the illusion of perspective (my 50W compared to your 5ï¿½V). If the SW
> station is buried in S9 noise, then this is not an antenna problem
> (unless you can null the noise out through careful lobe positioning).
> Filtering and/or DSP stand to answer the problem, but these are
> obviously not remedies to transmission issues.

>
> There is another thread discussing the goal of constructing a small
> loop for 80M reception (and how well 5 turns might achieve some
> benefit). The same issues of loss prevail for the comparison of
> Radiation Resistance to Ohmic Resistance for a 1 Meter loop. The loop
> Rr is in the thousandths of an Ohm and about on par for a small wire's
> Ohmic loss. There's that 3dB again and what concerns the transmission
> efficiency is far easier to tolerate with the receiver and its surplus
> of gain. If the SWLer pays attention to this issue as it concerns the
> transmission problems, then that SWLer stands to gain in the
> efficiency returned. However, this is not to suggest that there is an
> actual need to obtain this efficiency; but if the SWLer mismanages the
> construction, the topic is discussed to the necessary depth to correct
> it.
>
> A simple basis of comparison will illustrate. Many SW radios have a
> ferrite stick antenna that will work with at least some stations (VOA,
> WWV, BBC and a host of others). Try transmitting through that same
> ferrite stick and it will be like trying to shout through a straw.
> Our only alternative is to add an amp, but the big KW is only going to
> render smoke.
>
> 73's
> Richard Clark, KB7QHC

RC,

In the same location using the same Antenna:

100uV of background noise being re-radiated by a Transmitting
Antenna that is being powered at 50W or 100W is simply not an
issue for the Amateur/HAM.
- Background Noise is NOT an Issue when thinking of Transmitting
Antennas that are Radiating Power in the Tens and Hundreds of Watts.
- For the HAM Signal-to-Noise is NOT a Transmission Antenna Parameter.

100uV of background noise being received by a Receiving Antenna
that is seeking a 25uV Signal is unacceptable for a SWLer.
- Background Noise IS an Issue when thinking of Receiving Antennas
that are 'acquiring' Radiated Power in the Milliwatts or micro-watts.
- For the SWLer Signal-to-Noise IS a key Receiving Antenna Parameter.

iane ~ RHF
.
Shortwave Listeners (SWL) AM/FM Antennas eGroup on YAHOO !
SWL-ANTENNA=> http://groups.yahoo.com/group/Shortwave-SWL-Antenna/
.

4583. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 00:27:33 UTC
From: KAZeringue <kazeringue@aol.com>
Message-ID: <40E0B793.90906@aol.com>
Source record: 92838

Cushcraft D4.

<http://www.cushcraft.com/amateur/details.asp?catid=86>

73

4584. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 01:24:55 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40e0c5c6_4@corp.newsgroups.com>
Source record: 92839

rh3x@erols.com wrote:

> Looking for a rotatable dipole covering 40-10M.

A 44 ft dipole fed with ladder-line will do the job. The ARRL Antenna
Book tells us the mechanical details. Aluminum tubing available from
www.texastowers.com
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4585. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 01:51:19 UTC
From: fumper@aol.com
Message-ID: <20040628215119.04158.00000643@mb-m15.aol.com>
Source record: 92840

I am looking for one too. any luck?

Steve --- N0NHA

4586. cancel <Cf2Ec.79073$A5.48588@newssvr29.news.prodigy.com>

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 02:00:29 UTC
From: nn7kexk7zfg@sbcglobal.net
Message-ID: <134Ec.79116$ge1.8113@newssvr29.news.prodigy.com>
Source record: 92841

```
This message was cancelled from within Mozilla.
```

4587. FS: 10 & 15 meter Lakeview Hamsticks

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 02:41:28 UTC
From: wa8mea@hotmail.com
Message-ID: <8a260fb2.0406281841.746b0829@posting.google.com>
Source record: 92842

For Sale: Two HAMSTICKS. One for 10 meters and one for 15 meters. Traded in my Pontiac Montana for a Ford Focus because of high gas prices. But I can't fit the rig in the Focus. So selling the antennas. Still plenty of action on 15 meters, especially this coming fall/winter. And E-skip daily on 10 meters which is perfect for mobiles. ONLY $14.95 for BOTH! (Plus $9.95 Priority Mail shipping and insurance.) First e-mail gets them! wa8mea@hotmail.com - 73 from Bill, WA8MEA - REALLY NEAT STUFF at - http://qth.com/dwm

4588. best antenna over a carport?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 06:26:37 UTC
From: eternalsquire@comcast.net
Message-ID: <904dab11.0406282226.7a08435d@posting.google.com>
Source record: 92843

Hi,

In my continual search for a halfway decent DX antenna situation for 20, 30, or 40 meters, I noticed that I have a carport approximately 120 feet long and 7 feet high and 15 feet wide. My car is at the very end of the carport, right across from my apartment, and my apartment is located on the lower floor.

The carport has florescent lights underneath every few cars, but is stuck in the asphalt and is therefore not connected to any ground! I am wondering if there is anything I can do with this?

1) Load up as is and work against a cold water pipe right underneath my apartment. Long wire?

2) Lay one insulated wire on top of the carport, terminate the wire at the far end with a resistor connected to the entire carport as artificial ground, and load up the local end. Classic single wire Beverage? Maybe two wires steerable Beverage?

3) Because florescent lights cause RFI across the entire band, lay a loop of very thin coax on top of the carport, interrupt the shield at the near end in order to connect with my tuner, and connect the shield to the carport and the water pipe for ground. Very long magnetic loop antenna with vertical lobes?

How good would any of these ideas be, or do you have any other ways to exploit a carport?

Thanks,

The Eternal Squire

4589. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 07:09:46 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <le32e0phhbq88f46th001qqhrevp6r450e@4ax.com>
Source record: 92844
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

On 28 Jun 2004 17:19:51 -0700, rhf-newsgroups@pacbell.net (RHF)
wrote:

>RC,
>
>In the same location using the same Antenna:
>
>100uV of background noise being re-radiated by a Transmitting
>Antenna that is being powered at 50W or 100W is simply not an
>issue for the Amateur/HAM.

Hello iane,

The construction of this "argument" is called a strawman. Who is to
say it "is simply not an issue?" Further, who is to say it is?
Amateur radios, as last I noted, contain receivers too and suffer
every much any debility as a SWL set. Simply put, there is no
separation to argue.

>- Background Noise is NOT an Issue when thinking of Transmitting
>Antennas that are Radiating Power in the Tens and Hundreds of Watts.
>- For the HAM Signal-to-Noise is NOT a Transmission Antenna Parameter.

Then why would you presume this is a fault in discussion here in an
antenna group? True this is cross-posted, but again, we have every
concern with reception that a SWLer would also have. Again, there is
no separation of issues to argue.

>100uV of background noise being received by a Receiving Antenna
>that is seeking a 25uV Signal is unacceptable for a SWLer.

Again, Amateur radio is just as concerned and seeks every remedy where
ever it may be found. To continue:

>- Background Noise IS an Issue when thinking of Receiving Antennas
>that are 'acquiring' Radiated Power in the Milliwatts or micro-watts.
>- For the SWLer Signal-to-Noise IS a key Receiving Antenna Parameter.

Antennas have no capacity to reduce Signal to Noise ratios except by
virtue of narrowing lobes to eliminate noise by placing it in a null
(if that is in fact a viable option either in the sense of having a
null, or having a null to a noise source that is not on the same
meridian as the signal of interest).

To this point, you have not offered any particularly receive dominated
issue that is not already a heavily trafficked topic with transmission

antennas. In fact, the presumption there are unique reception antennas that are more suitable than their transmission cousins is simply the artifice of my aforementioned advantage of the RF Gain control. It has been long established (through the simple act of purchase power) that receivers have far more gain available than needed except for the worst of antenna designs (and that has to be an exceptionally vile design).

Such examples of small loops used for MF are proof positive how poor an antenna can be, and the RF gain knob resurrecting its pitiful efficiency. This does NOT demonstrate some illusion of superior receive antenna design; rather it is more smoke and mirrors as an argument. Inverting the argument, if you had a full sized antenna for that band, you would only need a galena crystal and cat whisker to power your hi-Z headset. For DX you would only need a $5 AF amplifier. The smaller antenna clearly needs more dollars expended to offset the debilities of the poorer efficiency. The specious argument is tailored for the technically effete who would rather push a credit card across the display counter than build their own cheap solution. Take heart that this not simply a cheap shot, there are as many Hams who don't know which end of the soldering iron to pick up either.

73's
Richard Clark, KB7QHC

4590. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 07:13:35 UTC
From: Mark1 <vonkenboer2004@hotmail.com>
Message-ID: <mn.ea297d46a5e18980.13868@hotmail.com>
Source record: 92845
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Zeg hallo, dit is een Nederlandse nieuwsgroep hoor :-P

Richard Clark plaatste dit op zijn scherm :
> On 28 Jun 2004 17:19:51 -0700, rhf-newsgroups@pacbell.net (RHF)
> wrote:
>
>> RC,
>>
>> In the same location using the same Antenna:
>>
>> 100uV of background noise being re-radiated by a Transmitting
>> Antenna that is being powered at 50W or 100W is simply not an
>> issue for the Amateur/HAM.
>
> Hello iane,
>
> The construction of this "argument" is called a strawman. Who is to
> say it "is simply not an issue?" Further, who is to say it is?
> Amateur radios, as last I noted, contain receivers too and suffer
> every much any debility as a SWL set. Simply put, there is no
> separation to argue.
>
>> - Background Noise is NOT an Issue when thinking of Transmitting
>> Antennas that are Radiating Power in the Tens and Hundreds of Watts.
>> - For the HAM Signal-to-Noise is NOT a Transmission Antenna Parameter.
>
> Then why would you presume this is a fault in discussion here in an
> antenna group? True this is cross-posted, but again, we have every
> concern with reception that a SWLer would also have. Again, there is
> no separation of issues to argue.
>
>> 100uV of background noise being received by a Receiving Antenna
>> that is seeking a 25uV Signal is unacceptable for a SWLer.
>
> Again, Amateur radio is just as concerned and seeks every remedy where
> ever it may be found. To continue:
>
>> - Background Noise IS an Issue when thinking of Receiving Antennas
>> that are 'acquiring' Radiated Power in the Milliwatts or micro-watts.
>> - For the SWLer Signal-to-Noise IS a key Receiving Antenna Parameter.
>
> Antennas have no capacity to reduce Signal to Noise ratios except by
> virtue of narrowing lobes to eliminate noise by placing it in a null

> (if that is in fact a viable option either in the sense of having a
> null, or having a null to a noise source that is not on the same
> meridian as the signal of interest).
>
> To this point, you have not offered any particularly receive dominated
> issue that is not already a heavily trafficked topic with transmission
> antennas. In fact, the presumption there are unique reception
> antennas that are more suitable than their transmission cousins is
> simply the artifice of my aforementioned advantage of the RF Gain
> control. It has been long established (through the simple act of
> purchase power) that receivers have far more gain available than
> needed except for the worst of antenna designs (and that has to be an
> exceptionally vile design).
>
> Such examples of small loops used for MF are proof positive how poor
> an antenna can be, and the RF gain knob resurrecting its pitiful
> efficiency. This does NOT demonstrate some illusion of superior
> receive antenna design; rather it is more smoke and mirrors as an
> argument. Inverting the argument, if you had a full sized antenna for
> that band, you would only need a galena crystal and cat whisker to
> power your hi-Z headset. For DX you would only need a $5 AF
> amplifier. The smaller antenna clearly needs more dollars expended to
> offset the debilities of the poorer efficiency. The specious argument
> is tailored for the technically effete who would rather push a credit
> card across the display counter than build their own cheap solution.
> Take heart that this not simply a cheap shot, there are as many Hams
> who don't know which end of the soldering iron to pick up either.
>
> 73's
> Richard Clark, KB7QHC

4591. helicity on vertical dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 07:29:12 UTC
From: eternalsquire@comcast.net
Message-ID: <904dab11.0406282329.3246270c@posting.google.com>
Source record: 92846

Hi,

I'm considering a vertical dipole array, one each in 3 corners of a triangle around the outside of my apartment wall. I'm on the lower floor, of course. Each vertical dipole will be disguised as a stereotypical wooden birdhouse that you find at the craft store, supported by wooden poles with wire cores.

The reason I am considering the vertical dipole is so that I do not have to bother with a radial system, I would rather hide the grounding system inside the pole support.

Only disadvantage of the scheme is that my roof is only 25 feet high, and that the bottom of a vertical dipole should be 10 feet off the ground. Under normal circumstances a 40 meter vertical dipole at one quarter wavelength on the side wold be impossible. 30 would be extremely difficult, 20 just might be doable.

What I would like to try to do is shorten the elements of each dipole using helical winding rather than straight length wire. That way I can have the active elements closer to the roof or even a little above.

Question: to what extent can I shorten the winding while still retaining good signal apeture? about 50 %? More? And what would I need to do (if anything) to compensate for this?

Thanks in advance,

The Eternal Squire

4592. Re: best antenna over a carport?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 07:37:55 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <eg52e0h6303dcf6ietm768hj7ctop7aft6@4ax.com>
Source record: 92847

On 28 Jun 2004 23:26:37 -0700, eternalsquire@comcast.net (The Eternal Squire) wrote:

>Hi,
>
>In my continual search for a halfway decent DX antenna situation for
>20, 30, or 40 meters, I noticed that I have a carport approximately
>120 feet long and 7 feet high and 15 feet wide. My car is at the very
>end of the carport, right across from my apartment, and my apartment
>is located on the lower floor.

Hi Andrew,

Unless this a continuation of your concern for stealth, I would suggest a GAP vertical antenna. However, the remaining discussion will presume your former interest.

>The carport has florescent lights underneath every few cars, but is
>stuck in the asphalt and is therefore not connected to any ground! I
>am wondering if there is anything I can do with this?

Suffer comes to mind. There is a ground (code demands it), however, it is a safety ground that in this case will probably not offer much RF relief. However, this presumes the lights are noisy which is not always the case. Most of this noise is through conduction and sharing of power circuits. To determine how much is over-the-air, simply scout the area with a small SW receiver with a whip antenna. Choose a set of frequencies to monitor (the ones you want to work would be suitable) and build a map of noise vs. frequency vs. position along this carport. There is no more successful answer to your query than direct experience.

>1) Load up as is and work against a cold water pipe right underneath
>my apartment. Long wire?

This will probably do just as well as any more elaborate design (including my already mentioned GAP).

>2) Lay one insulated wire on top of the carport, terminate the wire
>at the far end with a resistor connected to the entire carport as
>artificial ground, and load up the local end. Classic single wire
>Beverage? Maybe two wires steerable Beverage?

A Beverage is typically a very low sensitivity and low efficiency antenna that has the advantage of directional selectivity (AKA receive antenna). It would have to be several wavelengths long to achieve its vaunted attributes.

>3) Because florescent lights cause RFI across the entire band, lay a
>loop of very thin coax on top of the carport, interrupt the shield at
>the near end in order to connect with my tuner, and connect the shield
>to the carport and the water pipe for ground. Very long magnetic
>loop antenna with vertical lobes?

Uhm, "magnetic" antennas will work quite well in picking up noise,
especially the way you have described it.

>How good would any of these ideas be, or do you have any other ways to
>exploit a carport?

You are in a far better position to simply try and report back here
how it went - anything else is conjecture of the first water and would
save you nothing in effort.

Another alternative is to find about 100 to 200 feet of coax. Add a
choke to the far end. Build a simple 1 Meter loop and attach it to
the choke. Connect the other end to your rig. Get a buddy and two
HTs so data can be accumulated. Walk the area and map out the
interference levels over several bands (a variation of the mapping
described above). A bigger loop, such as you anticipate, will only
suggest more noise introduced - if you can't live with a small loop's
worth, you certainly won't find any relief with a bigger one. As a
cautionary note, making it a small dipole won't bring any more relief
either. Noise, such as you anticipate, is noise - indistinguishable
from DX.

73's
Richard Clark, KB7QHC

4593. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 07:45:13 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <eb72e0h2dckdu8vupfrt7rdnecsgdf2osb@4ax.com>
Source record: 92848
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

On Tue, 29 Jun 2004 09:13:35 +0200, Mark1
<vonkenboer2004(geen-rommel)@hotmail.com> wrote:

>Zeg hallo, dit is een Nederlandse nieuwsgroep hoor :-P
>
probeer de vertaaldiensten van bable vissen bij
http://babelfish.altavista.com/

73's
Richard Clark, KB7QHC

4594. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 09:16:39 UTC
From: Mark1 <vonkenboer2004@hotmail.com>
Message-ID: <mn.eaa47d466e0b9aec.13868@hotmail.com>
Source record: 92849
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Richard Clark had uiteengezet :
> On Tue, 29 Jun 2004 09:13:35 +0200, Mark1
> <vonkenboer2004(geen-rommel)@hotmail.com> wrote:
>
>> Zeg hallo, dit is een Nederlandse nieuwsgroep hoor :-P
>>
> probeer de vertaaldiensten van bable vissen bij
> http://babelfish.altavista.com/
>
> 73's
> Richard Clark, KB7QHC

LOL, we zien hoe goed de vertaalmachine werkt (not)

4595. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 09:46:03 UTC
From: Gert-Jan Dam PG0G <gertjandam_spamblok_@fastmail.fm>
Message-ID: <mn.eac27d46720e0e13.5482@fastmail.fm>
Source record: 92850
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Op dinsdag 29-6-2004 krabbelde Mark1 op mijn schermpje
> Richard Clark had uiteengezet :
>> On Tue, 29 Jun 2004 09:13:35 +0200, Mark1
>> <vonkenboer2004(geen-rommel)@hotmail.com> wrote:
>>
>>> Zeg hallo, dit is een Nederlandse nieuwsgroep hoor :-P
>>>
>> probeer de vertaaldiensten van bable vissen bij
>> http://babelfish.altavista.com/
>>
>> 73's
>> Richard Clark, KB7QHC
>
> LOL, we zien hoe goed de vertaalmachine werkt (not)

Dit even ter illustratie...Tis niet te lezen.

Dergelijke voorbeelden van kleine lijnen die voor MF worden gebruikt
zijn bewijspositief hoe armen een antenne kan zijn, en de de
aanwinstenknop van rf doend herleven zijn meelijwekkende efficiency.
Dit toont niet aan ï¿œï¿œn of andere illusie van meerdere antenneontwerp
ontvangt; eerder is het meer rook en spiegels als argument. Omkerend
het argument, als u een volledige met maat antenne voor die band had,
zou u slechts een van de loodglanskristal en kat bakkebaard nodig
hebben om uw hoofdtelefoon aan te drijven hallo-z. Voor DX zou u
slechts een $5 AF versterker nodig hebben. De kleinere antenne vergt
duidelijk meer dollars besteed om debilities van de slechtere
efficiency te compenseren. Het specious argument wordt gemaakt voor
technisch uitgeput wie eerder een creditcard over de vertoningsteller
dan bouwt hun eigen goedkope oplossing zou duwen. Neem eenvoudig hart
dat dit niet een goedkoop schot, zijn er zo vele Hammen die don't weten
welk eind van de soldeerbout om ï¿œï¿œn van beiden op te nemen.

--
Met vriendelijke groet,
Gert-Jan Dam
HF knutselhoekje: http://www.pg0g.net
De nieuwsgroepronde Homepage: http://www.nieuwsgroepronde.tk
http://members.hostedscripts.com/antispam.html

4596. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 10:36:24 UTC
From: Mark1 <vonkenboer2004@hotmail.com>
Message-ID: <mn.eaf47d46d9215df2.13868@hotmail.com>
Source record: 92851
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

'zou u slechts een van de loodglanskristal en kat bakkebaard nodig
hebben om uw hoofdtelefoon aan te drijven'

rofl
Mark

Na rijp beraad schreef Gert-Jan Dam PG0G :
> Op dinsdag 29-6-2004 krabbelde Mark1 op mijn schermpje
>> Richard Clark had uiteengezet :
>>> On Tue, 29 Jun 2004 09:13:35 +0200, Mark1
>>> <vonkenboer2004(geen-rommel)@hotmail.com> wrote:
>>>
>>>> Zeg hallo, dit is een Nederlandse nieuwsgroep hoor :-P
>>>>
>>> probeer de vertaaldiensten van bable vissen bij
>>> http://babelfish.altavista.com/
>>>
>>> 73's
>>> Richard Clark, KB7QHC
>>
>> LOL, we zien hoe goed de vertaalmachine werkt (not)
>
> Dit even ter illustratie...Tis niet te lezen.
>
> Dergelijke voorbeelden van kleine lijnen die voor MF worden gebruikt zijn
> bewijspositief hoe armen een antenne kan zijn, en de de aanwinstenknop van rf
> doend herleven zijn meelijwekkende efficiency. Dit toont niet aan ï¿œï¿œn of
> andere illusie van meerdere antenneontwerp ontvangt; eerder is het meer rook
> en spiegels als argument. Omkerend het argument, als u een volledige met maat
> antenne voor die band had, zou u slechts een van de loodglanskristal en kat
> bakkebaard nodig hebben om uw hoofdtelefoon aan te drijven hallo-z. Voor DX
> zou u slechts een $5 AF versterker nodig hebben. De kleinere antenne vergt
> duidelijk meer dollars besteed om debilities van de slechtere efficiency te
> compenseren. Het specious argument wordt gemaakt voor technisch uitgeput wie
> eerder een creditcard over de vertoningsteller dan bouwt hun eigen goedkope
> oplossing zou duwen. Neem eenvoudig hart dat dit niet een goedkoop schot,
> zijn er zo vele Hammen die don't weten welk eind van de soldeerbout om ï¿œï¿œn
> van beiden op te nemen.

4597. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 11:39:44 UTC
From: Chuck <no.spam@no.spam.net>
Message-ID: <40e15411_3@127.0.0.1>
Source record: 92852

Bill has overstated the "generally accepted" number of radials. AM broadcast stations will have 120 radials but I've never met a ham with that many and many thousands of us have worked the world with a lot fewer. It depends greatly on the quality of ground you have and that's not easy to determine before you begin. But after 8 radials, improvements with each additional radial become much smaller.

My advice, Gary, is to start with a few radials for each band and try it out. Here's the irony: if that works well, you will probably see an improvement if you double the number of radials. If it doesn't work well at all, you might try a different approach because adding more radials will not be too effective.

Nature is full of these ironies. My favorite is that when bread and crackers are exposed to the same environment, the bread becomes hard and the crackers become soft! (Posted on someone's door at Stanford Research Institue back in the 60's.)

Chuck

"Bill Turner" <noway@nohow.com> wrote in message
news:5lcbd0h5er4on7s4ambd3aefckmt6bh08d@4ax.com...
> On 20 Jun 2004 13:52:17 GMT, aa5qt@aol.com (AA5QT) wrote:
>
> >I have a 6BTV that I'm about to install. It will primarily be used for
> >80/40/30 meters. Some questions:
> >
> >I could elevate it, if it would improve performance. The manual says not
to
> >ground the radials or the antenna base, so I could mount the unit on an
> >insulated mast, and string the radials at a 45 degree angle....
> >
> >Or I could place it near the ground, or try a metal mast, or....
> >
> >Any experience/suggestions?
> >
> >Gary K5QT
>
> ----------
>
> Performance will be best if it's up in the air, away from ground. RF
> does best when flowing through metal, not dirt. Earth is lossy and
> should be avoided for transmitting. If you were receiving only, the
> loss could be made up by more gain in the receiver, but when power is
> lost during transmitting, it's gone forever.

>
> If for some reason you 'had' to mount the vertical at ground level, you
> should install enough radials that the antenna does not 'see' the earth
> at all, only the radials. To do this, the generally accepted number of
> radials is about 120, 1/4 wave long.
>
> --
> Bill, W6WRT
> QSLs via LoTW
>

4598. Re: best antenna over a carport?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 14:00:37 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <10e2tns3rkso0e@corp.supernews.com>
Source record: 92854

longwire
ground to biggest conductor nearby
tuner
get on the air

I dare not attempt construction of sentences comparable to Richard's, so I thought I'd just get to the point.
73 es gud dx
H.
NQ5H

"Richard Clark" <kb7qhc@comcast.net> wrote in message news:eg52e0h6303dcf6ietm768hj7ctop7aft6@4ax.com...
> On 28 Jun 2004 23:26:37 -0700, eternalsquire@comcast.net (The Eternal
> Squire) wrote:
>
> >Hi,
> >
> >In my continual search for a halfway decent DX antenna situation for
> >20, 30, or 40 meters, I noticed that I have a carport approximately
> >120 feet long and 7 feet high and 15 feet wide. My car is at the very
> >end of the carport, right across from my apartment, and my apartment
> >is located on the lower floor.
>
> Hi Andrew,
>
> Unless this a continuation of your concern for stealth, I would
> suggest a GAP vertical antenna. However, the remaining discussion
> will presume your former interest.
>
> >The carport has florescent lights underneath every few cars, but is
> >stuck in the asphalt and is therefore not connected to any ground! I
> >am wondering if there is anything I can do with this?
>
> Suffer comes to mind. There is a ground (code demands it), however,
> it is a safety ground that in this case will probably not offer much
> RF relief. However, this presumes the lights are noisy which is not
> always the case. Most of this noise is through conduction and sharing
> of power circuits. To determine how much is over-the-air, simply
> scout the area with a small SW receiver with a whip antenna. Choose a
> set of frequencies to monitor (the ones you want to work would be
> suitable) and build a map of noise vs. frequency vs. position along
> this carport. There is no more successful answer to your query than
> direct experience.
>

> >1) Load up as is and work against a cold water pipe right underneath
> >my apartment. Long wire?
>
> This will probably do just as well as any more elaborate design
> (including my already mentioned GAP).
>
> >2) Lay one insulated wire on top of the carport, terminate the wire
> >at the far end with a resistor connected to the entire carport as
> >artificial ground, and load up the local end. Classic single wire
> >Beverage? Maybe two wires steerable Beverage?
>
> A Beverage is typically a very low sensitivity and low efficiency
> antenna that has the advantage of directional selectivity (AKA receive
> antenna). It would have to be several wavelengths long to achieve its
> vaunted attributes.
>
> >3) Because florescent lights cause RFI across the entire band, lay a
> >loop of very thin coax on top of the carport, interrupt the shield at
> >the near end in order to connect with my tuner, and connect the shield
> >to the carport and the water pipe for ground. Very long magnetic
> >loop antenna with vertical lobes?
>
> Uhm, "magnetic" antennas will work quite well in picking up noise,
> especially the way you have described it.
>
> >How good would any of these ideas be, or do you have any other ways to
> >exploit a carport?
>
> You are in a far better position to simply try and report back here
> how it went - anything else is conjecture of the first water and would
> save you nothing in effort.
>
> Another alternative is to find about 100 to 200 feet of coax. Add a
> choke to the far end. Build a simple 1 Meter loop and attach it to
> the choke. Connect the other end to your rig. Get a buddy and two
> HTs so data can be accumulated. Walk the area and map out the
> interference levels over several bands (a variation of the mapping
> described above). A bigger loop, such as you anticipate, will only
> suggest more noise introduced - if you can't live with a small loop's
> worth, you certainly won't find any relief with a bigger one. As a
> cautionary note, making it a small dipole won't bring any more relief
> either. Noise, such as you anticipate, is noise - indistinguishable
> from DX.
>
> 73's
> Richard Clark, KB7QHC

4599. Re: ATAS-120 balcony mount

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 14:01:15 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <40E1762B.9A37483@cwis.net>
Source record: 92853

Gery,
The balcony amy of may not be large enough to provide sufficient
counterpoise for the antenna. Why not take along some wire in case
it isn't enough?
'Doc

4600. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 14:14:57 UTC
From: Gert-Jan Dam PG0G <gertjandam_spamblok_@fastmail.fm>
Message-ID: <mn.ebce7d46f005de5a.5482@fastmail.fm>
Source record: 92855
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Op dinsdag 29-6-2004 krabbelde Mark1 op mijn schermpje
> 'zou u slechts een van de loodglanskristal en kat bakkebaard nodig hebben om
> uw hoofdtelefoon aan te drijven'

Ja haha. Lachen zo'n vertaal programma :D

> rofl
> Mark

--
Met vriendelijke groet,
Gert-Jan Dam
HF knutselhoekje: http://www.pg0g.net
De nieuwsgroepronde Homepage: http://www.nieuwsgroepronde.tk
http://members.hostedscripts.com/antispam.html

4601. Re: helicity on vertical dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 15:58:44 UTC
From: Cecil Moore <w5dxp@hotmail.com>
Message-ID: <40e19294$1_8@corp.newsgroups.com>
Source record: 92856

The Eternal Squire wrote:
> Question: to what extent can I shorten the winding while still
> retaining good signal apeture? about 50 %? More? And what would I
> need to do (if anything) to compensate for this?

75m mobile antennas are shortened by as much as 88%. Of course,
they are not very efficient. But a 50% shortening should result
in an acceptable amount of loss. However, hi-Q loading coils are
more efficient than helical windings. Tell everyone that the
loading coils are varmint guards (snakes, squirrels) for your
"birdhouses". A top hat could be disguised as bird perches and
would raise the efficiency of your antenna elements.

On another note, peak performance from a vertical array requires
phasing/matching at the feedpoints. Roy, W7EL, has a computer
program that will calculate the lengths of the phasing sections
for you - available at www.eznec.com.
--
73, Cecil http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 100,000 Newsgroups - 19 Different Servers! =-----

4602. Re: helicity on vertical dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 16:05:53 UTC
From: richardharrison@webtv.net
Message-ID: <8284-40E19361-247@storefull-3254.bay.webtv.net>
Source record: 92858

The Eternal Squire wrote:
"I`m considering a vertical dipole array, one each in 3 corners of a triangle---."

ON4UN has a section on "Triangular Arrays" beginning on page 11-48 of "Low-Band DXing". Check the rest of the book. Use vertical polarization if you have good soil conductivity or adequate radials. Otherwise, horizontal polarization may work better. Avoid inductive loading of short verticals. Instead use capacitive hats. The book is a winner.

Best regards, Richard JHarrison, KB5WZI

4603. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 16:13:08 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <2553e09fh62767dbepn5auefejlcec8qck@4ax.com>
Source record: 92857
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

On Tue, 29 Jun 2004 11:46:03 +0200, Gert-Jan Dam PG0G
<gertjandam_spamblok_@fastmail.fm> wrote:

>Dit even ter illustratie...Tis niet te lezen.
>
>Dergelijke voorbeelden van kleine lijnen die voor MF worden gebruikt
>zijn bewijspositief hoe armen een antenne kan zijn, en de de
>aanwinstenknop van rf doend herleven zijn meelijwekkende efficiency.
>Dit toont niet aan ï¿½ï¿½n of andere illusie van meerdere antenneontwerp
>ontvangt; eerder is het meer rook en spiegels als argument. Omkerend
>het argument, als u een volledige met maat antenne voor die band had,
>zou u slechts een van de loodglanskristal en kat bakkebaard nodig
>hebben om uw hoofdtelefoon aan te drijven hallo-z. Voor DX zou u
>slechts een $5 AF versterker nodig hebben. De kleinere antenne vergt
>duidelijk meer dollars besteed om debilities van de slechtere
>efficiency te compenseren. Het specious argument wordt gemaakt voor
>technisch uitgeput wie eerder een creditcard over de vertoningsteller
>dan bouwt hun eigen goedkope oplossing zou duwen. Neem eenvoudig hart
>dat dit niet een goedkoop schot, zijn er zo vele Hammen die don't weten
>welk eind van de soldeerbout om ï¿½ï¿½n van beiden op te nemen.

Hi OM,

ï¿½ï¿½n of andere goede vertaling, slecht wat. Wat kwamen uit zeer goed
zelfs daarna twee vertalingen.

73's
Richard Clark, KB7QHC

4604. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 16:20:34 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <of53e05883jiep1durc13bkls83t2l20ht@4ax.com>
Source record: 92859
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

On Tue, 29 Jun 2004 16:14:57 +0200, Gert-Jan Dam PG0G
<gertjandam_spamblok_@fastmail.fm> wrote:

>Op dinsdag 29-6-2004 krabbelde Mark1 op mijn schermpje
>> 'zou u slechts een van de loodglanskristal en kat bakkebaard nodig hebben om
>> uw hoofdtelefoon aan te drijven'
>
>Ja haha. Lachen zo'n vertaal programma :D
>
>> rofl
>> Mark

Hi OM,

het van het kattenbakkebaard en loodglans kristal is de oude
componenten van de tijddetector. De bakkebaard van de kat is fijne
draad. Het kristal van het loodglans is semiconducting mineraal (waar
de draad raakt en contact met een oxyde opneemt). De twee componenten
maken een diode.

73's
Richard Clark, KB7QHC

4605. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 18:13:57 UTC
From: Gert-Jan Dam PG0G <gertjandam_spamblok_@fastmail.fm>
Message-ID: <mn.ecbd7d4675fee17c.5482@fastmail.fm>
Source record: 92860
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Op dinsdag 29-6-2004 krabbelde Richard Clark op mijn schermpje
> On Tue, 29 Jun 2004 11:46:03 +0200, Gert-Jan Dam PG0G

> ï¿œï¿œn of andere goede vertaling, slecht wat. Wat kwamen uit zeer goed
> zelfs daarna twee vertalingen.

Ik heb een willekeurig stuk vertaald. Dit kwam eruit en het is gewoon
onleesbaar.

> 73's
> Richard Clark, KB7QHC

--
Met vriendelijke groet,
Gert-Jan Dam
HF knutselhoekje: http://www.pg0g.net
De nieuwsgroepronde Homepage: http://www.nieuwsgroepronde.tk
http://members.hostedscripts.com/antispam.html

4606. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 18:28:50 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <15d3e0d4h8fk596ebqn9p3uu3uml438snb@4ax.com>
Source record: 92861
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

On Tue, 29 Jun 2004 20:13:57 +0200, Gert-Jan Dam PG0G
<gertjandam_spamblok_@fastmail.fm> wrote:

>Ik heb een willekeurig stuk vertaald. Dit kwam eruit en het is gewoon
>onleesbaar.
>
Mijn fout toen. De kortere zinnen zijn nodig.

4607. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 18:29:31 UTC
From: Gert-Jan Dam PG0G <gertjandam_spamblok_@fastmail.fm>
Message-ID: <mn.eccd7d4624397c03.5482@fastmail.fm>
Source record: 92862
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Op dinsdag 29-6-2004 krabbelde Richard Clark op mijn schermpje
> On Tue, 29 Jun 2004 16:14:57 +0200, Gert-Jan Dam PG0G

> het van het kattenbakkebaard en loodglans kristal is de oude
> componenten van de tijddetector. De bakkebaard van de kat is fijne
> draad. Het kristal van het loodglans is semiconducting mineraal (waar
> de draad raakt en contact met een oxyde opneemt). De twee componenten
> maken een diode.

Ik zal eens van een bakkebaard van een kat en wat loodglans een diode
maken hi.

Sorry, _This_ is a Dutch newsgroup!

> 73's
> Richard Clark, KB7QHC

--
Met vriendelijke groet,
Gert-Jan Dam
HF knutselhoekje: http://www.pg0g.net
De nieuwsgroepronde Homepage: http://www.nieuwsgroepronde.tk
http://members.hostedscripts.com/antispam.html

4608. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 18:30:01 UTC
From: rhf-newsgroups@pacbell.net
Message-ID: <ff3145e8.0406291030.5a75b29c@posting.google.com>
Source record: 92863
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna

RC (KB7QHC),

Spoken (written) like a True Amateur, and precicly why most SWLs
ignore what is written in reply to SWL 'type' Antennas questions
by HAMs.

Most SWLs work to get the best signal (cleanest signal and lowest
noise) they can to be able to listen to what they what to hear.

The HAM would hardly ever consider a 'random' wire Antenna;
but to the SWL'er the "Random" Wire Antenna 'concept' is a
natural to fill their available space. Power handling, gain
and antenna design characteristics are the focus of the HAM.

As far as the AM/MW Loop Antenna's are concerned. For the AM/MW
DX'er these Antenna's perform the best for their size and the
available space that the average Broadcast Listener (BCL) has
for these Medium Wave Band. The SWL'er wants to hear any Radio
Station out there from any direction.

The 'focus' of the SWL'er is simpy different then the Amateur;
and the majority of SWL'ers are Program Listeners who seldom
listen to the HAM Bands.

iane ~ RHF
.
.
= = = Richard Clark <kb7qhc@comcast.net> wrote in message
= = = news:<le32e0phhbq88f46th001qqhrevp6r450e@4ax.com>...
> On 28 Jun 2004 17:19:51 -0700, rhf-newsgroups@pacbell.net (RHF)
> wrote:
>
> >RC,
> >
> >In the same location using the same Antenna:
> >
> >100uV of background noise being re-radiated by a Transmitting
> >Antenna that is being powered at 50W or 100W is simply not an
> >issue for the Amateur/HAM.
>
> Hello iane,
>
> The construction of this "argument" is called a strawman. Who is to
> say it "is simply not an issue?" Further, who is to say it is?
> Amateur radios, as last I noted, contain receivers too and suffer

> every much any debility as a SWL set. Simply put, there is no
> separation to argue.
>
> >- Background Noise is NOT an Issue when thinking of Transmitting
> >Antennas that are Radiating Power in the Tens and Hundreds of Watts.
> >- For the HAM Signal-to-Noise is NOT a Transmission Antenna Parameter.
>
> Then why would you presume this is a fault in discussion here in an
> antenna group? True this is cross-posted, but again, we have every
> concern with reception that a SWLer would also have. Again, there is
> no separation of issues to argue.
>
> >100uV of background noise being received by a Receiving Antenna
> >that is seeking a 25uV Signal is unacceptable for a SWLer.
>
> Again, Amateur radio is just as concerned and seeks every remedy where
> ever it may be found. To continue:
>
> >- Background Noise IS an Issue when thinking of Receiving Antennas
> >that are 'acquiring' Radiated Power in the Milliwatts or micro-watts.
> >- For the SWLer Signal-to-Noise IS a key Receiving Antenna Parameter.
>
> Antennas have no capacity to reduce Signal to Noise ratios except by
> virtue of narrowing lobes to eliminate noise by placing it in a null
> (if that is in fact a viable option either in the sense of having a
> null, or having a null to a noise source that is not on the same
> meridian as the signal of interest).
>
> To this point, you have not offered any particularly receive dominated
> issue that is not already a heavily trafficked topic with transmission
> antennas. In fact, the presumption there are unique reception
> antennas that are more suitable than their transmission cousins is
> simply the artifice of my aforementioned advantage of the RF Gain
> control. It has been long established (through the simple act of
> purchase power) that receivers have far more gain available than
> needed except for the worst of antenna designs (and that has to be an
> exceptionally vile design).
>
> Such examples of small loops used for MF are proof positive how poor
> an antenna can be, and the RF gain knob resurrecting its pitiful
> efficiency. This does NOT demonstrate some illusion of superior
> receive antenna design; rather it is more smoke and mirrors as an
> argument. Inverting the argument, if you had a full sized antenna for
> that band, you would only need a galena crystal and cat whisker to
> power your hi-Z headset. For DX you would only need a $5 AF
> amplifier. The smaller antenna clearly needs more dollars expended to
> offset the debilities of the poorer efficiency. The specious argument
> is tailored for the technically effete who would rather push a credit
> card across the display counter than build their own cheap solution.
> Take heart that this not simply a cheap shot, there are as many Hams

> who don't know which end of the soldering iron to pick up either.
>
> 73's
> Richard Clark, KB7QHC

4609. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 18:57:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <vle3e0p5tpaat51ei5msn4tmoka7in1sng@4ax.com>
Source record: 92864
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

On Tue, 29 Jun 2004 20:29:31 +0200, Gert-Jan Dam PG0G
<gertjandam_spamblok_@fastmail.fm> wrote:

>Sorry, _This_ is a Dutch newsgroup!

Of course it is: nl.radio.amateur
This is an amateur antenna discussion. This discussion originated
from this group (nl.radio.amateur). If this is a mistake, take it up
with the original poster.

73's
Richard Clark, KB7QHC

4610. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 19:13:01 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <fse3e01aj1et1m2rdbmqq467v6jrln0vh6@4ax.com>
Source record: 92865
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

On 29 Jun 2004 11:30:01 -0700, rhf-newsgroups@pacbell.net (RHF) wrote:

>RC (KB7QHC),
>
>Spoken (written) like a True Amateur, and precicly why most SWLs
>ignore what is written in reply to SWL 'type' Antennas questions
>by HAMs.

Strange logic to offer that a listener comes here to post a query they will ignore in anticipation. Rather self serving argument isn't it?

>Most SWLs work to get the best signal (cleanest signal and lowest
>noise) they can to be able to listen to what they what to hear.

There is nothing in this statement that distinguishes amateur from listener. Further, it contains absolutely no technical material to support any sense of this exclusivity of concern. To respond in kind, you don't even rise to amateur status.

>The HAM would hardly ever consider a 'random' wire Antenna;

Now this is a statement that is clearly in error. The archives will attest to this.

>but to the SWL'er the "Random" Wire Antenna 'concept' is a
>natural to fill their available space. Power handling, gain
>and antenna design characteristics are the focus of the HAM.

As they are no more or less for a listener. If you find some other motivation, it is strictly your own prejudice.

>As far as the AM/MW Loop Antenna's are concerned. For the AM/MW
>DX'er these Antenna's perform the best for their size and the
>available space that the average Broadcast Listener (BCL) has
>for these Medium Wave Band. The SWL'er wants to hear any Radio
>Station out there from any direction.

Perhaps you should attend this board more often to learn the fundamentals. There is no impediment to hearing any Radio Station out there from any direction with simple verticals. SW sets come with them you know.

>The 'focus' of the SWL'er is simpy different then the Amateur;
>and the majority of SWL'ers are Program Listeners who seldom
>listen to the HAM Bands.

So why are you posting to an amateur group? Why an antenna group? You would be better served through your self-imposed limitations by staying out of the fast lane.

73's
Richard Clark, KB7QHC, WPE0EPH

p.s. if the WPE0EPH is unknown to you, it denotes my having been a Shortwave listener for 40 years and registered with the Popular Electronics DX club (as well as a sack full of others from around the world).

4611. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 19:48:47 UTC
From: Mark1 <vonkenboer2004@hotmail.com>
Message-ID: <mn.ed1c7d46b1e0b70c.13868@hotmail.com>
Source record: 92866
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Richard Clark beweerde :
> On Tue, 29 Jun 2004 16:14:57 +0200, Gert-Jan Dam PG0G
> <gertjandam_spamblok_@fastmail.fm> wrote:
>
>> Op dinsdag 29-6-2004 krabbelde Mark1 op mijn schermpje
>>> 'zou u slechts een van de loodglanskristal en kat bakkebaard nodig hebben
>>> om uw hoofdtelefoon aan te drijven'
>>
>> Ja haha. Lachen zo'n vertaal programma :D
>>
>>> rofl
>>> Mark
>
> Hi OM,
>
> het van het kattenbakkebaard en loodglans kristal is de oude
> componenten van de tijddetector. De bakkebaard van de kat is fijne
> draad. Het kristal van het loodglans is semiconducting mineraal (waar
> de draad raakt en contact met een oxyde opneemt). De twee componenten
> maken een diode.
>
> 73's
> Richard Clark, KB7QHC

Translation, : it from it cat-sideburn and leadshine cristal is the old
components of the timedetector. The sideburn of the cat is fine thread.

And so on.
So pse remove this group from future postings.

4612. NEC/4 with EZNEC 4.0

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 21:02:34 UTC
From: Jer <Jer@spam.net>
Message-ID: <KNkEc.7997$SO5.7031@twister.socal.rr.com>
Source record: 92867

From: dj2ya@t-online.de (Ulrich Weiss)
Date: Wed, 23 Jun 2004 13:40:40 +0200
List-post: <mailto:antennaware@contesting.com>

hello Arie,

thanks for your contribution... your figures come very close to my empirical data when analysing dipoles (of exactly the same length in exactly the same place on the same day in bright sunshine all day) for 14 MHz using different kinds of materials, insulations, thicknesses, diameters etc....
obviously there is a flaw in Roys formula as well... some people erroneously think that he employs NEC/4 with EZNEC 4.0 when taking wire insulation into consideration...

regards

Uli, DJ2YA

"Roy Lewallen" <w7el@eznec.com> wrote in message

4613. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 21:23:53 UTC
From: Tam/WB2TT <t-tammaru@c0mca$t.net>
Message-ID: <mYKdnbGcd9lAQHzdRVn-gQ@comcast.com>
Source record: 92868

"Richard Clark" <kb7qhc@comcast.net> wrote in message
news:fse3e01aj1et1m2rdbmqq467v6jrln0vh6@4ax.com...
> On 29 Jun 2004 11:30:01 -0700, rhf-newsgroups@pacbell.net (RHF)
wrote:.....
> So why are you posting to an amateur group? Why an antenna group?
> You would be better served through your self-imposed limitations by
> staying out of the fast lane.
>
> 73's
> Richard Clark, KB7QHC, WPE0EPH
>
> p.s. if the WPE0EPH is unknown to you, it denotes my having been a
> Shortwave listener for 40 years and registered with the Popular
> Electronics DX club (as well as a sack full of others from around the
> world).

Richard,
Probably to a lot of people a radio or electronic hobbyist is an "amateur".
Impression I get is that some CBers think so also. From looking at old
literature, the search for the holy grail of a noise free antenna, seems to
back to around T=0. It would help, if the manufacturers of SWL receivers
would add noise blankers in sub $500 radios. I did not see any in the AES
catalog below that price that claimed to have a noise blanker. I won't even
delve on IF filter shape factor.

ps. I can beat your 40 years by about 10.

Tam/WB2TT

4614. Re: helicity on vertical dipoles

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 21:32:20 UTC
From: Jack Painter <223bthp@cox.net>
Message-ID: <FdlEc.33781$cj3.33572@lakeread01>
Source record: 92869

"The Eternal Squire" <eternalsquire@comcast.net> wrote
> I'm considering a vertical dipole array, one each in 3 corners of a
> triangle around the outside of my apartment wall. I'm on the lower
> floor, of course. Each vertical dipole will be disguised as a
> stereotypical wooden birdhouse that you find at the craft store,
> supported by wooden poles with wire cores.

I see some surprised birds in the picture.....;-)

Jack

4615. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 21:34:42 UTC
From: John Doty <jpd@whispertel.LoseTheH.net>
Message-ID: <40E1E072.7040603@whispertel.LoseTheH.net>
Source record: 92870
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Richard Clark wrote:

> Antennas have no capacity to reduce Signal to Noise ratios except by
> virtue of narrowing lobes to eliminate noise by placing it in a null
> (if that is in fact a viable option either in the sense of having a
> null, or having a null to a noise source that is not on the same
> meridian as the signal of interest).

Not true. You are making the assumption that that the antenna only picks up radiated modes. Non-radiated electromagnetic modes are also troublesome, particularly common mode on the transmission line. This tends to be the way that locally generated noise from household gadgets gets into an antenna system.

Consider a lamp dimmer that generates 10 mW of RFI, which rides out in common mode on the mains, finds its way to the power cord of your transceiver, rides out on the feedline to the antenna, and then couples back through differential mode to your receiver input. That's not a very efficient coupling path, so suppose it has a loss of 60 dB. You'll still get 10 nW to the receiver. This is a lot: even if it's spread over 30 MHz, it's still 10 uV in a 6 kHz channel. That's S6 on my Drake R-8, a very serious quantity of noise.

On the other hand, if your transmitter puts out 1 kW, 60 dB of loss means it only delivers 1 mW of RF to the dimmer, an amount unlikely to interfere with its operation. Reciprocity does not mean *consequences* are symmetrical.

> To this point, you have not offered any particularly receive dominated
> issue that is not already a heavily trafficked topic with transmission
> antennas.

A deep, steerable null can be extremely useful for reception, but its not generally useful for transmission.

> In fact, the presumption there are unique reception
> antennas that are more suitable than their transmission cousins is
> simply the artifice of my aforementioned advantage of the RF Gain
> control. It has been long established (through the simple act of
> purchase power) that receivers have far more gain available than
> needed except for the worst of antenna designs (and that has to be an
> exceptionally vile design).
>
> Such examples of small loops used for MF are proof positive how poor
> an antenna can be, and the RF gain knob resurrecting its pitiful

> efficiency.

But for MWDX reception, efficiency simply isn't an important virtue.
Gain is cheap. What matters is the steerable nulls. An efficient
steerable MW antenna is enormous and expensive.

> This does NOT demonstrate some illusion of superior
> receive antenna design; rather it is more smoke and mirrors as an
> argument. Inverting the argument, if you had a full sized antenna for
> that band, you would only need a galena crystal and cat whisker to
> power your hi-Z headset. For DX you would only need a $5 AF
> amplifier. The smaller antenna clearly needs more dollars expended to
> offset the debilities of the poorer efficiency.

Sensitivity is the cheapest, easiest virtue to put into a receiver.
Essentially all modern receivers have plenty. Indeed, the cheap ones
often overload when presented with an efficient antenna: you have to
spend the dollars to be able to handle the big signals!

Speaking of strawmen, have you ever actually tried DXing with a crystal
radio?

> The specious argument
> is tailored for the technically effete who would rather push a credit
> card across the display counter than build their own cheap solution.
> Take heart that this not simply a cheap shot, there are as many Hams
> who don't know which end of the soldering iron to pick up either.

I love designing and building antennas: applied physics is fun. But it's
good engineering to go with the strengths of your technology. For my
inverted-L's, I spend a little efficiency (4 dB or so) to get octaves of
effective bandwidth, something that is perhaps of little use to hams,
but is very useful to an SWL in conjunction with the frequency agility
of a modern receiver. 4 dB of efficiency loss is of negligible
consequence at HF and below if your receiver has a decent noise figure.
I've never seen mention of this efficiency/bandwidth tradeoff in the ham
literature, but it's not hard to find in the professional literature.
For details of a specific calculation, see:

http://anarc.org/naswa/badx/antennas/SWL_longwire.html

-jpd

4616. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 21:44:13 UTC
From: Mark1 <vonkenboer2004@hotmail.com>
Message-ID: <mn.ed907d46ccc1361a.13868@hotmail.com>
Source record: 92721
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

pse remove the nl newsgroup from this discussion.

John Doty schreef op 29-6-04 :
> Richard Clark wrote:
>
>> Antennas have no capacity to reduce Signal to Noise ratios except by
>> virtue of narrowing lobes to eliminate noise by placing it in a null
>> (if that is in fact a viable option either in the sense of having a
>> null, or having a null to a noise source that is not on the same
>> meridian as the signal of interest).
>
> Not true. You are making the assumption that that the antenna only picks up
> radiated modes. Non-radiated electromagnetic modes are also troublesome,
> particularly common mode on the transmission line. This tends to be the way
> that locally generated noise from household gadgets gets into an antenna
> system.
>
> Consider a lamp dimmer that generates 10 mW of RFI, which rides out in common
> mode on the mains, finds its way to the power cord of your transceiver, rides
> out on the feedline to the antenna, and then couples back through
> differential mode to your receiver input. That's not a very efficient
> coupling path, so suppose it has a loss of 60 dB. You'll still get 10 nW to
> the receiver. This is a lot: even if it's spread over 30 MHz, it's still 10
> uV in a 6 kHz channel. That's S6 on my Drake R-8, a very serious quantity of
> noise.
>
> On the other hand, if your transmitter puts out 1 kW, 60 dB of loss means it
> only delivers 1 mW of RF to the dimmer, an amount unlikely to interfere with
> its operation. Reciprocity does not mean *consequences* are symmetrical.
>
>> To this point, you have not offered any particularly receive dominated
>> issue that is not already a heavily trafficked topic with transmission
>> antennas.
>
> A deep, steerable null can be extremely useful for reception, but its not
> generally useful for transmission.
>
>> In fact, the presumption there are unique reception
>> antennas that are more suitable than their transmission cousins is
>> simply the artifice of my aforementioned advantage of the RF Gain
>> control. It has been long established (through the simple act of
>> purchase power) that receivers have far more gain available than
>> needed except for the worst of antenna designs (and that has to be an

>> exceptionally vile design).
>>
>> Such examples of small loops used for MF are proof positive how poor
>> an antenna can be, and the RF gain knob resurrecting its pitiful
>> efficiency.
>
> But for MWDX reception, efficiency simply isn't an important virtue. Gain is
> cheap. What matters is the steerable nulls. An efficient *steerable* MW
> antenna is enormous and expensive.
>
>> This does NOT demonstrate some illusion of superior
>> receive antenna design; rather it is more smoke and mirrors as an
>> argument. Inverting the argument, if you had a full sized antenna for
>> that band, you would only need a galena crystal and cat whisker to
>> power your hi-Z headset. For DX you would only need a $5 AF
>> amplifier. The smaller antenna clearly needs more dollars expended to
>> offset the debilities of the poorer efficiency.
>
> Sensitivity is the cheapest, easiest virtue to put into a receiver.
> Essentially all modern receivers have plenty. Indeed, the cheap ones often
> overload when presented with an efficient antenna: you have to spend the
> dollars to be able to handle the big signals!
>
> Speaking of strawmen, have you ever actually tried DXing with a crystal
> radio?
>
>> The specious argument
>> is tailored for the technically effete who would rather push a credit
>> card across the display counter than build their own cheap solution.
>> Take heart that this not simply a cheap shot, there are as many Hams
>> who don't know which end of the soldering iron to pick up either.
>
> I love designing and building antennas: applied physics is fun. But it's good
> engineering to go with the strengths of your technology. For my inverted-L's,
> I spend a little efficiency (4 dB or so) to get octaves of effective
> bandwidth, something that is perhaps of little use to hams, but is very
> useful to an SWL in conjunction with the frequency agility of a modern
> receiver. 4 dB of efficiency loss is of negligible consequence at HF and
> below if your receiver has a decent noise figure. I've never seen mention of
> this efficiency/bandwidth tradeoff in the ham literature, but it's not hard
> to find in the professional literature. For details of a specific
> calculation, see:
>
> http://anarc.org/naswa/badx/antennas/SWL_longwire.html
>
> -jpd

4617. DXer needs help imroving fm recption

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 22:10:50 UTC
From: DJboutit <Recordking@Hotmail.com>
Message-ID: <KNIEc.4871$sD5.4864@newssvr23.news.prodigy.com>
Source record: 92722

I have a Fisher FM 2110 tuner Radio Shack antenna 20ft to 25ft high. What can I do to improver the recption that does not cost $$ I live in Houston Tx and want to get stations atleast 100 to 150 miles away.

4618. Re: ,,,and you are?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 22:19:58 UTC
From: Steve Nosko <suteuve.nosukowicuz@moutouroula.com>
Message-ID: <cbsq2nftl1@newshost.mot.com>
Source record: 92726

Hey! Do that for me...with trepidation.

--
Steve N, K,9;d, c. i My email has no u's.

"william ewald" <wewald@bellsouth.net> wrote in message
news:ac31e0hlac1it8hogsu0vtcl0tf3hdeqf3@4ax.com...
> On 28 Jun 2004 01:10:02 GMT, fractenna@aol.com (Fractenna) wrote:
>
> >>yea right said:
>
> >>Chip, don't be so easly fooled! The BPL industry only has one goal in
> >>mind, to make money. Radio enthusiast are their enemy.
> >>
> >
> >...and you are...
> >
> >?
> >
> >73,
> >Chip N1IR
>
> Who is Fractenna?
>
> Total posts by Fractenna, 6560 in rec.radio.antenna, containing the
> following keywords or phrases, arranged by times used :
>
> fractal antenna, 1140
> Phil, 769
> patent, 304
> Fractal Antenna Systems (or FAS), 289
> legal, 221
> abuse, 171
> copyright, 168
> Fractal Antenna Reflector, 148
> libel, 137
> attack, 126
> bogus, 125
> fraud, 118
> lies, 112
> malicious. 112
> harassment, 110
> illegal, 92
> lawsuit, 86
> hate, 83

> credibility, 75
> Patent pending, 75
> sue, 71
> This thread is closed, 69
> public notice, 65
> lawyer, 63
> warning, 63
> My attorney, 62
> Your attorney, 62
> defamation, 58
> defend, 58
> threat, 58
> fraudulent, 56
> abusive, 50
> counsel, 50
> litigation, 48
> threatening, 47
> liar, 41
> harassing, 39
> patent Infringement, 38
> destroy. 37
> distortion, 31
> criminal, 28
> obsession, 27
> Wakefield killer, 23
> damages, 22
> malign, 16
> hatred, 15
> pirating, 14
> antisemitic, 13
> www.n1IR.com, 13
> death threat, 10
> retraction, 9
> offenders, 3
> legal counsel, 2
>
>
>
>

4619. Re: DXer needs help imroving fm recption

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 22:45:17 UTC
From: jgboyles@aol.com
Message-ID: <20040629184517.10926.00000866@mb-m02.aol.com>
Source record: 92723

>I have a Fisher FM 2110 tuner Radio Shack antenna 20ft to 25ft high. What
>can I do to improver the recption that does not cost $$

Nothing that does not cost money, unless you have amplifiers and/or push-up poles in your junk box. Antenna mounted amplifiers will help, but you have to run power up to them, or use a photovoltaic array. Amps at receiver will not generally help. Probably the cheapest solution is to get the antenna at least another 10' up, more if possible.
73 Gary N4AST

4620. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 23:05:21 UTC
From: jgboyles@aol.com
Message-ID: <20040629190521.10926.00000868@mb-m02.aol.com>
Source record: 92724

>Nature is full of these ironies. My favorite is that when bread and crackers
>are exposed to the same environment, the bread becomes hard and the crackers
>become soft!

Freshly baked bread is full of moisture, and a nice crisp cracker is dry.
After a while the bread loses its moisture and hardens, while the cracker
absorbs moisture and softens. Is this the moisture in the ground analogy you
are talking about?
73 Gary N4AST

4621. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 23:08:29 UTC
From: rc <rc@roncrowley.dot.com>
Message-ID: <jss3e0l5g8ah6e6e36o1v4ffe03btr6851@4ax.com>
Source record: 92725

On Tue, 29 Jun 2004 07:39:44 -0400, "Chuck" <no.spam@no.spam.net>
wrote:

>
>Nature is full of these ironies. My favorite is that when bread and crackers
>are exposed to the same environment, the bread becomes hard and the crackers
>become soft! (Posted on someone's door at Stanford Research Institue back in
>the 60's.)
>
>Chuck
>

Not so ironic at all. The bread lost it's moisture but the cracker
absorbed it due to the salt being a natural desiccant. The irony was
lost because the outcome was predictable.

OK, I know . . . no one likes a smart ass :-)

Ron, W1WBV

4622. Re: DXer needs help imroving fm recption

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-29 23:17:18 UTC
From: "David.Shrader" <W1MCE@comcast.net>
Message-ID: <1MmEc.1011$%_6.748@attbi_s01>
Source record: 92727

DJboutit wrote:
> I have a Fisher FM 2110 tuner Radio Shack antenna 20ft to 25ft high. What
> can I do to improver the recption that does not cost $$ I live in Houston Tx
> and want to get stations atleast 100 to 150 miles away.
>
>
At 20 feet high your antenna can effectively see the horizon at about 6
miles from your house. So, to receive a FM station 150 miles away the FM
station needs to have it's antenna at an elevation of somewhere around 2
miles high. That is simply not feasible!!

At 100 miles the radio station needs an antenna about 1 mile high. Still
not feasible!

Basically, you should be able to receive a FM signal from a very well
equipped FM station out to 50 to 60 miles from their transmitting
antenna. Even at 60 miles the broadcast antenna needs to be around 2000
feet high.

4623. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 00:39:48 UTC
From: rh3x@erols.com
Message-ID: <2t24e0d0imsub4pr65kp7cteq364f6a6ht@4ax.com>
Source record: 92728

Steve: Seems we received some great advice and direction. Thanks
all.

de Rich/N2JR

On 29 Jun 2004 01:51:19 GMT, fumper@aol.com (Fumper) wrote:

>I am looking for one too. any luck?
>
>Steve --- N0NHA

4624. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 01:01:42 UTC
From: Bob Miller <bxmillerNoSpam@texas.net>
Message-ID: <1644e0htpakt8iq0i259oscs0nvtppf7of@4ax.com>
Source record: 92729

On Mon, 28 Jun 2004 19:38:22 -0400, rh3x@erols.com wrote:

>Looking for a rotatable dipole covering 40-10M. Any company make
>one?
>
>Tks de Rich/N2JR
>

Read http://www.cebik.com/aledz.html and see where he ends up.

bob
k5qwg

4625. Re: Millen grid dip meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 01:39:58 UTC
From: John Moriarity <k6qq@hdo.net>
Message-ID: <10e46f47roen3bb@corp.supernews.com>
Source record: 92730

> And, another thought: Often times on ebay, and at swap meets, you will
see
> ones by Measurments Corp-- Model 59. (think some also calles "Boontown"
> meters , were made in Boontown, N.J.)

Actually, it's Boonton, N.J., I've been to the
Measurements Corp factory. There was
another company there that used the name
"Boonton". I have one of their RF Voltmeters.

> ...These
> come in 2 varieties- a LOW freq head (freq range unknown), and a HF-VHF
> version 2.2 MHz to 400 MHz ...

One meter/power supply unit, three tuning
heads. Mine are packed at the moment,
but the LF head covers roughly 60 kHz to
2.3 MHz, the most common head covers
2.2 to 400 MHz, and the UHF head covers
up to about 1GHz, as I recall.

I have all three heads, and use them all.
Great instrument, but many newcomers
(even a Hewlett-Packard RF engineer I
once worked for) have never seen one.

73, John - K6QQ

4626. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 01:58:00 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <mbs3e0h6l7fc42p7boqfa9c1gj73g5vcv3@4ax.com>
Source record: 92731
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

On Tue, 29 Jun 2004 15:34:42 -0600, John Doty
<jpd@whispertel.LoseTheH.net> wrote:

>You are making the assumption that that the antenna only picks
>up radiated modes.

I am making no such assumption and all following commentary does
absolutely nothing to separate the concerns of SWLers from Ham
activity.

>Non-radiated electromagnetic modes are also
>troublesome, particularly common mode on the transmission line. This
>tends to be the way that locally generated noise from household gadgets
>gets into an antenna system.
>
>Consider a lamp dimmer that generates 10 mW of RFI, which rides out in
>common mode on the mains, finds its way to the power cord of your
>transceiver, rides out on the feedline to the antenna, and then couples
>back through differential mode to your receiver input. That's not a very
>efficient coupling path, so suppose it has a loss of 60 dB. You'll still
>get 10 nW to the receiver. This is a lot: even if it's spread over 30
>MHz, it's still 10 uV in a 6 kHz channel. That's S6 on my Drake R-8, a
>very serious quantity of noise.

Let's work with exactly that scenario you offered.

S6 (Calibrated) on my Drake TR-7 is -88dBm - so close to your 10ï¿½V to
be indistinguishable. My TS-430 varies from -80dBm to -73dBm. There
is no calibrated S-Meter for my DX-440, but for a $200 SW set, its
sensitivity is -90dBm for a full scale meter indication (about 7dB
range from top to bottom).

All very well and good. Now if we regard this speculation of 10mW (it
is, after all, the epitome of a wild ass guess, isn't it?); then,
let's reverse engineer that 10nW product from 6kHz buckets over the
range of 30MHz to find 50ï¿½W which is 23dB below the original power
presumably suppressed 60dB. Well, I have either pencil-whipped you,
or you me, or each other - the numbers don't add up. Hardly matters
given the original specification had no basis in fact.

However, if I return to the original "problem" of noise derived from
household sources; then that is also something I have closely
measured.

Across time, frequency, antennas, and known noise sources I have found
it as low as S1 for my longwire (an antenna supposedly unused by Hams)

to as high as S7 (for that same longwire). My loops, dipoles and verticals hardly fell outside of this range to present any gilt-edge design.

With every circuit in the house broken (operating battery power in the dark), average noise level was either S2 for a vertical, or S1 to S3 for a loop (rather upsetting the voodoo of loops being quiet and verticals being noisy). When I returned power to the house by stages, I insured every opportunity of injecting noise by setting dimmers to their worst position (about 50%). In the low bands, I suffered as much as S8 noise levels with an average of S5 when the house was full lit (also including fluorescents) and all noise sources adding to the cacophony of reception. This was for a loop antenna.

>On the other hand, if your transmitter puts out 1 kW, 60 dB of loss
>means it only delivers 1 mW of RF to the dimmer, an amount unlikely to
>interfere with its operation. Reciprocity does not mean *consequences*
>are symmetrical.

This effect of reciprocity has been reported so frequently in this group so as to negate your premise. We have many queries for how to solve this problem.

>> To this point, you have not offered any particularly receive dominated
>> issue that is not already a heavily trafficked topic with transmission
>> antennas.
>
>A deep, steerable null can be extremely useful for reception, but its
>not generally useful for transmission.

This really goes off the deep edge. Barring loss introduced for the sake of jimmying the logic, transmitters AND receivers enjoy the GAIN derived from the introduction of a null not otherwise part of the characteristic. This is a commonplace of theory and practice. Where ever you can design or contribute to a null; then this must of necessity result in an increase in signal outside of its region. These are all commonplace observations discussed here that are observable for either Ham or SWL operations. There is NO differential offered in these observations that separate SWL from Ham activities.

>> Such examples of small loops used for MF are proof positive how poor
>> an antenna can be, and the RF gain knob resurrecting its pitiful
>> efficiency.
>
>But for MWDX reception, efficiency simply isn't an important virtue.

I believe I have said that at least 3 to 5 times already.

>Gain is cheap. What matters is the steerable nulls. An efficient
>*steerable* MW antenna is enormous and expensive.

Who needs an efficient MW antenna?

>> This does NOT demonstrate some illusion of superior
>> receive antenna design; rather it is more smoke and mirrors as an
>> argument. Inverting the argument, if you had a full sized antenna for
>> that band, you would only need a galena crystal and cat whisker to
>> power your hi-Z headset. For DX you would only need a $5 AF
>> amplifier. The smaller antenna clearly needs more dollars expended to
>> offset the debilities of the poorer efficiency.
>
>Sensitivity is the cheapest, easiest virtue to put into a receiver.
>Essentially all modern receivers have plenty. Indeed, the cheap ones
>often overload when presented with an efficient antenna: you have to
>spend the dollars to be able to handle the big signals!

All of $20 if you have any technical capacity. Otherwise push the
credit card across the display counter and spend as much as they can
sell you. This argument is like driving your car into the shop to get
the air changed in your tires every 100 miles.

Again, front end overload is a very common complaint offered here by
SWLers who are then advised in how to simply AND cheaply combat this
problem.

>Speaking of strawmen, have you ever actually tried DXing with a crystal
>radio?

Sure, what is so remarkable about that? Beyond this simple design,
ever hear of a super-Regen receiver? You don't need to spend half a
kilo-buck to get the same sensitivity and filtering is dirt cheap.
How about Q-multipliers? All such topics barely spread the wallet as
much as the illusion of more buttons make a better rig.

>I love designing and building antennas: applied physics is fun. But it's
>good engineering to go with the strengths of your technology. For my
>inverted-L's, I spend a little efficiency (4 dB or so) to get octaves of
>effective bandwidth, something that is perhaps of little use to hams,
>but is very useful to an SWL in conjunction with the frequency agility
>of a modern receiver. 4 dB of efficiency loss is of negligible
>consequence at HF and below if your receiver has a decent noise figure.

As I pointed out to Yahoo, if you choose to cripple yourself, then
slide on over to the shoulder and enjoy kicking up dust and rocks as
you travel down the road. a 4dB loss for an inverted L (hardly a SW
invention) is far too simple to remedy to make its suffering a boast
of martyrdom. It is a strange argument to offer that you can't afford
a $20 solution for your $500 set and $2 worth of wire.

>I've never seen mention of this efficiency/bandwidth tradeoff in the ham
>literature,

You haven't looked. Either contrived, wholly fictional, or accurately
represented, it is part of the stock in trade for selling antennas.
In this group, I would wager its discussion consumes more bandwidth
than bragging about how many QSL cards have been pasted to the wall.

>but it's not hard to find in the professional literature.
>For details of a specific calculation, see:
>
>http://anarc.org/naswa/badx/antennas/SWL_longwire.html
>
>-jpd

It would do you well to note that this "professional" whom you rely upon, John Kraus, is one of the most notable Ham Radio Operators frequently acknowledged and referred to here.

Do you or others have any actual differentiable discussion, or is this simply an outlet for appoligia for why it isn't worth the strain to lift a soldering iron when you can bench press a credit card?

73's
Richard Clark, KB7QHC

4627. Re: best antenna over a carport?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 02:07:28 UTC
From: tdonaly@aol.com
Message-ID: <20040629220728.29691.00000700@mb-m18.aol.com>
Source record: 92732

H wrote,
>
>longwire
>ground to biggest conductor nearby
>tuner
>get on the air
>
>I dare not attempt construction of sentences comparable to Richard's, so I
>thought I'd just get to the point.
>73 es gud dx
>H.
>NQ5H
>

Reminds me of Hemingway.
73,
Tom Donaly, KA6RUH

4628. Re: Millen grid dip meter question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 02:09:26 UTC
From: sbc yahoo news <nn7kexk7zfg@sbcglobal.net>
Message-ID: <40E220F4.2040205@sbcglobal.net>
Source record: 92733

Yeh, and my first experience with one was at a Ham, and now long retired Tektronix employee. always wanted one-- bought mine for around 60 bux! The interesting thing was , found 2 of them (SANS OSCILLATOR HEAD) for 10 bux, and one of them NOT the WW II version, but in a SQUARE, modern houseing ! Probably should have got them on spot, but then there is always next year!! Not much call, unfortunatly for great test lab quality equipment (too many appliance ops!) but then the more they DONT recognize this stuff, the cheaper it is for me!! Good Memories- from around 35 years ago! Jim NN7K

John Moriarity wrote:
>>And, another thought: Often times on ebay, and at swap meets, you will
>
> see
>
>>ones by Measurments Corp-- Model 59. (think some also calles "Boontown"
>>meters , were made in Boontown, N.J.)
>
>
> Actually, it's Boonton, N.J., I've been to the
> Measurements Corp factory. There was
> another company there that used the name
> "Boonton". I have one of their RF Voltmeters.
>
>
>>...These
>>come in 2 varieties- a LOW freq head (freq range unknown), and a HF-VHF
>> version 2.2 MHz to 400 MHz ...
>
>
> One meter/power supply unit, three tuning
> heads. Mine are packed at the moment,
> but the LF head covers roughly 60 kHz to
> 2.3 MHz, the most common head covers
> 2.2 to 400 MHz, and the UHF head covers
> up to about 1GHz, as I recall.
>
> I have all three heads, and use them all.
> Great instrument, but many newcomers
> (even a Hewlett-Packard RF engineer I
> once worked for) have never seen one.
>
> 73, John - K6QQ
>

>

4629. Re: DXer needs help imroving fm recption

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 02:58:16 UTC
From: Bob Bob <bcnntp@optusnet.com.au>
Message-ID: <9rm9r1-87s.ln1@p400bob.lse.com.au>
Source record: 92734

Err isnt FM broadcast between 88-108MHz? There is some "bend" to those
frequencies.

The simple answer to the problem is;
- more antenna height
- low cable loss (preamp?)
- low noise figure (good preamp)
- directive/gain antenna

Each of these requires $$ and it is a case of how *much* better it needs
to be. I'd initially suggest a low noise preamp as having best bang for
the buck. You can certainly buy them but it may be worthwhile looking a
a low noise design from a handful of components (say $5-10) I built one
up once from (I think) an MRF901. Worked well for TV and FM radio.

And maybe go to 30ft on the mast. Local obstructions might be a problem
too. ie make sure that your 20ft pole isnt right next to a 18ft house....

Antenna gain is a tricky one because most designs arent quite wide
enough to cover the entire band with good gain. LPDA's and helixes might
do the job though. Depends though on what you want to spend or make.

I should also point out that if you have any strong local FM stations
preamps may get overloaded and not perform well at all.This is the price
you pay for putting a wideband amp at the RX front end.

Hope this helps

Cheers BOb VK2YQA

bcnuup does it better

David.Shrader wrote:
> DJboutit wrote:
>
>> I have a Fisher FM 2110 tuner Radio Shack antenna 20ft to 25ft high.
>> What
>> can I do to improver the recption that does not cost $$ I live in
>> Houston Tx
>> and want to get stations atleast 100 to 150 miles away.
>>
>>
> At 20 feet high your antenna can effectively see the horizon at about 6
> miles from your house. So, to receive a FM station 150 miles away the FM
> station needs to have it's antenna at an elevation of somewhere around 2
> miles high. That is simply not feasible!!
>

> At 100 miles the radio station needs an antenna about 1 mile high. Still
> not feasible!
>
> Basically, you should be able to receive a FM signal from a very well
> equipped FM station out to 50 to 60 miles from their transmitting
> antenna. Even at 60 miles the broadcast antenna needs to be around 2000
> feet high.
>

4630. Re: Rotatable Dipole

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 03:49:06 UTC
From: Hal Rosser <hmrosser@bellsouth.net>
Message-ID: <sCqEc.2661$LL5.739@bignews1.bellsouth.net>
Source record: 92735

I've seen'em use slinkies over pvc pipe on field day. Rotatable, portable,
decent operation. And it can walk down stairs.

<rh3x@erols.com> wrote in message
news:2ta1e01lbdrq4dcrdoqupdvos1v2qsdq3b@4ax.com...
> Looking for a rotatable dipole covering 40-10M. Any company make
> one?
>
> Tks de Rich/N2JR
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.712 / Virus Database: 468 - Release Date: 6/27/2004

4631. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 04:41:44 UTC
From: John Doty <jpd@whispertel.LoseTheH.net>
Message-ID: <40E24488.2040000@whispertel.LoseTheH.net>
Source record: 92736
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

Richard Clark wrote:
> On Tue, 29 Jun 2004 15:34:42 -0600, John Doty
> <jpd@whispertel.LoseTheH.net> wrote:
>
>
>>You are making the assumption that that the antenna only picks
>>up radiated modes.
>
>
> I am making no such assumption and all following commentary does
> absolutely nothing to separate the concerns of SWLers from Ham
> activity.
>
>
>>Non-radiated electromagnetic modes are also
>>troublesome, particularly common mode on the transmission line. This
>>tends to be the way that locally generated noise from household gadgets
>>gets into an antenna system.
>>
>>Consider a lamp dimmer that generates 10 mW of RFI, which rides out in
>>common mode on the mains, finds its way to the power cord of your
>>transceiver, rides out on the feedline to the antenna, and then couples
>>back through differential mode to your receiver input. That's not a very
>>efficient coupling path, so suppose it has a loss of 60 dB. You'll still
>>get 10 nW to the receiver. This is a lot: even if it's spread over 30
>>MHz, it's still 10 uV in a 6 kHz channel. That's S6 on my Drake R-8, a
>>very serious quantity of noise.
>
>
> Let's work with exactly that scenario you offered.
>
> S6 (Calibrated) on my Drake TR-7 is -88dBm - so close to your 10ï¿½V to
> be indistinguishable. My TS-430 varies from -80dBm to -73dBm. There
> is no calibrated S-Meter for my DX-440, but for a $200 SW set, its
> sensitivity is -90dBm for a full scale meter indication (about 7dB
> range from top to bottom).
>
> All very well and good. Now if we regard this speculation of 10mW (it
> is, after all, the epitome of a wild ass guess, isn't it?); then,
> let's reverse engineer that 10nW product from 6kHz buckets over the
> range of 30MHz to find 50ï¿½W which is 23dB below the original power
> presumably suppressed 60dB. Well, I have either pencil-whipped you,
> or you me, or each other - the numbers don't add up.

10 uV into 50 ohms is 2 pW, not 10 nW (E^2/R). 2 pW = -117 dBW = -87 dBm. Multiplying by 30000/6 = 5000 buckets makes 10 nW or -50 dBm. Cancel the assumed 60 dB loss and I get +10 dBm, or 10 mW. The numbers add up fine.

>
> However, if I return to the original "problem" of noise derived from
> household sources; then that is also something I have closely
> measured.
>
> Across time, frequency, antennas, and known noise sources I have found
> it as low as S1 for my longwire (an antenna supposedly unused by Hams)
> to as high as S7 (for that same longwire). My loops, dipoles and
> verticals hardly fell outside of this range to present any gilt-edge
> design.

Just because you couldn't doesn't mean others can't. Look at the rest of the articles on the BADX site. Taking steps to minimize common mode coupling has worked very well for me, and many people tell me it works for them too.

You might also find the articles at http://www.qsl.net/wa1ion/ interesting, especially the one entitled "Another Look at Noise Reducing Antennas". Mark's antenna designs are generally useless for transmitting, but they make superb MWDX receiving antennas.

>
> With every circuit in the house broken (operating battery power in the
> dark), average noise level was either S2 for a vertical, or S1 to S3
> for a loop (rather upsetting the voodoo of loops being quiet and
> verticals being noisy). When I returned power to the house by stages,
> I insured every opportunity of injecting noise by setting dimmers to
> their worst position (about 50%). In the low bands, I suffered as
> much as S8 noise levels with an average of S5 when the house was full
> lit (also including fluorescents) and all noise sources adding to the
> cacophony of reception. This was for a loop antenna.
>
>
>>On the other hand, if your transmitter puts out 1 kW, 60 dB of loss
>>means it only delivers 1 mW of RF to the dimmer, an amount unlikely to
>>interfere with its operation. Reciprocity does not mean *consequences*
>>are symmetrical.
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> This effect of reciprocity has been reported so frequently in this
> group so as to negate your premise. We have many queries for how to
> solve this problem.
>
>
>>>To this point, you have not offered any particularly receive dominated
>>>issue that is not already a heavily trafficked topic with transmission
>>>antennas.

>>
>>A deep, steerable null can be extremely useful for reception, but its
>>not generally useful for transmission.
>
>
> This really goes off the deep edge. Barring loss introduced for the
> sake of jimmying the logic, transmitters AND receivers enjoy the GAIN
> derived from the introduction of a null not otherwise part of the
> characteristic. This is a commonplace of theory and practice. Where
> ever you can design or contribute to a null; then this must of
> necessity result in an increase in signal outside of its region.
> These are all commonplace observations discussed here that are
> observable for either Ham or SWL operations. There is NO differential
> offered in these observations that separate SWL from Ham activities.

Certainly there is. A narrow null takes little power from the pattern:
you get little gain by putting that in a broad lobe. For example, an
elementary dipole has, theoretically, infinitely deep nulls yet it only
has about 2 dBi gain. Now consider a phased array: small phasing errors
have little effect on the gain, but they can have a large effect on the
null depth.

When transmitting, you're generally interested in putting the power in
the right place, but when receiving you're often more interested in
avoiding picking up power from the wrong place. These considerations are
only weakly related.

>
>
>>>Such examples of small loops used for MF are proof positive how poor
>>>an antenna can be, and the RF gain knob resurrecting its pitiful
>>>efficiency.
>>
>>But for MWDX reception, efficiency simply isn't an important virtue.
>
>
> I believe I have said that at least 3 to 5 times already.
>
>
>>Gain is cheap. What matters is the steerable nulls. An efficient
>>*steerable* MW antenna is enormous and expensive.
>
>
> Who needs an efficient MW antenna?

People who transmit, of course!

>>Speaking of strawmen, have you ever actually tried DXing with a crystal
>>radio?
>
>
> Sure, what is so remarkable about that? Beyond this simple design,

> ever hear of a super-Regen receiver? You don't need to spend half a
> kilo-buck to get the same sensitivity and filtering is dirt cheap.

Sure. Used them. Selectivity is *lousy*. For SW, I've gotten better
results with a plain regen. Still, my Drake R-8 is better for DX, my
Sony ICF-SW100 travels easy, and my Stromberg-Carlson 58-T sounds
wonderful, so I haven't played with a regen in quite a while.

> How about Q-multipliers? All such topics barely spread the wallet as
> much as the illusion of more buttons make a better rig.

I have a Heathkit Q-multiplier I built in 1965. It's pretty good at
nulling out unwanted carriers, but in peak mode the shape factor of a
single resonance is pretty poor. At the moment I don't have a working
receiver it's really suited to, but I have a Halli S-40 one of my
in-laws gave me, and one of these days I'll find the time to repair it
(it's in really poor shape). The S-40 could probably use a Q-multiplier
once I've got it in working order.

>
>
>>I love designing and building antennas: applied physics is fun. But it's
>>good engineering to go with the strengths of your technology. For my
>>inverted-L's, I spend a little efficiency (4 dB or so) to get octaves of
>>effective bandwidth, something that is perhaps of little use to hams,
>>but is very useful to an SWL in conjunction with the frequency agility
>>of a modern receiver. 4 dB of efficiency loss is of negligible
>>consequence at HF and below if your receiver has a decent noise figure.
>
>
> As I pointed out to Yahoo, if you choose to cripple yourself, then
> slide on over to the shoulder and enjoy kicking up dust and rocks as
> you travel down the road. a 4dB loss for an inverted L (hardly a SW
> invention) is far too simple to remedy to make its suffering a boast
> of martyrdom. It is a strange argument to offer that you can't afford
> a $20 solution for your $500 set and $2 worth of wire.

How would you undo that 4 dB loss without loss of bandwidth? I'm hardly
boasting of martyrdom anyway: a broadband inverted L is a fine general
purpose receiving antenna.

>
>
>>I've never seen mention of this efficiency/bandwidth tradeoff in the ham
>>literature,
>
>
> You haven't looked. Either contrived, wholly fictional, or accurately
> represented, it is part of the stock in trade for selling antennas.
> In this group, I would wager its discussion consumes more bandwidth
> than bragging about how many QSL cards have been pasted to the wall.

Examples?

>>but it's not hard to find in the professional literature.
>>For details of a specific calculation, see:
>>
>>http://anarc.org/naswa/badx/antennas/SWL_longwire.html
>>
>>-jpd
>
>
> It would do you well to note that this "professional" whom you rely
> upon, John Kraus, is one of the most notable Ham Radio Operators
> frequently acknowledged and referred to here.

He knew a great deal about the full range of antenna designs and
applications, not just ham radio. And he sure knew his physics.

>
> Do you or others have any actual differentiable discussion, or is this
> simply an outlet for appoligia for why it isn't worth the strain to
> lift a soldering iron when you can bench press a credit card?

When a soldering iron is the best tool to get the job done, I lift a
soldering iron. The Stromberg-Carlson was a "bare chassis" restoration:
most of the resistors were >50% off value, the paper capacitors were
leaking, the electrolytics were dry, and one of the RF coils was open
(disassembling and reassembling the coil turret was a real pain). Still,
it was worth the work to get that wonderful sound.

The NASA certified techs I work with professionally tell me I'm pretty
good with a soldering iron, considering I'm a physicist. From them,
that's high praise :-)

-jpd

4632. Re: Coaxial sleeve antenna?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 04:42:38 UTC
From: antennas@yahoo.com
Message-ID: <e8be44e3.0406292042.453b7dc7@posting.google.com>
Source record: 92737

"Jimmie" <Gfender@carolina dot.rr.dot com> wrote in message
news:<hyADc.68321$2o2.4339693@twister.southeast.rr.com>...
> "VE8AE Andrew" <antennas@yahoo.com> wrote in message
> news:e8be44e3.0406202018.2d9c2aa@posting.google.com...
> > I want to build a nice small antenna for my boat. I had a J pole in a
> > PVC tube, but I thought about a vertical dipole of the sleeve type.
> > Can you make such a beast with the coax and just remove outer
> > insulation and then pull braid back over the coax until they are both
> > the same length? I want it for 156.8 MHz so it should be around 1.5 ft
> > per side. But I have seen an article that says the top portion should
> > be smaller than the lower braid portion to balance things out
> > electrically. Can anyone shed some light on this for me? I have tried
> > it and my analyzer doesn't show it resonant anywhere near that freq.
> > Hmmmm.
> > Help please.
> > Any other good marine antennas that are easy to build would be great
> > if you have plans or ideas. Thanks folks.
> > Andrew VE8AE
>
> The outer jacket of coax has some pretty bad properties at these
> frequencies. Normally this is not a problem as it is generally just used to
> keep water out of the coax. With the sleeve type antenna you are building
> you are expecting it to be an RF insulator, a job it was never designed to
> do. Ive found these work much better by cutting off the shield where they
> fold back and replacing it with a length of Teflon insulted wire. Other
> types of insulation may work as well but I have not tried it.

Thanks Jim, I have found some information on this sleeve dipole. I am
going to try one from 1/2" tube as outer and some 1/8" maybe up center
then a whip on the top. See if that will play or not. If not I may
make the Super J maritime antennas out of the antenna handbook. Yes I
know I could buy an antenna but that would be letting the dark side
win!! If I can't come up with something rigid and durable I will buy
one. Thank you everyone.
Andrew VE8AE

4633. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 06:14:31 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <r8h4e0d1fnn9fg5ncp1u9epfgsbgq8i2uq@4ax.com>
Source record: 92738
Cross-posted to: rec.radio.amateur.antenna,rec.radio.shortwave

On Tue, 29 Jun 2004 22:41:44 -0600, John Doty
<jpd@whispertel.LoseTheH.net> wrote:
>>>Consider a lamp dimmer that generates 10 mW of RFI, which rides out in
>>>common mode on the mains, finds its way to the power cord of your
>>>transceiver, rides out on the feedline to the antenna, and then couples
>>>back through differential mode to your receiver input. That's not a very
>>>efficient coupling path, so suppose it has a loss of 60 dB. You'll still
>>>get 10 nW to the receiver. This is a lot: even if it's spread over 30
>>>MHz, it's still 10 uV in a 6 kHz channel. That's S6 on my Drake R-8, a
>>>very serious quantity of noise.

>10 uV into 50 ohms is 2 pW, not 10 nW (E^2/R). 2 pW = -117 dBW = -87
>dBm. Multiplying by 30000/6 = 5000 buckets makes 10 nW or -50 dBm.
>Cancel the assumed 60 dB loss and I get +10 dBm, or 10 mW. The numbers
>add up fine.

As I said, one of the two of us was being pencil-whipped. This does
nothing to change the fact that the original term has no basis in
fact. It could as easily be laid to the effects of a nuclear EMP 2000
miles away. There will always be something to blame, and that is NOT
a solution nor is it differentiable between Ham and SWL antennas.

>> However, if I return to the original "problem" of noise derived from
>> household sources; then that is also something I have closely
>> measured.
>>
>> Across time, frequency, antennas, and known noise sources I have found
>> it as low as S1 for my longwire (an antenna supposedly unused by Hams)
>> to as high as S7 (for that same longwire). My loops, dipoles and
>> verticals hardly fell outside of this range to present any gilt-edge
>> design.
>
>Just because you couldn't doesn't mean others can't.

Can't WHAT? The numbers I offer are shown of direct experience
correlatable to real world conditions and conform to 3 Sigma of SWL
conditions. Being correlatable they were also resolved and reduced to
that same unpowered baseline without forcing me off the grid into
darkness. My station sits with a noise flicker based upon
atmospherics and radiation borne products, not the usual household
pollution that I both describe above and eliminated through techniques
described as commonplaces in this group.

There are no magic antennas and no magic rituals equal to these
commonplace practices that are offered here.

>Look at the rest of
>the articles on the BADX site. Taking steps to minimize common mode
>coupling has worked very well for me, and many people tell me it works
>for them too.

This material is NOT novel by any stretch of the imagination.
However, it is hardly fully encompassing and falls short of the entire
treatment. The notion that a spike in the ground solves common mode
reveals a very limited experience in the matter, and simply devolves
to the misty eyed sentimentality of "it works for me, so there is no
better way for you." Testimonial is a poor substitute for how and why
- especially when the suggested solution inevitably fails for someone.
The common response in that situation is to sneer them away as somehow
deserving their predicament - again, with no one knowing the basis of
the problem, they can hardly help but repeat the same nostrum now
shown to fail somewhere (an anathema in religion).

>You might also find the articles at http://www.qsl.net/wa1ion/

These suggestions grow more bizarre by the posting where the
correspondent offers that SWLers ignore Amateur advice as poor quality
(a remark from a noted Yahoo), and then offer proof of their own
beguiling theories through quotes from - Amateur references.

>interesting, especially the one entitled "Another Look at Noise Reducing
>Antennas". Mark's antenna designs are generally useless for
>transmitting, but they make superb MWDX receiving antennas.

I cannot see how injecting the notion of uselessness is a boon for an
argument upon a physicist who can understand the notion of symmetry or
what is called in this field of study, reciprocity. If it is useless
as a transmit antenna, is it useless as a receive antenna? Of course
not, as such the injection of this comment serves no purpose other
than rhetorical noise.

The problem with such a degraded S/N in the correspondence of ideas is
that the larger body of uninitiated SWLers come to the conclusion that
this "uselessness" is a positive boon to be sought in every antenna
design. Our eminent Yahoo wears this badge of anti-intellectualism as
a patronizing populist.

This discussion also reveals a poverty of alternative designs that
have equal or superior merits, even if devoid of transmitting
application. Those designs are widely discussed here and their merits
are weighed not in prejudicial terms but rather in technical
comparisons and their correlation to application. That is to say,
anyone can make an informed decision on the basis of these evaluations
offered here where we typical discard "testimonials" to the rubbish
heap.

>A narrow null takes little power from the pattern:
>you get little gain by putting that in a broad lobe. For example, an
>elementary dipole has, theoretically, infinitely deep nulls yet it only
>has about 2 dBi gain. Now consider a phased array: small phasing errors

>have little effect on the gain, but they can have a large effect on the
>null depth.

Again, this exposes a lack of experience in the matter. Those nulls are balanced against the theoretical radiator called an isotropic source. This is the i of the 2dBi (and in fact is actual;y higher than that value).

Worse yet, this lack of experience further pollutes the uninitiated SWLer's notion of this balance of ledger because no one on this earth is ever going to experience that 2dB gain (nor the supposed sharp nulls) - and simply due to earth being nearby (an irreconcilable fact of life that extends out beyond 6 Sigma for the population of listeners). A simple dipole one quarterwave above earth exhibits an additional 3dB gain above and beyond your cited number. This goes to show how your casually abandoned 4dB for an inverted L is so simply recovered - through real comparisons rather than xeroxed theories.

The level of discussion is so unbalanced with myth, superstition and hearsay that the casual SWLer seeking advice faces the problem of sorting out the shit from the shinola. If I were to hike the dipole a little more, it shows 8dB gain after allowing a real world loss of 1dB. To tell that same casual SWLer 4dB is no great loss gives a spread of 10dB.

The consequence of this challenging this poor coverage of intellectual offering is that the casual SWLer having the facts known, can in fact choose to build a less optimal antenna, one that suits his real world limitations, and enjoy a design that does not simply discard signal with abandon. Alternatively, a simpler receiver can perform with an excellent antenna as well as a box full of expensive knobs can with an air cooled resistor.

>When transmitting, you're generally interested in putting the power in
>the right place, but when receiving you're often more interested in
>avoiding picking up power from the wrong place. These considerations are
>only weakly related.

This has been spoken too, the limitation is found in the signal and noise being aligned along the same meridian. If there is any weak relation it is found in the chance of distribution. The laws of reciprocity are not violated by chance, and both Ham operator and SWLer suffer the same odds. There is NOTHING separable here.

>> Who needs an efficient MW antenna?
>
>People who transmit, of course!

And SWLers are not transmitting are they? Really, these specious arguments do not advance any notion of this being separate issues. There is nothing in the circularity of logic that demands poorer transmit antenna designs are better receive antenna designs. Nearly every beneficial description from your sources cited above lie outside

of the antenna and reside in the coupling or in the receiver. Such commonplaces are not novel; they are not unique and special knowledge; and they are certainly not universally applicable.

>How would you undo that 4 dB loss without loss of bandwidth?

That has been responded to above. Loss of bandwidth is a chimera suited for argument rather than operation. To say it is frequency agile is the crowning claim for someone who is fain to turn a switch and set a capacitor in 5 seconds. This isn't rocket surgery, children learn such techniques within minutes of explanation and faithfully demonstrate far less loss consistently for ever after.

Further, the usage of a tuner solves many other ills related to noise and front end overload. The argument of the 9:1 transformer to ease operation comes at the expense of simple cheap solutions - to no great benefit, and further, to 4 dB additional loss as you describe. What boon is to be found in that combination?

I find it laughable that one web site offered claims that a resonant system is bad for your reception. What a crock! This has all the logic of buying square wheels to increase your gas mileage.

>I'm hardly
>boasting of martyrdom anyway: a broadband inverted L is a fine general
>purpose receiving antenna.

And what distinguishes it as a poor transmitting antenna? The inclusion of the engineering decoration of the 9:1 transformer? This logic is destroyed by a conventional tube transmitter (the original application suited to this design).

Once again, every issue in relation to even this point is discussed as a commonplace in this group with simple and cheap solutions that perform without the concurrent 4dB loss. Such a cavalier attitude of discarding signal is evidence of purchasing power, not technical competence.

>>>I've never seen mention of this efficiency/bandwidth tradeoff in the ham
>>>literature,
>>
>>
>> You haven't looked. Either contrived, wholly fictional, or accurately
>> represented, it is part of the stock in trade for selling antennas.
>> In this group, I would wager its discussion consumes more bandwidth
>> than bragging about how many QSL cards have been pasted to the wall.
>
>Examples?

As I offered, you need to look rather than claim. They are so common that if they escape your attention, no work on my part is going to satisfy you.

So, the question remains:
>> Do you or others have any actual differentiable discussion, or is this
>> simply an outlet for appoligia for why it isn't worth the strain to
>> lift a soldering iron when you can bench press a credit card?

73's
Richard Clark, KB7QHC

4634. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 06:31:53 UTC
From: Meindert Sprang <mhsprang@NOcustomSPAMware.nl>
Message-ID: <10e4nlgl8jluoc1@corp.supernews.com>
Source record: 92739
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

"Mark1" <vonkenboer2004(geen-rommel)@hotmail.com> wrote in message
news:mn.ed907d46ccc1361a.13868@hotmail.com...
> pse remove the nl newsgroup from this discussion.

Loop niet zo te zeuren Mark1, deze draad is gestart door een Nederlander
(Kees) en ge-crosspost naar twee engelse groepen. Dus dat deze heren hier
steeds weer terugkomen is gewoon deel van de originele discussie.

Meindert

4635. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 07:22:51 UTC
From: Mark1 <vonkenboer2004@hotmail.com>
Message-ID: <mn.f2327d46b1dec72e.13868@hotmail.com>
Source record: 92740
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Meindert Sprang bracht volgend idï¿œe uit :
> "Mark1" <vonkenboer2004(geen-rommel)@hotmail.com> wrote in message
> news:mn.ed907d46ccc1361a.13868@hotmail.com...
>> pse remove the nl newsgroup from this discussion.
>
> Loop niet zo te zeuren Mark1, deze draad is gestart door een Nederlander
> (Kees) en ge-crosspost naar twee engelse groepen. Dus dat deze heren hier
> steeds weer terugkomen is gewoon deel van de originele discussie.
>
> Meindert

Wat een onzin Meindert, ik vraag gewoon of ze deze nieuwsgroep eruit
willen halen, het is en blijft een Nederlandse nieuwsgroep.

De 'draad' is gestart door Kees met reclame maken voor zijn website met
daarop zijn eigen gebouwde antenne, daar staat netjes bij dat hij wel
vragen wilt beantwoorden, nou prima maar dan wel op zijn e-mail adres
graag.

4636. Klein formaat IRC's nog inwisselbaar ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 07:52:04 UTC
From: ariexyz@hotmail.com
Message-ID: <995b9343.0406292352.2baa57c@posting.google.com>
Source record: 92741

Heb hier nog een behoorlijke stapel IRC's (Intenational Reply Coupon)
liggen in het oude kleinere formaat.

Weet iemand of deze oude exemplaren nog (steeds) inwisselbaar
zijn tegen postzegels ?

Arie.

4637. Re: Klein formaat IRC's nog inwisselbaar ?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 09:03:17 UTC
From: Helmut <MyCallSign@qsl.net>
Message-ID: <cbtvki$ps8$04$1@news.t-online.com>
Source record: 92742

Hey, Arie,

am Besten wird es sein, Du gehst zu Deinem Postamt und versuchst es.
International habe ich gehï¿½rt, kann man die nicht mehr verwenden.

Gruï¿½ Helmut
OE8SOQ
"arie" <ariexyz@hotmail.com> schrieb im Newsbeitrag
news:995b9343.0406292352.2baa57c@posting.google.com...
| Heb hier nog een behoorlijke stapel IRC's (Intenational Reply Coupon)
| liggen in het oude kleinere formaat.
|
| Weet iemand of deze oude exemplaren nog (steeds) inwisselbaar
| zijn tegen postzegels ?
|
| Arie.

4638. Re: best antenna over a carport?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 11:53:43 UTC
From: "H. Adam Stevens, NQ5H" <NQ5H@ARRL.net>
Message-ID: <10e5am77m9k19bf@corp.supernews.com>
Source record: 92743

"Tdonaly" <tdonaly@aol.com> wrote in message
news:20040629220728.29691.00000700@mb-m18.aol.com...
> H wrote,
> >
> >longwire
> >ground to biggest conductor nearby
> >tuner
> >get on the air
> >
> >I dare not attempt construction of sentences comparable to Richard's, so
I
> >thought I'd just get to the point.
> >73 es gud dx
> >H.
> >NQ5H
> >
>
> Reminds me of Hemingway.
> 73,
> Tom Donaly, KA6RUH
>
>
With his best bourbon.
tnx es 73
de
NQ5H

Why did the chicken cross the road?

To die.
In the rain.

4639. Re: DXer needs help imroving fm recption

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 12:52:14 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <2kfrbnF1trq9U1@uni-berlin.de>
Source record: 92744

"DJboutit" wrote
>want to get stations at least 100 to 150 miles away.

VHF basically is a line-of-sight service, although favorable propagation conditions can extend that range at some times of the day and seasons of the year, for some receiving locations. When those conditions exist, it doesn't take much of a receiving antenna. When they don't, no practical receiving antenna will work well.

For an FM station radiating 100kW from a 1,500 foot height above average terrain, at a 93 mile range the FCC's f 50,50 curves predict a field strength of about 75 microvolts/meter at a receiving antenna height of about 30 feet above ground. And that only occurs for "uncluttered" paths to 50% of locations at that distance, 50% of the time. Urban clutter and/or lower rx antenna height will reduce those fields strengths considerably.

As a cal point, my situation with St. Louis FM stations parallels the conditions above. Using a McIntosh MR-73 tuner with a Wineguard CH6065 10-element FM antenna (10dB gain), they are received with reasonable stereo quality about 1/2 the time.

RF

Visit http://rfry.org for FM broadcast RF system papers.

4640. what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 14:32:23 UTC
From: Thierry <"Answer direct via http">
Message-ID: <40e2cf06@news.vo.lu>
Source record: 92745
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

Hi,

Compare these prices for the Cuschcraft MA5B :
http://www.durhamradio.com/cushcraft-ma5b.htm $599

http://www.chq-inc.com/asp/details.asp?mod=MA5B&man=cush, less than $400

The first deny any eplanations, so someone could help me to understand why
Keith sold this antenna at such a price...

Thanks in advance.

73
Thierry

4641. Re: what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 14:46:12 UTC
From: Hank Oredson <horedson@att.net>
Message-ID: <UmAEc.165739$Gx4.132980@bgtnsc04-news.ops.worldnet.att.net>
Source record: 92746
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

"Thierry" <Answer direct via http://www.astrosurf.com/lombry/post.htm> wrote
in message news:40e2cf06@news.vo.lu...
> Hi,
>
> Compare these prices for the Cuschcraft MA5B :
> http://www.durhamradio.com/cushcraft-ma5b.htm $599
>
> http://www.chq-inc.com/asp/details.asp?mod=MA5B&man=cush, less than $400
>
> The first deny any eplanations, so someone could help me to understand why
> Keith sold this antenna at such a price...

Because someone was willing to purchase it at that price?

> Thanks in advance.

You are welcome.

--

... Hank

http://horedson.home.att.net
http://w0rli.home.att.net

4642. F911 sure make that dumb hayseed Bush look stupid

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 14:52:35 UTC
From: cva <bn@art.com>
Message-ID: <cbujtb028lf@enews4.newsguy.com>
Source record: 92749

.

4643. Re: best antenna over a carport?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 14:57:53 UTC
From: Mike Luther <mike.luther@ziplog.com>
Message-ID: <10e5l6jbn1897c8@corp.supernews.com>
Source record: 92747

And for nostalgia with Hemingway antenna .. chuckle ..

H. Adam Stevens, NQ5H wrote:

>"Tdonaly" <tdonaly@aol.com> wrote in message
>news:20040629220728.29691.00000700@mb-m18.aol.com...
>
>
>>H wrote,
>>
>>
>>>longwire
>>>ground to biggest conductor nearby
>>>tuner
>>>get on the air
>>>
>>>I dare not attempt construction of sentences comparable to Richard's, so
>>>
>>>
>I
>
>
>>>thought I'd just get to the point.
>>>73 es gud dx
>>>H.
>>>NQ5H
>>>
>>>
>>>
>>Reminds me of Hemingway.
>>73,
>>Tom Donaly, KA6RUH
>>
>>
>>
>>
>With his best bourbon.
>tnx es 73
>de
>NQ5H
>
>
>
>
>

>Why did the chicken cross the road?
>
>To die.
>In the rain.
>
>
>
>
Use Hemingray insulators!

;)

--

--> Sleep well; OS2's still awake! ;)

Mike Luther

4644. Re: what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 15:14:07 UTC
From: Thierry <"Answer direct via http">
Message-ID: <40e2d8cd$1@news.vo.lu>
Source record: 92748
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

"Hank Oredson" <horedson@att.net> wrote in message
news:UmAEc.165739$Gx4.132980@bgtnsc04-news.ops.worldnet.att.net...
> "Thierry" <Answer direct via http://www.astrosurf.com/lombry/post.htm>
wrote
> in message news:40e2cf06@news.vo.lu...
> > Hi,
> >
> > Compare these prices for the Cuschcraft MA5B :
> > http://www.durhamradio.com/cushcraft-ma5b.htm $599
> >
> > http://www.chq-inc.com/asp/details.asp?mod=MA5B&man=cush, less than $400
> >
> > The first deny any eplanations, so someone could help me to understand
why
> > Keith sold this antenna at such a price...
>
> Because someone was willing to purchase it at that price?
>

I suspect a problem of currency, but the dealer refuses to explain and keep
a deep fog around its advertisings.
Not smart. I prefer to go away, for example to CHQ...

Any info about this price difference is welcome to complete the information
published on my website
http://www.astrosurf.com/lombry/qsl-portable.htm

Thierry

> > Thanks in advance.
>
> You are welcome.
>
> --
>
> ... Hank
>
> http://horedson.home.att.net
> http://w0rli.home.att.net
>
>

4645. Re: what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 15:47:24 UTC
From: raiar@bbs.galilei.com.nospam
Message-ID: <40e2df82.830117390@news.galilei.com>
Source record: 92750
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

Same reason prices are different at different places on almost
everything. WHATEVER THE MARKET WILL BEAR!

Why is plain salt $1.69 at Kroger and .98 at WalMart?

Why is soda at retail pricing normally 21 cents for 12 ounces at a
store or $2.24 per gallon retail if you look at it that way. But at a
restaurant (who buys it wholesale also, just as the store does) why do
they sell it for over $17.00 per gallon? Any price over 99 cents,
which represents 1000% markup is extortion on soda products!

TTUL
Gary

4646. Outbacker Perth grounding question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 15:51:05 UTC
From: "Bruce W.1" <bw@noDirectEmail.com>
Message-ID: <LjBEc.37229$cj3.17320@lakeread01>
Source record: 92751

I'm mounting an Outbacker Perth just above a long gutter and downspout. The gutter/downspout is the ground side of this antenna. This combination will be fed with 300 ohm twinlead.

The ground side of this has me confused. My question is this. Does the ground jack on the Outbacker need to be connected for it to work properly?

Why does the Outbacker even have a ground jack? A hamstick antenna doesn't have a ground jack.

If I was using a hamstick then one side of the 300 ohm twinlead would go to the antenna, the other side to the gutter/downspout. Simple.

If the Oubacker ground jack needs to be connected then should it go in series or parallel to the gutter/downspout? Or does it even matter?

In other words, should the feedline first go to the Outbacker ground jack, then on to the gutter? Or could I split the ground at some point near the antenna, run one wire to the Outbacker and the other to the gutter/downspout?

Thanks for your help.

Bruce AF8F

4647. Re: what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 15:51:25 UTC
From: David Morgan <david@vanguard2.freeserve.co.uk>
Message-ID: <cbunht$a1h$1@newsg1.svr.pol.co.uk>
Source record: 92752
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

Thierry wrote:
> The first deny any eplanations, so someone could help me to
> understand why Keith sold this antenna at such a price...

The first dealer is based in Canada and the second is in the USA

$599 Canadian = $446 US which isn't too far away from the $380 price that CHQ are selling at considering (I believe) a generally higher cost of living in Canada.

--
David
M3EUN

4648. Re: what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 15:59:40 UTC
From: Hank Oredson <horedson@att.net>
Message-ID: <MrBEc.45330$OB3.7210@bgtnsc05-news.ops.worldnet.att.net>
Source record: 92753
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

"Gary V. Deutschmann, Sr." <raiar@bbs.galilei.com.nospam> wrote in message
news:40e2df82.830117390@news.galilei.com...
>
> Same reason prices are different at different places on almost
> everything. WHATEVER THE MARKET WILL BEAR!
>
> Why is plain salt $1.69 at Kroger and .98 at WalMart?
>
> Why is soda at retail pricing normally 21 cents for 12 ounces at a
> store or $2.24 per gallon retail if you look at it that way. But at a
> restaurant (who buys it wholesale also, just as the store does) why do
> they sell it for over $17.00 per gallon? Any price over 99 cents,
> which represents 1000% markup is extortion on soda products!

My experience with the IC-2100H:

Had to replace a failing (25 year old) packet link radio.
Checked eBay, they were selling for $150 - $180 "New In Box".
Checked HRO, AES, etc. on the web.
Prices were $149 - $169 plus shipping.
Drove to Portland HRO, asked about price.
Store owner checked computer, looked at the big
pile of 2100Hs on the shelf, picked up a box, put it
on the counter and said "How about $135?".

Of course I bought some other stuff as well ;-)

--

... Hank

http://horedson.home.att.net
http://w0rli.home.att.net

4649. Re: what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 16:13:20 UTC
From: Richard Clark <kb7qhc@comcast.net>
Message-ID: <3co5e05rm6gjnn4g1o9kje6ddc1h4co7it@4ax.com>
Source record: 92754
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

On Wed, 30 Jun 2004 17:14:07 +0200, "Thierry" <Answer direct via
http://www.astrosurf.com/lombry/post.htm> wrote:

>I suspect a problem of currency, but the dealer refuses to explain and keep
>a deep fog around its advertisings.
>Not smart. I prefer to go away, for example to CHQ...

Hi Thierry,

Manufacturer builds and sells (on average) to distributor (CHQ,
durhamradio, or Joe's Tap Dancing Academy) for $300. Manufacturer who
also advertises, offers MSRP (Manufacturer's "suggested" retail price)
or $599. This is only a "suggestion" but it establishes the "market
price."

Distributor #1 can sell for this price (customer pays the price
because that is what is advertised). Distributor #2 can sell for
more (customer tries to go to Manufacturer instead but is told to buy
through Distributor). Distributor #3 can sell for less (customer
abandons Distributors #1 and #2 like you). Everyone sells antennas
and is happy.

Soon Distributor #2 sells less than others and goes out of business
unless he has no bid contract to sell antennas for Halliburton.
Distributor #2 pays kick-back to Halliburton. Halliburton charges the
Taxpayer more money for "handling fees" and is twice as happy.
Congress over-appropriates funds for black project that Halliburton is
managing (for a fee) without oversight; and the price of the antenna
(on average) rises to $1200. $120 (10%) finds its way back into the
pockets of Republicans and they are happy. Instead of spending it to
generate local jobs, they put their money into off-shore investments
that are tax sheltered companies holding government contracts, and the
cycle starts all over again (happier yet).

Explanation: Capitalism (or the zero job growth economic boom).

73's
Richard Clark, KB7QHC

4650. Re: what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 16:25:14 UTC
From: Dan <lists@elp.rr.com>
Message-ID: <caq5e09isomo5tblo2i6p4ls4g6dtcsmbk@4ax.com>
Source record: 92755

On Wed, 30 Jun 2004 16:32:23 +0200, "Thierry" <Answer direct via
http://www.astrosurf.com/lombry/post.htm> wrotd:

>Hi,
>
>Compare these prices for the Cuschcraft MA5B :
>http://www.durhamradio.com/cushcraft-ma5b.htm $599
>
>http://www.chq-inc.com/asp/details.asp?mod=MA5B&man=cush, less than $400
>
>The first deny any eplanations, so someone could help me to understand why
>Keith sold this antenna at such a price...
>
>Thanks in advance.
>
>73
>Thierry
>

HRO - $339.95 free shipping

4651. Re: Vertical Questions

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 18:00:05 UTC
From: Chuck <no.spam@no.spam.net>
Message-ID: <40e2feb3_1@127.0.0.1>
Source record: 92756

Ron and Gary: Good analyses! Indeed, because the outcome was expected, there was no irony. Now that I recall, the sign on the door had been in reference to the seeming perversity of nature, rather than to irony. I keep forgetting that my memory is slipping.

Chuck

4652. Re: what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 18:20:09 UTC
From: fractenna@aol.com
Message-ID: <20040630142009.03890.00000664@mb-m19.aol.com>
Source record: 92757

>The first dealer is based in Canada and the second is in the USA
>
>$599 Canadian = $446 US

:-)G R I N :-)

73,
Chip N1IR

4653. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 18:38:51 UTC
From: "J.W.Siebelink" <jw.siebelink@wxs.nl>
Message-ID: <cbv1bg$e74$1@reader13.wxs.nl>
Source record: 92758
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Nou weet ik wat ze in plaats van dat Morse hadden moeten doen: Engels.

73 Hans, PA0H

"Mark1" <vonkenboer2004(geen-rommel)@hotmail.com> wrote in message
news:mn.f2327d46b1dec72e.13868@hotmail.com...
> Meindert Sprang bracht volgend id�e uit :
> > "Mark1" <vonkenboer2004(geen-rommel)@hotmail.com> wrote in message
> > news:mn.ed907d46ccc1361a.13868@hotmail.com...
> >> pse remove the nl newsgroup from this discussion.
> >
> > Loop niet zo te zeuren Mark1, deze draad is gestart door een Nederlander
> > (Kees) en ge-crosspost naar twee engelse groepen. Dus dat deze heren
hier
> > steeds weer terugkomen is gewoon deel van de originele discussie.
> >
> > Meindert
>
> Wat een onzin Meindert, ik vraag gewoon of ze deze nieuwsgroep eruit
> willen halen, het is en blijft een Nederlandse nieuwsgroep.
>
> De 'draad' is gestart door Kees met reclame maken voor zijn website met
> daarop zijn eigen gebouwde antenne, daar staat netjes bij dat hij wel
> vragen wilt beantwoorden, nou prima maar dan wel op zijn e-mail adres
> graag.
>
>

4654. Re: Outbacker Perth grounding question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 18:59:23 UTC
From: dplatt@radagast.org
Message-ID: <10e63cb3v52m1f@corp.supernews.com>
Source record: 92759

In article <LjBEc.37229$cj3.17320@lakeread01>,
Bruce W.1 <bw@noDirectEmail.com> wrote:

>The ground side of this has me confused. My question is this. Does the
>ground jack on the Outbacker need to be connected for it to work properly?

Yes.

>Why does the Outbacker even have a ground jack?

As I understand it, the Outbacker has a built-in matching network
which allows the (antenna radiation resistance + antenna loss
resistance + ground loss resistance) to be matched to a 50-ohm
feedline. As this total resistance often sums up to less than 50
ohms, an antenna of this sort is usually matched to the feedline using
an "L" network, which requires a connection to ground.

In the case of the Outbacker, I believe that the "L" consists of some
internal shunt inductance connected between the feedpoint and ground
(via the ground jack), and some series capacitive reactance created by
shortening the whip a bit.

If you leave the ground connection unattached, you're likely to find
that the antenna's feedpoint impedance is quite low when the whip is
adjusted for resonance.

> A hamstick antenna
>doesn't have a ground jack.

... and they are not always well-matched to a 50-ohm feedline.

A local Ham had trouble getting a low SWR with his Hamsticks,
especially after he improved the grounding between his feedline and
his vehicle chassis. I measured it out with an MFJ meter, and at
resonance the hamstick's feedpoint impedance was somewhere down in the
15-to-20-ohm range.

He purchased a set of air-wound coils, which connect to the antenna's
3-24 bolt and which have an alligator-clip-equipped lead which goes to
ground. With the correct clip positioning, and a slight readjustment
of the whip length, he now has a 1:1 match.

The Outbacker antennas do the same basic thing, but using an internal
(non-adjustable) matching component.

>If I was using a hamstick then one side of the 300 ohm twinlead would go
>to the antenna, the other side to the gutter/downspout. Simple.

You may or may not get an acceptable impedance match that way. No guarantee.

>If the Oubacker ground jack needs to be connected then should it go in
>series or parallel to the gutter/downspout? Or does it even matter?
>
>In other words, should the feedline first go to the Outbacker ground
>jack, then on to the gutter? Or could I split the ground at some point
>near the antenna, run one wire to the Outbacker and the other to the
>gutter/downspout?

What I'd do would be to minimize the length of the ground lead between the Outbacker and the feedline, and run as heavy as convenient a grounding wire or strap to the gutter. This would mimic a proper automobile installation.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will boycott any company which has the gall to send me such ads!

4655. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 19:23:01 UTC
From: Mark1 <vonkenboer2004@hotmail.com>
Message-ID: <mn.f5037d46f82603d4.13868@hotmail.com>
Source record: 92760
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Als je mijn vertaling van het stukje babbelfish hebt gelezen weet je
dat dat dus niet het probkeem is, maar wel dat dit een Nederlandse
Nieuwsgroep is en dus de voertaal Nederlands is.

J.W.Siebelink plaatste dit op zijn scherm :
> Nou weet ik wat ze in plaats van dat Morse hadden moeten doen: Engels.
>
> 73 Hans, PA0H
>
> "Mark1" <vonkenboer2004(geen-rommel)@hotmail.com> wrote in message
> news:mn.f2327d46b1dec72e.13868@hotmail.com...
>> Meindert Sprang bracht volgend idï¿œe uit :
>>> "Mark1" <vonkenboer2004(geen-rommel)@hotmail.com> wrote in message
>>> news:mn.ed907d46ccc1361a.13868@hotmail.com...
>>>> pse remove the nl newsgroup from this discussion.
>>>
>>> Loop niet zo te zeuren Mark1, deze draad is gestart door een Nederlander
>>> (Kees) en ge-crosspost naar twee engelse groepen. Dus dat deze heren hier
>>> steeds weer terugkomen is gewoon deel van de originele discussie.
>>>
>>> Meindert
>>
>> Wat een onzin Meindert, ik vraag gewoon of ze deze nieuwsgroep eruit
>> willen halen, het is en blijft een Nederlandse nieuwsgroep.
>>
>> De 'draad' is gestart door Kees met reclame maken voor zijn website met
>> daarop zijn eigen gebouwde antenne, daar staat netjes bij dat hij wel
>> vragen wilt beantwoorden, nou prima maar dan wel op zijn e-mail adres
>> graag.

4656. Signal interference with nearby aluminum reflectors?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 20:00:23 UTC
From: dave.harper@gmail.com
Message-ID: <364fd697.0406301200.699aa311@posting.google.com>
Source record: 92761

I was wondering what effect aluminum foil (used as a radiation heat shield) would have on GPS signal reception? The scenario is a small payload container (approx 10" cube) covered in polystyrene, with a handheld GPS reciever located near the top on one corner.

Would aluminum foil on the inner sides (and/or bottom) interfere with the reception of the signal? I'm worried about possible reflection or other mechanisms of interference that might occur and prevent good reception. Basically, my question is, would foil on the sides or the bottom pose a reception problem? Are there any "configurations" that might not pose a problem? (i.e. 2 furthest sides only, half of bottom only, etc).

Thanks in advance for any insight!
Dave

4657. Re: Signal interference with nearby aluminum reflectors?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 20:22:43 UTC
From: "Gary S." <Idontwantspam@net>
Message-ID: <1o76e0l15bs208i7ob6gat91fsj1r9hcfo@4ax.com>
Source record: 92762
Cross-posted to: rec.radio.amateur.antenna,sci.geo.satellite-nav

On 30 Jun 2004 13:00:23 -0700, dave.harper@gmail.com (David Harper)
wrote:

>I was wondering what effect aluminum foil (used as a radiation heat
>shield) would have on GPS signal reception? The scenario is a small
>payload container (approx 10" cube) covered in polystyrene, with a
>handheld GPS reciever located near the top on one corner.
>
>Would aluminum foil on the inner sides (and/or bottom) interfere with
>the reception of the signal? I'm worried about possible reflection or
>other mechanisms of interference that might occur and prevent good
>reception. Basically, my question is, would foil on the sides or the
>bottom pose a reception problem? Are there any "configurations" that
>might not pose a problem? (i.e. 2 furthest sides only, half of bottom
>only, etc).
>
I am adding in the sci.geo.satellite-nav newsgroup, as people there
are familiar with GPS antenna issues, and could explain this better
than I can.

First, you need to know what style of antenna your GPS has. Most are
either a patch antenna (the Garmin eTrex series) or a quad helix
antenna (some Garmin and most Magellan). The positioning and shielding
issues are rather different for the two.

You are right to be concerned about reflected signals, or multi-path,
issues. That can degrade accuracy.

Also consider a GPS model with provision for an external antenna,
which might give you more mounting options. You could have a
completely shielded box, with a passthrough for the GPS antenna cable,
to the antenna mounted completely outside the shielding.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4658. Re: Signal interference with nearby aluminum reflectors?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 20:26:20 UTC
From: Dama Foster <nospam@invalid.com>
Message-ID: <2kgltfF27ef0U1@uni-berlin.de>
Source record: 92763

It is a reflector, and will change the pattern. How much depends on how the Al is configured to the antenna, and the spacing. The wavelength is about 1 foot, so your dimentions indicate that something will happen. (10 inch or 10 foot?) Quickest way is to just try it. The type of antenna the handheld has determines quite a bit too. THe antenna needs to see the sky, many times it dosent matter what it is mounted on, but then you have a handheld, that can be different.

"David Harper" <dave.harper@gmail.com> wrote in message news:364fd697.0406301200.699aa311@posting.google.com...
> I was wondering what effect aluminum foil (used as a radiation heat
> shield) would have on GPS signal reception? The scenario is a small
> payload container (approx 10" cube) covered in polystyrene, with a
> handheld GPS reciever located near the top on one corner.
>
> Would aluminum foil on the inner sides (and/or bottom) interfere with
> the reception of the signal? I'm worried about possible reflection or
> other mechanisms of interference that might occur and prevent good
> reception. Basically, my question is, would foil on the sides or the
> bottom pose a reception problem? Are there any "configurations" that
> might not pose a problem? (i.e. 2 furthest sides only, half of bottom
> only, etc).
>
> Thanks in advance for any insight!
> Dave

4659. Re: 80 meter multi turn loop antenna

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 20:43:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <cbv8ma$qr6$1@sparta.btinternet.com>
Source record: 92764

"Jaap" <jaap.verheul@ditweghalenhetnet.nl> wrote in message
news:cbnbiu$60q$1@reader10.wxs.nl...
> HI,
>
> I'm thinking about building a multi turn loop for 80 meters, using in for
TX
> and RX purpose.
> This would be a loop thats 1 meter big and 5 turns. Is there anyone who
has
> tried this before?
>
> Jaap PA3DTR

==========

A multiturn loop on 80m is hopelessly inefficient for transmitting purposes. It is roughly 80 dB down on 1/4-wave vertical. Furthermore, for a Tx power output a lot less than a watt, the volts across the tuning capacitor will be 10Kvolts or more - if you can find or make one.

For the performance of multi-turn receiving loops download program RJELOOP3 from website below.

For the performance of single-turn transmitting loops download program MAGLOOP4.

--

Regards from Reg, G4FGQ
For free radio design and modelling
software go to -
http://www.btinternet.com/~g4fgq.regp

4660. Re: Make your own T2FD

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 21:04:55 UTC
From: Mark1 <vonkenboer2004@hotmail.com>
Message-ID: <mn.f5687d46ed67d78c.13868@hotmail.com>
Source record: 92765
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.antenna,nl.radio.amateur

Meindert Sprang schreef :
> "Mark1" <vonkenboer2004(geen-rommel)@hotmail.com> wrote in message
> news:mn.f5037d46f82603d4.13868@hotmail.com...
>> Als je mijn vertaling van het stukje babbelfish hebt gelezen weet je
>> dat dat dus niet het probkeem is, maar wel dat dit een Nederlandse
>> Nieuwsgroep is en dus de voertaal Nederlands is.
>
> Mark1, je bent nu zelf net zo erg, want je haalt niet even de engelse
> groepen uit de lijst, dus jij zit nu Nederlands te lullen in een
> engelstalige nieuwsgroep.
>
> De pot verwijt de ketel...
>
> Meindert

Dit is niet de pot verwijt de ketel, enkel het laten zien aan de
engelstalige nieuwsgroeppen hoe hindelijk het is als er iemand in een
andere taal schrijft, als ze het dan proberen te vertalen in babbelfish
of een andere vertaalprogramma zullen ze zien dat er geen barst van
klopt.
Vandaar dat ik nu dus weer die engelstalige groepen die jij eruit hebt
gehaald erbij heb gezet :-P

4661. Re: How to get a good ground is very rocky terrian???

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 21:16:04 UTC
From: Ed Bailen <n5kzw@arrl.net>
Message-ID: <9oa6e0hrg625ml0sj6timv888rav2v4u39@4ax.com>
Source record: 92766

On Thu, 17 Jun 2004 05:30:19 -0800, "mike sebring"
<msebring@kpunet.net> wrote:

>I live in S.E. Alaska on an island that is about 99% solid rock and i am
>wondering what would be a good way to get an effective ground for my rig and
>my antennas.
>I have tried to drive a 4' ground rod in the ground and it will only go down
>about a foot and a half till it hits solid rock.
>I have considered just burying several strands of heavy bare copper wire and
>using that for my ground.
>Any sugjestions????
>Thanks for any help any of you can give me.
>
>EX WB8RSH soon to be KL7???
>
>Mike
>

Mike, I live on a rock here in central Texas. My service ground is 75
feet of #6 copper laid in the bottom of the electrical trench. I also
have a 6-foot horizontal ground rod laying on the rock with a few
inches of dirt over it and located where the feed lines pass through a
grounded metal bulkhead in the house wall.

The tower ground is via a couple of horizontal ground rods driven
between a couple of layers of rock near the base of the ower. The
tower is pretty much the highest object within a 0.75 mile radius, and
I've had one hit in the past 15 years. The only serious damage was
the stinger on the 2M Isopole at the top of the tower, and the
processor in the PK-232.

My neighbor had lightning rods installed on her metal-roofed house,
and they brought all of the ground cables down to several 2-foot
square copper plates laid right on the rock and covered with a few
inches of dirt. (Capacitive coupling?)

For RF ground, your best bet is radials and counterpoises.

Good luck,
Ed Bailen - N5KZW

4662. Re: Outbacker Perth grounding question

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 21:33:50 UTC
From: jgboyles@aol.com
Message-ID: <20040630173350.25600.00001059@mb-m29.aol.com>
Source record: 92767

>I'm mounting an Outbacker Perth just above a long gutter and downspout.
> The gutter/downspout is the ground side of this antenna. This
>combination will be fed with 300 ohm twinlead.

The Outbacker or the Hamstick are not usually fed with 300 ohm line. I have never used either, but it is my understanding they are both designed for mobile operation and a 50 ohm feed.
If you are planning to transmit with the Outbacker fed with 300 ohm line you will need a Balanced Antenna Tuner at the shack. Even with this arrangement, I would not expect very good results because of ground losses and a low radiation resistance at the antenna input. You will be feeding a very unbalanced antenna with a balanced transmission line. My suggestion would be to feed the antenna with 50 ohm coax, and adjust the antenna for the best match at the transmitter. And yes, you will still need to connect the antenna ground jack to some sort of ground.
73 Gary N4AST

4663. Re: what justify so high price... nothing

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 22:10:46 UTC
From: Ed <egallup_REMOVE_@Starband.net>
Message-ID: <Xns95189AE43796DSpectrumhogStarbandn@207.106.92.175>
Source record: 92768
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,uk.radio.amateur

Why are you picking on Haliburton? You think they are the only ones doing this? Don't you remember the $600 toilet seats and $75 hammers from decades ago? ....

<grin>

Ed

4664. Re: Signal interference with nearby aluminum reflectors?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 22:37:02 UTC
From: Peter <prathman@comcast.net>
Message-ID: <Rpmdnds0buEG3H7dRVn-uA@comcast.com>
Source record: 92769
Cross-posted to: rec.radio.amateur.antenna,sci.geo.satellite-nav

Gary S. wrote:

> On 30 Jun 2004 13:00:23 -0700, dave.harper@gmail.com (David Harper)
> wrote:
>
>
>>I was wondering what effect aluminum foil (used as a radiation heat
>>shield) would have on GPS signal reception? The scenario is a small
>>payload container (approx 10" cube) covered in polystyrene, with a
>>handheld GPS reciever located near the top on one corner.
>>
>>Would aluminum foil on the inner sides (and/or bottom) interfere with
>>the reception of the signal? I'm worried about possible reflection or
>>other mechanisms of interference that might occur and prevent good
>>reception. Basically, my question is, would foil on the sides or the
>>bottom pose a reception problem?

I'd expect this to be alright as long as the GPS antenna still has a clear view of most of the sky - i.e. if you imagine your eye being at the location of the antenna, it should be able to directly see most of the sky without needing to look through any aluminum foil. Multipath problems from reflections tend to be more of an issue when the direct path is blocked so the receiver only gets the reflected signal and when the path length of the reflected signal is substantially different than it would be for the direct signal. Neither would be the case here. There could still be some destructive interference from reflected signals but that problem is minimized if the direct signal path is unobstructed and therefore the strongest signal and by the selective antenna gain for signals of the proper circular polarization.

4665. Re: NEC/4 with EZNEC 4.0

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 23:06:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <10e6hrllhq2itc2@corp.supernews.com>
Source record: 92770

EZNEC, EZNEC+, and EZNEC-M, of all versions including version 4.0, do not use any part of NEC-4 for any calculations. The geometry check and the wire insulation features perform the same functions as similar NEC-4 features, but they are implemented with independently written code that is not part of, copied from, or derived from NEC-4. I have been very careful about this, because NEC-4 is copyrighted software.

EZNEC/4 of all versions including v. 4.0 does use NEC-4 for calculations including wire insulation. Because the EZNEC geometry check feature detects more problems than the corresponding NEC-4 routine (SEGCHK), the EZNEC feature is used for that function by default. However, the user can choose to use the NEC-4 function, or both, if desired. EZNEC/4 is sold only to people or companies who have already purchased an NEC-4 license from the copyright holder.

In the tests I've run (by no means a comprehensive group of tests), the EZNEC insulated wire routine gives answers very similar to those given by NEC-4. I'd be very interested in any case where they significantly differ.

Roy Lewallen, W7EL

Jer wrote:

> ... some people erroneously
> think that he employs NEC/4 with EZNEC 4.0 when taking wire insulation into
> consideration...
>
> regards
>
> Uli, DJ2YA
>
>
> "Roy Lewallen" <w7el@eznec.com> wrote in message
>
>

4666. Re: Signal interference with nearby aluminum reflectors?

Newsgroup: rec.radio.amateur.antenna
Date: 2004-06-30 23:11:47 UTC
From: Herb Kauhry <tiptoe@tulip.me>
Message-ID: <blydnRQE0Lcp1X7dRVn-jw@comcast.com>
Source record: 92771
Cross-posted to: rec.radio.amateur.antenna,sci.geo.satellite-nav

I'm not reading this thing, but maybe it's got something you can use :-)

http://www.geomatics.ucalgary.ca/~cannon/99NTMJR.pdf

--

"Peter" <prathman@comcast.net> wrote in message
news:Rpmdnds0buEG3H7dRVn-uA@comcast.com...
> Gary S. wrote:
>
> > On 30 Jun 2004 13:00:23 -0700, dave.harper@gmail.com (David Harper)
> > wrote:
> >
> >
> >>I was wondering what effect aluminum foil (used as a radiation heat
> >>shield) would have on GPS signal reception? The scenario is a small
> >>payload container (approx 10" cube) covered in polystyrene, with a
> >>handheld GPS reciever located near the top on one corner.
> >>
> >>Would aluminum foil on the inner sides (and/or bottom) interfere with
> >>the reception of the signal? I'm worried about possible reflection or
> >>other mechanisms of interference that might occur and prevent good
> >>reception. Basically, my question is, would foil on the sides or the
> >>bottom pose a reception problem?
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> I'd expect this to be alright as long as the GPS antenna still has a
> clear view of most of the sky - i.e. if you imagine your eye being at
> the location of the antenna, it should be able to directly see most of
> the sky without needing to look through any aluminum foil. Multipath
> problems from reflections tend to be more of an issue when the direct
> path is blocked so the receiver only gets the reflected signal and when
> the path length of the reflected signal is substantially different than
> it would be for the direct signal. Neither would be the case here.
> There could still be some destructive interference from reflected
> signals but that problem is minimized if the direct signal path is
> unobstructed and therefore the strongest signal and by the selective
> antenna gain for signals of the proper circular polarization.
>